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History Lives! The Use of Simulations in a High School Social Studies Classroom

by Lydia Adkins

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June 2015

On the first day of teaching I always asked the students in my American history classes two questions. The first question was "do you enjoy learning history?" and the second "if you could choose your ideal way to learn history what would it be?" When asked if they enjoyed learning about history, the overwhelming response was "No, it's boring." As a social studies teacher the fact that my students did not enjoy learning history really made me think about different ways in which to engage my students. That is when I moved on to the second question. The second question elicited several different types of responses such as watching movies, engaging in reenactments/simulations and art projects. Now knowing how many of my students felt, I wanted to be able to know how to give them a deeper understanding of the material; that is when I thought about simulations.

In America, schools are trying anything and everything possible in order to boost student improvement and scores. One such school that is focusing on how implementation of the arts can improve student achievement and motivation is Glenn Rock School in New Jersey. Glenn Rock School was given an Arts Create Excellent Schools grant, through which a three-year professional development track was created by Teachers College at Columbia University. These professional development classes taught teachers how to incorporate the arts in their classrooms. With these implementations, participants noted a substantial growth in their student's engagement, creative thinking and the use of multiple perspectives (Pieczura, 2013, p. 12).

When I first started teaching my major concern was keeping the students engaged in the lessons and after using several of their suggestions throughout the first quarter, I found that the students tended to be the most engaged when we did reenactments and technological simulations. According to DiCamillo and Gradwell (2012) a reform in classrooms has been long overdue and the major source of research should be in how students think about history critically in the use of

simulations (p. 1). The question of this study was, does the use of simulations effect the ability of students in a standard American History class to comprehend the actions of American historical figures and the events that transpired due to their actions? Simulations, as they were used in my study, are student experiences through movements, reenactments and computer programs in order for students to grasp a higher historical knowledge. The word simulation seems to be a bit broad but in the literature, it tends to have three main focuses: role-playing, scripted skit, and interactive computer websites or software. Simulations in my classroom meant that I would have student volunteers to demonstrate a difficult theory to envision. From my previous experiences using simulations in the classroom, I could tell that students seemed to be more engaged in these lessons, but I wanted to see engaging in simulations would also help with their understanding of historical figures and events occurred and transpired the way that they did.

Literature Review

Simulations are an engaging pedagogical strategy students tend to enjoy (Kelin, 2005; Piecruza, 2013). In the sphere of this study, simulations are defined as role-playing, using art and dramatics and using computer programs in which social studies students will take an active participating role. The use of these various types of simulations in a social studies classroom are to instill a sense of historical analysis and critical thinking. With the skills of analysis and critical thinking, students will be able to have a better understanding of people and events (Kelin, 2005; NCDPI, 2011; O'Reilly,1998). Through the literature, it is clear there is a need for research in the field of simulations in high school history classrooms.

Kelin (2005) found that by incorporating arts in the social studies classrooms students became more curious which led to a higher engagement level. In an elementary school classroom studying Henry Hudson, Kelin (2005) wanted to see if students would have an emotional connection to the characters they portrayed and in doing so if they would understand why their characters acted the way that they did, finding:

> That emotional response spurred them on to devise an event that made them feel triumphant and instilled in them an avid interest in finding out more details about the real history… Ultimately, they develop a deeper understanding of the historical event because they have formed an emotional tie with the characters and their simulation (Kelin, 2005, p.7).

These researchers' findings favorably advocate for the use of arts in the classroom to promote engagement.

The ability to critically analyze and interpret problems of the past, various perspectives of historical figures, and relationships between people and events is an essential part of the social studies curriculum (NCDPI, 2011). In order to develop a deeper understanding of historical figures and social contexts students must apply higher order critical thinking skills. The decision making students must do in simulations increases their historical understanding and their higher order thinking skills (Kelin, 2005). The understanding and higher order thinking skills allow students to comprehend the actions of historical figures by putting information into context. O'Reilly (1998) put students into a role playing simulation in which they had to make key decisions during World War I by acting as diplomats from Russia, Austria-Hungary, and Germany. During this simulation students were asked to make decisions based on what was best for their countries interests. By reconnecting the simulation to the learning objective it allows for learning goals of thinking critically to be assessed.

By creating this historical thinking method in history, students will become able to understand why certain events happened and what decisions led to the events happening. There is a lack of research literature that pertains to the use of simulations, as a pedagogical method in high school classrooms. The question of this study is, does the use of simulations effect the ability of students in a standard American History class to comprehend the actions of American historical figures and the events that transpired due to their actions?

Methodology

Participants were drawn from a public Title I high school in rural North Carolina. The participants were sampled from a standard American History I class of 21. Permission to use student data was received from the Wake Forest University Institutional Review Board, the local school district, the school principal, parents and the individual student participants. The unit that was targeted during this research study was titled, "Rebellion" and events focused on during this research were British taxation and the American Revolution.

In order to gage the students' prior understanding at the beginning of the unit, students were given a 10 question pre-test. The researcher then charted the student's prior knowledge based on how many correct responses are given from the pre-test.

Each day the researcher collected data on how the students understand concepts before and after a simulation. The two days of simulation followed same format: bell ringer, lecture, simulation, and debrief/exit slip. After the lecture, students completed a Likert scale self-assessment of 1 being no understanding and 10 being they fully grasp the concept. The participants then wrote four things on the survey: their name, the number that best corresponds to their self-assessed understanding, what they understand or don't understand and why and will answer a comprehension question about the material just gone over. They completed the self-assessment again following the simulation.

At the end of the unit, student participants were given the same 10 question pre-test as before the unit. Coupled with the daily surveys of student understanding, the post-test showed how much the students gained in knowledge and understanding over the whole unit.

The responses to the Likert survey were charted to compare to the understanding of the participants from the before and after the simulation. By collecting this daily data the researcher was also aware of which types of simulations were most valuable and promoted a better understanding. The researcher also recorded observations of students' ability to critically analyze and think historically as well as the analysis of student work.

Findings

After each of the simulations, students' surveys showed that they felt more confident in their own understanding of the material. On the computer simulation Likert survey the average student understanding went from a score of 6.8 after the lecture to a score of 8.16 after the simulation. The average of student self-assessed understanding went up by a score by 1.36. The open-ended survey answers to question two, the comprehension question, showed a deeper understanding of the material following the simulation as shown on Jane's survey. On the pre-survey, Jane wrote "It was harder on them cause of the taxes on the food and trade goods as they needed", while on her post-survey her response was "It was harder on them cause of the taxes on the food and trade goods as they needed. And when the British solders stayed and the colonies it made everything harder for them to get items cause of the British guarding off certain places." Jane showed a deeper knowledge of everyday life in the colonies during the time by giving more detail of the trade.

The battle simulation Likert survey showed on average the student understanding of the material after the lecture was about 5.5 and after the simulation the average was 8.14. The average of the 21 student participants felt that their understanding of the material was elevated by 2.64 after the simulation occurred. Students' answers to the open-ended question on the survey supports the conclusion that their understanding increased during the battle simulation. For example, Matthew on his pre-survey, wrote "Americans have good ambush tactics and they have strong allies", on the post-survey he said, "they had less people and the colonists had better point to fight at". The detail of his answer shows a higher level of comprehension after the simulation than before.

Based on student work, the knowledge and understanding of life in the colonies during the American Revolution was firmly grasped during the simulation. The student work also showed a level of knowledge and understanding of the advantages and disadvantages of the colonists and British during the Revolutionary War after completing a computer simulation in which they role-played the life of a young teenager living in Boston at the time of the Revolution. When asked about how their character's life went in the computer game Matthew said that he would adjust to the changes (from the British) but not take part in the Revolution activities.

Based on the pre- and post-tests, student comprehension of material increased after the simulations. Compared to the pre-tests, the post tests show a spike in the class average scores by 23.5 percent. On the pre-test, there were 20 student participants and the average score of those student on the pre-test was 37.5 out of 100. The post test was taken by 19 students and their average score was 61 out of 100 total points, an increase of 23.5 points. In regards to the corresponding questions for each of the simulations there was either an improvement or no change on each of the questions in terms of number of students who answered correctly except for number 4.

Discussion

The use of arts in the classroom, according to Kelin (2005) and Pieczura (2013), allow for students to become more engaged and in turn allows for critical thinking and the use of multiple perspectives. The acting out of the battle simulation, much like a play, allowed for students to understand multiple perspectives of the people involved in the Revolutionary War.

Just as in the research of Pieczura (2013), the students involved in the battle reenactment showed a better comprehension of the material, a higher level of cooperation because they had to work together, and allowed the students to develop empathy for opposing sides of the battle. Empathy also developed during the computer simulation as students had to make decisions as a young printing apprentice during the time of the Boston Massacre.

According to Schulte (2005), the use of kinesthetic help understanding, this was also found to be true in my research as students showed the most growth in self-understanding and comprehension during the battle simulation. Students were engaged in the lesson and enjoyed the reenactment in which they acted out the Battle of Bunker Hill several times, with each student getting the chance to be a Red Coat and a Patriot. Through the use of this simulation students were able to grasp the advantages and disadvantages of both sides and understood the different types of battle styles used during the Revolution as shown in Matthew and Jane's work samples.

Conclusions

Based upon my data analysis and findings, I believe that the use of simulations in the classroom to teach historical comprehension is a successful tool. By using the instrument of the pre and post test, I conclude that the use of the simulation increased student learning in terms of prior versus gained knowledge. Student understanding was also effected by the simulations with students on average showing at least a two point increase in student proclaimed understanding with the use of the Likert scale. As the researcher, I was able to test the student comprehension of the material through an individual question on the before and after surveys, the pre and post tests and the student work.

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Using Francophone Music in the High School French Class

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An essential element of being globally competent in the 21st century is the ability to communicate with both respect and understanding in more than one language. In the position statement on global competence published by the American Council on the Teaching of Foreign Languages, communication that involves the demonstration of an understanding of "how, when, and why to say what to whom" is emphasized, along with proficiency in the target language and a profound understanding of culture (American Council on the Teaching of Foreign Language [ACTFL], 2014a, p.1). Best practices in the world language classroom call for performance-based instruction, which are purposefully designed to give students opportunities to use language for real-life communication purposes, helping them gain language ability that will enable them to interact with native speakers (ACTFL, 2012a). The goal of performance-based instruction is for students to gain L2 proficiency as they experience authentic communication tasks, and over time, in a well-articulated program of study, to progress through the levels of Novice, Intermediate, Advanced, and Superior established by the ACTFL Proficiency Guidelines (ACTFL, 2012b).

Incorporating music in the K-12 world language program allows teachers to share the products, practices, and perspectives from other cultures represented in the music, thereby situating authentic cultural contexts in the classroom (ACTFL, 2014b). Both a universal product and practice in many cultures, music provides an ideal, authentic cultural framework for language learning (Arens, 2010; Eddy, 2007). With its connection to emotions as well as its cognitive and motivational benefits in the K-12 world language classroom, music is a rich and powerful tool that can be used to foster awareness and an understanding of the perspectives of others while simultaneously supporting the development of second language ability (Salcedo, 2010).

Review of Literature

In our global world, authentic music is becoming increasingly important as a means for developing relationships between members of different cultures. Learning each other's languages is not enough; a deep cultural understanding is required, and music is a vital means through which to understand culture (Arens, 2010; Eddy, 2007). As a "universally known idiom," music

can define, transmit, and even transcend language and culture (Bellver, 2008, p. 894; Eddy, 2007). Music evokes an emotional response because a listener may feel nostalgia, remorse, or encouragement, depending upon the piece of music. These emotions are universal, according to Heusinkveld (2011), who adds, "the appeal of the music that elicits them is universal" (p. 137). The universality of the emotions transmitted through music can contribute to participants' cultural competence as the music encourages deeper personal connections within the student.

By calling upon the emotions music evokes, world language teachers can engage language learners in meaningful, communicative contexts. They can use music as a "hook" in order to connect language learners' emotional reactions to a reflective and analytic process (Bellver, 2008, p. 889). In addition to the potential music has to increase students' motivation and interest level, music can also lower their anxiety about language learning. According to Krashen (1982), affective variables such as motivation, self-confidence, and low anxiety facilitate second language acquisition. Language learners tend to enjoy and respond positively to activities involving music and when they have fun with music, their anxiety level is likely to decrease (Bellver, 2008; Fonseca-Mora, 2000). Furthermore, studies have shown that the use of songs in the world language classroom has certain cognitive benefits, such as aiding retention of vocabulary and facilitating short-term language learning (Legg, 2009; Ludke, Ferreira, & Overy, 2014). Since speech and singing both have musical elements like rhythm and intonation, music can be harnessed to develop second language ability (Ludke, Ferreira & Overy, 2014; Salcedo, 2010). Incorporating music into the world language classroom also addresses diverse learners' needs, such as Multiple Intelligences (Fonseca-Mora, 2000; Gardner, 2006). Individuals have varying degrees of different types of intelligence, and by tapping into all of them, including musical and linguistic intelligence, music can be used, in the words of Adkins (1997), to "exploit language learners' interests, capabilities, and confidence in one domain of knowledge as a means to facilitate growth in other domains" (p. 43).

French specialists can help students develop an understanding of the relationship between a piece of music and its culture of origin by providing them with performance-based tasks and meaningful experiences with French-speaking artists from all over the world. As a result of combining rich Francophone musical experiences with performance-based instruction, participants can develop their language ability while gaining cultural knowledge and a deeper understanding of the cultures of the Francophone world (Eddy, 2007; Failoni, 1993). The

purpose of this action research study was to explore how the use of instructional strategies involving Francophone music in the high school French classroom affected participants' development of language ability and cultural knowledge.

Methodology

The study was conducted between April 8 and May 6, 2015 and included 19 French III students in a North Carolina public high school where the researcher was assigned for student teaching. It included three data sets. Data set one consisted of student artifacts resulting from the researcher's use of performance-based instructional strategies. The researcher developed instructional strategies based on the Intermediate range of the ACTFL Proficiency Guidelines and ACTFL Performance Descriptors, both research-based frameworks for language learning (ACTFL, 2012a; ACTFL, 2012b). The researcher was looking for student language development in the Intermediate range through the use of the three communication modes in understanding main ideas and supporting details of songs, participating in conversations on familiar topics, communicating information, expressing their own thoughts, and recognizing that differences exist in cultural perspectives. Instruction focused on developing oral and written language ability to support the three modes of communication and included responding to oral questions using multiple tenses, reading to interpret main ideas and supporting details, as well as writing and speaking using multiple tenses to present information. Students demonstrated their cultural knowledge through oral and written evidence.

The communicative context for this instruction was songs from two Francophone countries (Côte d'Ivoire and Belgium). For pre-listening, students watched a presentation on each artist and read an interview with the artist. After listening to the song, students discussed the perspectives in the song in both small groups and as a class; the researcher collected data on this class discussion. The unit concluded with a culminating group project.

Data set two included field notes, recorded videos of class sessions, and observations about instruction. Data set three included students' responses from a written survey regarding their opinions of how the instructional strategies affected the development of their French ability and cultural knowledge, as well as their enjoyment of the activities. The researcher examined the three data sets and looked for evidence of students' oral and written language development in the Intermediate range and how students showed evidence of cultural knowledge gained.

Results and Discussion

Data were collected three times during this study. In the activities for data set one, 17 of 19 students were present in class on April 24 for the first full group discussion and 18 of 19 for the second discussion on April 28. When asked oral questions about how the singer felt in the first song, ten (76%) of the students present in class were able to respond orally using the present tense to describe the emotions of the artist, and all (100%) were able to do so with the second song. The researcher asked each student a follow-up question that required higher-order thinking, for example, "*Why* do you think the artist feels this way?" With the first song, five students (29%) were able to understand and answer the higher-order question in French by giving an opinion, and eight (44%) could do so with the second song. These findings indicate that students were making progress in terms of their oral language ability and gaining cultural knowledge. By providing main ideas and supporting details about the songs, these same students showed evidence of their ability to communicate an opinion and make inferences when answering higher order questions, which is consistent with the Intermediate level of proficiency (ACTFL, 2012a; ACTFL, 2012b). Several of these same students also demonstrated sufficient language control when conveying comprehensible messages despite errors in accuracy of language use, also consistent with Intermediate language ability.

Other students demonstrated reflection and empathy towards the artists' lives through comprehensible sentences, when for example, describing difficulties the singer and social activist Tiken Jah Fakoly has faced in trying to unite Africa though his music. These findings support Failoni's (1993) belief that interacting with members of other cultures and experiencing these cultures' products (like music) can help language learners develop cross-cultural empathy. In reviewing video-recorded classes and field notes from data set two, the researcher observed that some students understood the details of the song, but were unable to express their comprehension in French and resorted to using English. She also observed that students appeared anxious on the day of group presentations. This observation led the researcher to recognize that since this was the first time they had ever presented in front of the class, the new experience of presentational speaking likely contributed to students' anxiety, influencing their performance.

Fifteen students (79%) presented their group culminating presentations on May 4 and May 6. The researcher took notes on the presentations and used a teacher-created analytic rubric based on the ACTFL Performance Descriptors for Language Learners (ACTFL, 2012a) and

adapted from the Fairfax County PALS rubrics (Fairfax County, 2013) in order to evaluate students' oral language ability. The researcher looked for students' ability to 1) demonstrate and communicate understanding of the emotions in the song, 2) provide personal thoughts about the song, 3) demonstrate control of basic language structures, 4) communicate information about the artist and his culture and 4) demonstrate reflection on the artist's perspective in the song. Fourteen students (93%) met or exceeded expectations of communicating cultural knowledge in their presentations, and 11 (73%) met or exceeded expectations of language control. The presentation revealed development in language ability and cultural knowledge as students communicated and expressed their opinions about the songs in well-developed sentences using both the present and past tenses. By presenting the artists' cultural background, students reflected knowledge of cultural differences and similarities and further demonstrated Intermediate language ability (ACTFL, 2012a; ACTFL, 2012b).

The student survey, data set three, revealed that the majority of students, 13 (72%), agreed that the activities using music involving all three modes of communication made them more aware of people from other cultures. Fewer students, eight (47%), believed the activities helped improve their French language ability. Twelve students (70%) agreed they would seek out more music from French-speaking musicians. The survey also revealed that 15 students (88%) agreed they enjoyed using music to learn about other cultures. These findings show that the instructional strategies positively affected student engagement in class and perhaps contributed to their progress in development of language ability and cultural knowledge.

Conclusions

As a result of this study, the researcher learned that using music as a communicative context in the classroom in conjunction with performance-based tasks helps students develop language ability and cultural knowledge. By the end of the unit, many students were able to use more varied vocabulary in forming complex sentences. They were also able to hold short conversations in the target language about the perspectives of artists from other cultures. Furthermore, they communicated in the presentational mode by researching and presenting on an artist in French using full sentences in both the present and past tenses. By communicating personal meaning, students demonstrated that they understood the main idea and supporting details in the songs, characteristic of the Intermediate level of proficiency (ACTFL, 2012a;

ACTFL, 2012b). They also showed an emerging ability to make inferences about an artist's emotions which requires higher-order thinking.

The researcher learned that Francophone music is a powerful tool for the French classroom whose value teachers should not underestimate. Whether students talk or write about a Francophone song, they develop their language ability and cultural knowledge. In the future, the researcher plans to use music in similar ways in her teaching and would like to incorporate more writing practice within her instructional strategies in order to help students develop their presentational writing ability. When repeating similar strategies in the future, she also plans on choosing themes for songs introduced such as "family" or "identity" in order to better focus class discussions and L2 outcomes.

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Fostering Public Speaking through Pecha Kucha in the High School English Classroom

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Milner, Milner, and Mitchell (2012) argue that there is a developing urgency in the modern world for oral language communication as a result of the technologies that have become the standard of modern American society; despite the increasing dominance of oral communication, Milner et al. (2012) suggest that active oral language practices only take place for about 5% of daily class time in the typical English classroom. Baker (1968) argues that "it is by means of…oral communicatory activities that the child asserts his individuality and…that he learns to become a social being" (p. 48). However, as a result of a lack of exposure to oral language skills, speech anxiety can become a common trait in students (Ayer & Hopf, 1993; Hunter, Westwick, & Haleta, 2014). The importance of reducing speech anxiety cannot be understated; strong public speaking skills are imperative for both future employability and self-development (Hunter et al., 2014). It is necessary that English teachers create an environment that encourages students to feel comfortable with oral communication.

A common way to introduce public speaking to students is through individual presentations in class. Often, these presentations have no structure other than a time limit, and teachers do not scaffold the requisite skills for successful public speaking for various reasons. Snyder and Murphy (2002) offer content-related suggestions for easing anxiety in beginning speakers: make the subject something the speaker knows well, simplify a complicated aspect of the subject, and/or take an opinionated stand on a certain issue that relates to the subject. With this in mind, it may be necessary for public speaking in the English classroom to receive a student-friendly facelift. As a result, this action research study seeks to answer two questions: How is student perception of public speaking impacted by the study of popular culture? Does the use of the Pecha Kucha public speaking format in the English classroom reduce student speech anxiety and develop oral communication skills?

Most broadly, popular culture can be defined as the part of a culture that is left for consideration after removing elitist elements of culture from the discussion (Mukerhi &

Schudson, 2012). In fact, Bennett (2012) boils this point down to its simplest form, saying that "the term 'popular' can be used…to mean 'well-liked by many people'" (p. 261). Mukerhi and Schudson (2012) note however that "the resulting field of popular culture does not have distinct borders" (p. 64). Morrell (2002) suggests that for the purpose of defining popular culture in the classroom, the object in question should be well-liked by most of the population, emanate from the general public, and studied through a lens that does not separate high culture from popular culture. Similarly, Willis (2010) argues that however trite an artifact of popular culture may seem, the way that individuals interact with popular culture is anything but; this means that students bring with them into the English classroom their unique understandings and interpretations of popular culture. Connecting popular culture to an English Language Arts curriculum allows students to "make sense of texts that permeate their own world" (Morell, 2002, p. 43) while also helping to reduce the stigma often associated with school texts and materials (Gorlewski & Martinez, 2010).

The advantages of including public speaking in the English classroom are numerous and include providing students with opportunities to practice and develop listening, speaking, reading, writing, critical thinking, and higher order research skills (Iberri-Shea, 2009; Manchey, 1986). No matter how much teachers work to develop oral language skills in their students, speech anxiety remains a hurdle for many students. It is imperative that teachers understand speech anxiety from their students' perspective and have strategies for helping them overcome this anxiety. Ayers and Hopf (1993) define public speaking anxiety as "those situations when an individual reports he or she is afraid to deliver a speech" (p. 4); public speaking can be a unique form of anxiety in that the individual knows the source of his or her anxiety. Ayers and Hopf also describe three methods for coping with speech anxiety, which are useful to the classroom: visualization, flooding, and skills training. Liao (2014) found that practicing speeches helps students overcome their anxiety through repetition. It does not matter whether students practice individually or in small groups, but it is imperative that the practice is done during class time.

Pecha Kucha is a recent phenomenon in public speaking, having been developed in the last decade by American architects living in Japan to give professionals an outlet with defined boundaries with which to present their work. Speakers are given six minutes and forty seconds to present their speech, accompanied by a twenty slide PowerPoint presentation that transitions automatically to the next slide every twenty seconds. Based on these limitations, presenters must

keep themselves organized and be succinct in their presentation (Beyer, 2011). One of the advantages of Pecha Kucha is its constraints, which Gries and Brooke (2010) argue can "help students create visual presentations that are rhetorically powerful" and "obliges students to identify and emphasize only the most relevant ideas in their longer arguments" (pp. 22-23). In past research involving university students, Beyer (2011) found that "students reported that Pecha Kucha was fun, enjoyable, and easier [to deliver] than expected" (p. 122). In the study, "the students and instructor rated Pecha Kucha presentations higher for visuals, and the instructor also rated eye contact and overall presentation quality higher" (Beyer, 2011, p. 123) when compared to traditional, unconstrained presentations.

Methods

This action research study included forty-two students across two twelfth grade English IV Honors classes in a public high school in the southeastern United States. Students and their parents/guardians voluntarily signed informed consent and assent letters in order to participate. Data were collected through students' Pecha Kucha presentations as well as the in-class assignments leading up to them.

During the study, students were asked to complete pre- and post-questionnaires that gathered student responses to six Likert-scale questions pertaining to public speaking anxiety. The post-questionnaire had an additional five open-ended questions asking students about their thoughts on topic self-selection and Pecha Kucha. The researcher began by showing students one example each day of public speaking from popular culture as a bell ringer activity for the first week. Students would grade the speeches on a researcher-created rubric and then have a brief discussion about the speech's strengths and weaknesses, first in pairs and then through whole class discussion. After the first week, students were introduced to the modified Pecha Kucha format that they would use for their own presentations and were provided materials to guide them through topic self-selection, with the only criteria being that their topic fall within the realm of popular culture. Students were provided with a graphic organizer, referred to as a storyboard, to organize their speeches, as well as two days in the school's media center to work on their Pecha Kucha slides. Student speeches took two and a half days of class time; topics ranged from "The Evolution of Miley Cyrus" to "NHL Goons."

Prior to data analysis, the research questions were reviewed to help ensure that all data collection sources remained relevant to the research questions. Open coding was conducted by

reviewing student post-questionnaire responses and student popular culture rubrics. Selective coding was then used to identify patterns in student artifacts that best related to the research questions. Quantitative analysis was used to analyze the Likert-scale data from the pre- and post-questionnaires; this data were analyzed using percentile comparisons on a four-point scale. The overall data were analyzed using constant comparative analysis to discover emerging themes.

Results

The purpose of the pre-questionnaire was to establish students' attitudes toward public speaking prior to the introduction of any popular culture or public speaking curriculum. All six of the Likert-scale questions were designed to gauge students' responses to various statements about their feelings toward public speaking as well as their past experiences with public speaking in a school setting. By the end of the unit, almost every statement saw meaningful shifts in student responses. On the post-questionnaire, only 40.5% of students agreed that they felt anxious speaking in front of the class, compared to 31% of students on the pre-questionnaire. The second statement about speaking in front of a crowd of strangers only saw a 0.05% move from Agree to Strongly Agree; otherwise, the numbers were identical to those on the pre-questionnaire. On the third statement, 52.4% of students felt anxious speaking in front of a class, while only 38% said so on the pre-questionnaire. On the fourth statement, "I enjoy public speaking," 54.8% of students selected Agree or Strongly Agree, the same as on the post-questionnaire.

In order to gauge student perception of interest in past experiences with public speaking in the classroom, students responded to the following statement on both the pre- and post-questionnaire: "I have been assigned to read speeches in school about topics I am interested in." There was a significant shift in students' perception of interactions with public speaking content that they found interesting. On the pre-questionnaire, 52.4% of students had positive perceptions of the public speaking content in a school setting; on the post-questionnaire, which was administered immediately upon the completion of students' Pecha Kucha presentations, 90.5% of students voiced positive opinions on the content of public speaking in the classroom. On the post-questionnaire, many students expressed positive feelings that resulted from being allowed to select their own Pecha Kucha topics in the realm of popular culture. Two of the more frequently used words in student responses were "comfortable" and "passionate," evoking descriptions about students' personal feelings on their topics of choice.

Many students viewed the boundaries positively. One student, Sasha, wrote that the time limits helped "because I could talk about my topic all day but that [Pecha Kucha] helped summarize it." Another student, Dana, thought in similar terms, writing that "the slides made it so I had a diverse amount of sub topics and caused me to get more to the point … [it also] helped me realize what was more important." Other students felt that Pecha Kucha helped them organize their thoughts more professionally, helping to make them more efficient speakers. Several students used the word "flow" to describe the effect that the slides had as an organizational tool. On the other hand, many students also expressed some displeasure with the boundaries. Students who felt negatively about the boundaries in Pecha Kucha tended to focus on them as a limiting factor rather than as an organizational tool. Many of these critiques had tones similar to that of Tyler, who felt that the boundaries did not help him because "I only had 20 [seconds] to get my point across." Similarly, Bo expressed surprise about the timing, as "20 seconds [per slide] is shorter than I thought."

Discussion

Student responses to Pecha Kucha were somewhat consistent with those of Beyer (2011) in that they produced mixed results. However, in comparing the pre- and post-questionnaire Likert-scale responses, the number of students who felt anxious speaking in front of the class actually increased slightly, something that did not happen in studies by Beyer (2011) or Oliver and Kowalczyk (2013). Student responses to topic selection were much more positive than their responses to Pecha Kucha. On the post-questionnaire, student responses to their experiences with speech topics they enjoyed shifted dramatically, up 38.1% from the pre-questionnaire. Because there was no demonstrable reduction in student public speaking anxiety, a connection between popular culture and a reduction in student public speaking anxiety cannot be made. However, anecdotally, the researcher did find substantial student engagement during the time that students spent in class preparing Pecha Kucha presentations as well as audience engagement when students' observed other's presentations.

For educators wishing to draw from this research to improve their use of oral language pedagogy, Pecha Kucha should be considered an appropriate tool to consider. Nevertheless, educators looking for a quick fix to alleviate public speaking anxiety in students may not consider Pecha Kucha as the most effective approach; however, with the appropriate

modifications, Pecha Kucha can provide students with a format that encourages preparedness and encourages presentations that cover meaningful content efficiently.

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Choosing to Read:
Scaffolding Pre-Choice, Choice, and Post-Choice Reading of Student-Selected Texts

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Students' lack of enjoyment and interest in reading is an issue within our schools that can be associated with classroom practices such as assigning texts beyond students' reading levels and outside of students' experiences (Cope, 1997). One alternative strategy for reading and text selection involves student choice. Choice in text selection has been included in secondary English classes with positive results in student attitude and engagement (Broz, 2003; Cope, 1997; Fisher & Frey, 2012; Morgan & Wagner, 2013; Simmons & Page, 2010; Smith & Scuilli, 2011). The purpose of this study is to incorporate student choice as the primary mode of text selection in a structured, goal-oriented learning experience. This learning experience consisted of three stages of choice in reading: pre-choice, choice, and post-choice. This study investigated these three stages of choice in classroom reading by examining the central research question: How does choice influence students' reading habits?

Review of Literature

Gallagher (2009) argues that very few students, and very few people in general, read as a leisure or recreational activity. McKenna, Kear, and Ellsworth (1995) found that some of these negative attitudes about reading may develop as students progress through school. Findings from a study by Moje, Overby, Tysvaer, and Morris (2008) suggest that students do read outside of school, contrary to popular belief. Hughes-Hassell and Rodge (2007) also found that most students read a significant amount outside of school. Around seventy percent of the students surveyed in that study reported engaging in reading as a leisure activity. Furthermore, students decided to engage in leisure reading for "three main reasons: fun and relaxation, to learn new things, and because they were bored" (Hughes-Hassell & Rodge, 2007, p. 24).

Students described reading as much more enjoyable when they had choice in the texts that they read (Cope, 1997; Fisher & Frey, 2012). In a study conducted in an English classroom, Thomas (2003) found that "overwhelmingly [students] cited choosing their own novels as the

key to increasing their reading" (p. 18). When the students were given choice in text selection, Denzin (2013) observed that students were able to read and discuss contentious and potentially inappropriate material in a very mature manner. Choice in text selection, therefore, is not only an opportunity that students find beneficial and enjoyable but also a responsibility students may be able to handle professionally. Pitcher, Martinez, Dicembre, Fewster, and McCormick (2010) found that in addition to other emergent conclusions, students struggled with comprehension of most reading done in and for school. However, Pitcher et al. (2010) also found that these students were better able to comprehend the reading when they personally selected the reading material. The inclusion of self-selected reading, therefore, provided students with the opportunity to better comprehend and understand their reading and to recognize the benefits of improving their reading through the experience of selecting an interesting text of their own choosing.

There are also multiple concerns to address when implementing choice through independent reading programs. Some teachers encounter an experience in which they feel like they lose control of the classroom and are unsure of whether or not the students are actually learning (Garan & DeVoogd, 2008). Additionally, choice is not always perceived by students as beneficial. Heron (2003) found that students had mixed opinions concerning opportunities for choice within classroom activities. When "choosing skills" (Broz, 2003, p.24) are not taught to and nurtured within students, students will not be able to select books that efficiently support them in reading for enjoyment, learning, and social interaction. As a result, students' reading habits may remain undeveloped. Therefore, fostering students' skills and understandings concerning text selection could be a critical component to increasing student engagement with and learning related to reading and personal reading habits.

Methods

The research study occurred during the spring semester at a high school in a mid-sized urban district in the southeastern United States. The research study took place during the researcher's student-teaching placement in two semester-long English III classes. Fifty-three students returned the required consent and assent forms and were included in the study. The students participating in the study consisted primarily of eleventh-grade students, although a few tenth- and twelfth-grade students were also class members and participated in the study.

On the first day of the study, the researcher administered a reading attitudes questionnaire to the participants in order to gather information regarding their attitudes about reading and their

reading habits. The questionnaire contained Likert-scale-style questions that asked students to record their attitudes about reading in various forms and situations. At the end of the fourth day, the researcher distributed and collected reading interest inventories in order for students to consider and record their own reading interests. At the end of the first week, each student selected a book from the school library to read each day in class over the following four weeks.

Using weekly reading forms, students determined reading goals. Data from these forms were used to monitor participants' engagement with their texts, reading habits, and understanding of their reasons for reading. Participants also completed a brief reader-response form after each reading. Data from the reader-response forms were used to analyze students' engagement with their chosen texts as well as their own reading habits. Finally, participants' summative writing assignments were collected at the end of the study, and the data were used to analyze participants' engagement with the text and reflections on their own reading habits. At the end of the study, students, again, completed the reading attitudes questionnaire and the reading interest inventory in order for the researcher to assess any changes in participants' interests and attitudes over time.

Prior to data analysis, the research question was reviewed in order to align data with the original inquiry of the research project. The quantitative data obtained from these questionnaires were analyzed using a pre- to post- comparison of averages. The majority of the data collected in this study was qualitative in nature. For this project, the qualitative data were analyzed by means of constant comparative analysis. The researcher used open, axial, and selective coding in order to examine themes that emerged from the aforementioned data collection techniques. The three themes that emerged from data analysis were understanding readers, the right book, and engagement in post-choice reading.

Results

Investigating: Understanding Readers

On the questionnaires, many students expressed positive attitudes about reading through comments concerning the reasons they read, primarily related to recreational reading. In many cases, students' desires and decisions to read seemed to correlate particularly with their perceived interest in the text. Beyond interest, students viewed reading as a means to learn. This connection between reading and learning could be associated with school, but some students wrote more about what was going on in the world around them. Other students viewed the

primary purpose of reading to be enjoyment or entertainment. Another important line of reasoning underlying students' decisions to read involved the context, the particular time and place for reading. Students indicated specific contexts as more commonly associated with reading: school, at home before bed, and during travel. While many students expressed reasons why they read, other students responded with reasons for not reading. A lack of interest was a significant reason that emerged for students not reading. In many student responses, it was not just that the reading was not interesting but, instead, that the act of reading itself was boring for them. For other students, choosing not to read was associated with negative experiences from the past or current troubles and difficulties associated with reading. Some students have experienced or do experience physical discomfort, such as headaches, associated with reading. Another concern was the negative stress associated with reading. A final reason included a consideration of how students used their time engaged in alternative activities other than reading.

Choosing: The Right Book

Students' preferences for choice in text selection emerged as a significant idea. For some students, choice was posited as a necessity for a positive and enjoyable reading experience. Other students noted the importance of the particular book or text they were reading. This idea of the right book being an important aspect of choice and the reading experience is supported by a significant number of comments from the data in which students wrote about enjoyment and engagement as dependent on the particular book or text. Another idea that emerged from the data was that when students have a choice in what they read, many students will choose to read various other forms of texts besides books. Many students commented that they choose to read articles in magazines or digital texts. In opposition to choice, students wrote about required or mandatory reading. This required reading, almost always associated with school, was generally perceived as negative and detrimental to students' likelihood of reading. Ultimately, the ideas of mandatory reading being boring or uninteresting appeared to have a negative influence on many students' reading experiences by contributing to negative attitudes about reading.

Exploring: Engagement in Post-Choice Reading

Many students experienced authentic engagement with the books they read over the course of the study. Several students used the term "hooked," wanting to keep reading more, to describe this experience of being engaged in their reading. Among the causes for becoming hooked were interest and enjoyment, as referenced above as reasons why students choose to

read. Beyond the general interest and enjoyment that students experienced in the reading, it appeared that students' experiences of being hooked increased as they moved further along in their books. Another emergent idea concerning student engagement during in-class reading was one describing liking a particular book more than other books and reading experiences from the past. Students who, in the past, had not enjoyed reading or not chosen to read for fun appeared to enjoy their self-selected books for various reasons, including the book being more interesting than expected and students being able to comprehend the book more easily than others.

Discussion

Students demonstrated a significant preference for having choice in their reading materials, while specific reading requirements were viewed as a negative. The association of more enjoyable reading and choice has been cited in several previous studies (Cope, 1997; Denzin, 2013; Fisher & Frey, 2012; Thomas, 2003). In each of these cases, choice in the selection of books was the key component associated with positive experiences with reading. When students chose books they wanted to read, they were more likely to read and enjoy them. Because students were able to think about a book they liked, choose that book, and spend significant time reading that book in class, they had a more positive reading experience, which aligns with a previous study for a similar in-class reading program (Morgan & Wagner, 2013). Furthermore, because each student spent significant time considering their choices before selecting a book, it appeared that many students avoided choosing books that did not align with their interests, which has been noted as a significant concern for some readers (Broz, 2003).

One idea that emerged as a counterpoint to choice was that of requirement. On many of the questionnaires, students indicated that they often read only because they had to read; it was required or mandatory for class. Therefore, these negative attitudes about reading were often associated with what could be called school reading. McKenna et al. (1995) found that many students developed negative attitudes about reading as they progressed through school, suggesting that something about the reading students do in school can lead to negative attitudes. In this study, students indicated that their reasons for not reading or for disliking reading, particularly required reading, included it being boring, uninteresting, or too difficult.

This study also produced findings that focused on students reading habits and attitudes. When asked to respond to an item concerning their general feelings about reading, many students responded in a way that expressed their reasons for reading, which were varied but also shared in

some instances. Among the most common reasons indicated for reading were because it is interesting, for fun or enjoyment, for relaxation, to avoid boredom, and to learn new things. These reasons align with those found in a previous study by Hughes-Hassell and Rodge (2007). An understanding of the purposes students have for reading, which appear to be, on a broad scale, fairly common, can help teachers guide and instruct their students.

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Supporting Students to Ask Scientific Questions in a Biology Project-Based Learning Unit

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Science education is at a crossroads as states demand performance on standardized tests and teachers and researchers fight for science curriculum that allows students to work and think like real scientists. Researchers and practitioners have developed two interconnected sets of national policy recommendations, *A Framework for K-12 Science Education* (National Research Council, 2012) and the *Next Generation Science Standards* (*NGSS*; NGSS Lead States, 2013), in order to describe how to move away from content-driven science classes that focus on memorization of vocabulary and provide only a surface-level understanding of each topic. In contrast with traditional state standards, the *Framework* (NRC, 2012) and the *NGSS* (NGSS Lead States, 2013) focus on a depth-over-breadth curriculum. Under the NGSS, as students enter higher grades and more advanced classes, they will study each core idea in greater depth and engage in authentic science and engineering practices (NGSS Lead States, 2013). The combination of core ideas and scientific practices helps to create more realistic and significant scientific experience for students (NGSS Lead States, 2013; NRC, 2012).

With science education and curricula moving toward more meaningful, authentic experiences for students, project-based learning (PBL) is of great relevance. Students participating in PBL lessons learn the same science content as their peers in traditional classrooms, but students act as real scientists as they solve real problems that are relevant to their lives (Capraro & Slough, 2008). As students become more comfortable with acting and thinking like scientists in their PBL classrooms, they will hopefully begin to ask questions like scientists. Project-based learning classrooms provide great environments for thoughtful scientific questions, but little research has been done to describe how teachers can support and encourage students to ask these scientific questions. The present study focuses on the research question: How can a teacher support students to ask scientific questions during a biology PBL unit?

Review of Literature

It is at the intersection of standards-driven courses and authentic scientific experiences that project-based learning is most relevant. Project-based learning (PBL), within the context of this study, is defined as an interdisciplinary instructional method that emphasizes investigation and collaboration in order to create authentic experiences for students (Capraro & Slough, 2008; Krajcik & Czerniak, 2014). In order to answer relevant, real-world driving questions, PBL students conduct authentic, hands-on investigations that require problem solving and critical thinking (Capraro & Slough, 2008; Han, Capraro, & Capraro, 2014, Krajcik & Czerniak, 2014). By performing genuine scientific work, students not only get a taste of life as a scientist, but have a deeper understanding of the purpose and application of the science content (National Research Council, 2012).

Project-based learning supports deeper content knowledge by engaging students in projects and activities that develop deep, integrated understanding of both science content and process (Krajcik & Czerniak, 2014). Asking questions, an NGSS science practice (NGSS Lead States, 2013), is an essential part of science education and an integral part of PBL lessons. Developing these questions goes beyond defining a driving question for an investigation, although this is an important part of student questioning with a PBL unit, and includes the types of questions they ask when planning their investigations, analyzing data, discussing results with their peers, and expressing what they still want to learn about a topic (National Research Council, 2012). Asking scientific questions, however, does not come second nature to students. For example, when first introduced to PBL, students tend to develop their questions too quickly or ask questions based on personal interests rather than based on the science content (Krajcik, et al., 1998). Students can improve their questioning skills over time, and as students adjust to new student-centered, cooperative learning environments, their questions will become more focused and will begin to include relationships between variables (Roth & Roychoudhury, 1993).

But what can science teachers do to help students improve the quality and relevancy of students' questions? Krajcik and colleagues (1998) suggest that having experience asking questions and learning how questions influence experiment design and investigation is a vital component of asking good questions. They point to the need for students to not only receive feedback from their teachers and peers, but to also have class time dedicated to the revision and

generation of questions. Additionally, it is important for teachers to scaffold the generation of questions and provide opportunities for students to explore more information related to the questions (Scardamalia & Bereiter, 1992).

Though project-based learning units will provide many opportunities for students to generate and revise questions, as well as gather background information on their topic, it is unclear how science teachers support students to ask questions within these units. The present study considers the development of student questions, as well as the supports provided by the teacher during instruction and facilitation; it seeks to answer the question: How can a teacher support students to ask scientific questions during a biology PBL unit?

Methodology

Context. This action research study consisted of students enrolled in two sections of honors biology at a public high school in the Southeastern United States where the researcher was assigned for student teaching. There were a total of 44 students invited to participate, but only 35 consented to participate in the study. Three students were also interviewed.

Data Collection. Collected data included pre- and post-unit tests, three sets of three student questions from throughout the genetics PBL unit, video from the question-writing sessions, and interviews with three students. A post-survey was also administered in order to determine students' comfort levels asking questions and participating in class, but the results were irrelevant to the research question and have been excluded from this study.

Data Analysis. The present study focused on describing how to support students to ask scientific questions in a biology project-based learning (PBL) unit. As such, the data analysis focused on both the supports and the development of questions during the unit. First, statistical analysis was performed on the pre- and post-test scores in order to confirm student learning during the unit. Because students wrote their scientific questions on three different days during the genetics PBL unit, the questions were analyzed and described by day. Five focus students were selected and their questions and progress were described in detail. Video footage from each question-writing class period was also analyzed for themes in the types of verbal support given by the teacher. Descriptions of the supports were analyzed and described by day, alongside the student questions. Finally, three of the five focus students were interviewed and their responses

were evaluated for themes in the supports the students found most influential on the development of their questions.

Results

Student averages on the pre- and post-tests were analyzed using an unpaired t-test. There was a significant difference $t\ (78) = 6.27$, $p < .0001$ between the pre- and post-test scores which confirmed student learning during the genetics PBL unit.

Based on the needs of the students, teacher-provided supports varied between each of the three question sets. In the first question set, the teacher provided students with two additional follow-up questions in the prompt, in order to help direct their questioning. In the second and third question sets, no additional written supports or follow-up questions were provided. Verbal supports also varied, and were divided into three main categories: procedural, prompts for brainstorming, and examples of content. During the first and second question sets, students needed more procedural verbal supports to help them to complete the question-writing activities. Since the class had never written formal questions, it is not surprising that it took two rounds of question-writing before students felt comfortable with the procedure. By the third and final question set, the students required very few procedural verbal supports and instead needed additional examples of content and prompts for brainstorming While the students may have felt comfortable with the format of asking questions by the third round, the increasing need for examples of content and prompts for brainstorming indicates that students were still not completely comfortable with the process of developing questions. This may also have been due to the removal of additional written supports on the question forms.

One factor that may have affected the types of supports students needed was the change in prompts from one question-writing session to the next. Because the prompts were intended to align with where the students were in the genetics PBL unit, each prompt was different. It is possible that different prompts supported students differently, thus affecting both the questions they produced and the additional verbal supports the teacher needed to supply in order to effectively facilitate the generation of student questions.

When student questions were analyzed based on scores in the three rubric categories (specific, investigable, and relevant), there were no consistent trends across the three sets of questions. Despite this, interviewed students still perceived improvements in their questions over

time. Analysis of the student interviews uncovered three main themes in the factors students found most important in the development of their questions: learning more, interest in the material, and class activities. The responses from the three students who were interviewed indicate that as they learned more about genetics and participated in labs and in-class activities, they became more interested in the material and felt more comfortable asking scientific questions. Student engagement, content knowledge, and interest in the material were critical factors in their perceived ability to ask scientific questions, though that perception did not always align with the actual progress of the students' questions over time.

Discussion

The findings of this research indicate that in order to support students to ask scientific questions during a biology PBL unit, teachers must change their scaffolding strategies based upon the question prompts and student experience with asking questions. It was expected that as students progressed through the unit and gained more experience asking questions, the quality of their scientific questions would improve. However, there were no consistent patterns in the quality of student questions over time, which suggests that the changing supports and question prompts may have affected each student differently. Another possible reason may be the lack of review from both teachers and peers between each question set.

While not all students' questions progressed based on the scoring measures, all three interviewed students perceived improvements in their questions throughout the unit. During the interviews, the students were not asked about the effect of specific supports, and did not mention the teacher-provided verbal or written supports as factors affecting the development of their questions. Instead, the interviewed students attributed the perceived improvement in their questions to in-class activities like discussions and labs, a greater knowledge of the genetics content, and an increased interest in the unit. As these students developed more content knowledge and became more interested and engaged in the unit, their confidence and perceived ability to ask scientific questions improved, even though their perception did not always align with their actual progress.

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Using Hispanic Music in the Secondary Spanish Classroom

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Music is a product of a culture and therefore represents cultural perspectives. The natural human connection with music makes its use in the K-12 world language classroom a meaningful context for learning about culture. The *World-Readiness Standards for Learning Languages* set forth the essential role of culture in language learning (American Council on the Teaching of Foreign Languages, 2014). Since language and culture are intertwined in language development, the use of authentic music and lyrics in instruction can virtually transport language learners to the target culture, creating meaningful communication opportunities for them to experience the culture in which the music originates. Using the innate motivation that music provides, interest in culture can be developed through this medium. As a result, when language students become interested in the cultures they are studying, this experience can lead to increased language acquisition (Curtain & Dahlberg, 2010).

Authentic music—music written by native speakers for native speakers—is linguistically genuine and can tell a story or provide a historical perspective of the culture it represents (Barry & Pellissier, 1995). The use of authentic music focused on historical and contemporary events in the Spanish classroom, for example, can support learners' use of Spanish to investigate, explain, and reflect on products and perspectives of Hispanic cultures and facilitate their ability to make comparisons with their own culture (ACTFL, 2014). These experiences provide students with opportunities to use the three modes of communication: interpersonal, interpretive, and presentational in order to develop their proficiency in Spanish.

Review of Literature

Music and song lyrics are used in K-12 classrooms and support cross-disciplinary instruction. Music not only has a "fun factor" that is appealing to most students, but it can also be beneficial in the learning process in a variety of ways. The use of music to support specific concepts can help students internalize and be able to recall information well into the future, and quite possibly, indefinitely (Baines, 2008). The capacity music and song lyrics have to stimulate

and enhance memory and reading demonstrates how both can be used to aid the learning process (Bellver, 2008). Music can play a significant role in the world language classroom since the combination of music and language can appeal to the emotions of students. This quality of emotional connection can, in turn, support the learning process, improving linguistic ability (Fonesca-Mora, Toscano-Fuentes, & Wermke, 2011). In particular, the inclusion of music and song lyrics can be used to introduce or reinforce L2 grammatical concepts, increase vocabulary both actively and passively, as well as provide a rich communication context for the study of idiomatic expressions (Nuessel & Marshall, 2008). Finally, the cultural perspectives and messages conveyed through lyrics can reinforce L2 concepts being taught, which is essential to students' language development (Curtain & Dahlberg, 2010).

Krashen's Affective Filter Hypothesis (1982) states that the variables of motivation, self-confidence, and anxiety play a facilitative role in L2 acquisition. When motivation and self-confidence are high and anxiety levels are low, students are more likely to have success in L2 acquisition (Krashen, 1982). Studies have shown that language students often have a stronger feeling of ease during lessons that incorporate music and song lyrics, stating that the overall meaning of material is easier to understand (Alley, 1988; Baines, 2008). Many students value activities involving music because they are enjoyable and can help reduce anxiety related to the use of the target language (Fonesca-Mora, Toscano-Fuentes, & Wermke, 2011).

Authentic music and lyrics are culturally reliable and linguistically genuine resources for the world language classroom (Barry & Pellissier, 1995). Both can demonstrate cultural experiences, depict historical or contemporary events, as well as provide meaningful contexts for L2 communication in which students use the three modes of communication, leading to students' L2 development. For example, listening to authentic music and reading the lyrics allows students to concentrate on messages and ideas as they would in L1, providing linguistic elements important to L2 acquisition (Fonesca-Mora, Toscano-Fuentes, & Wermke, 2011). Additionally, the structural and motivational properties of music can help students' develop auditory perception, metacognitive knowledge, and aid phonological memory, all of which can aid students' L2 development (Sleve & Miyake, 2006).

Culture and language are inextricably linked. Therefore, the development of cultural competence, which includes empathy and respect toward other cultures, enhances students' L2 proficiency development (Thanasoulas, 2001). When language students examine values and

themes of the cultures of the language they are studying, they not only develop their cultural competence but also can gain the ability to examine their own cultural biases and beliefs. This skill is developed as students make comparisons and begin to understand differing viewpoints (Berhó & Defferding, 2005; Curtain & Dahlberg, 2010). The purpose of this action research study was to develop students' language ability and cultural understanding in a high school Spanish class while working with authentic music focused on historical and contemporary events.

Methodology

The action research study took place April 16-28, 2015, during a field experience that was a component of the researcher's master's degree program. The project included eleven students in a Level V Spanish class in a field placement at a central North Carolina public high school. The Spanish specialist who taught the class collaborated with the researcher to teach his classes for the duration of the study. Of the eleven students, one was a native speaker and two were heritage speakers. The researcher considered these factors when analyzing data.

The study included three data sets. Data Set One consisted of student artifacts that were the result of performance-based instructional strategies using two authentic songs to develop listening comprehension and oral and written expression in Spanish. The authentic music selected by the researcher focused on a historical or contemporary event in Hispanic culture in order to help students develop a better understanding of the event and its impact. The researcher analyzed students' written work looking for comprehension of the main idea, use of supporting details, a reflection, and a comparison with another event to determine students' interpretive ability. The researcher also looked for language control in students' writing, including accurate spelling, use of accents, subject/verb agreement, presenting information in more than one time frame, as well as the use of new vocabulary from lyrics and class discussions to determine students' presentational writing ability. These parameters for performance are representative of the Intermediate high proficiency level with emerging evidence of Advanced low proficiency (ACTFL, 2012a/2012b). Finally, students worked in groups on a culminating project to analyze a new song using the strategies taught previously and to create an oral and written presentation. Data Set Two consisted of the researcher's field notes and video-recorded classes. These data were used to focus on the researcher's instructional strategies as well as student engagement. Data Set Three consisted of a student survey designed to gain information about students'

perceptions of how the strategies helped their Spanish language development and cultural understanding in relation to the activities and their final project.

Results and Discussion

For the first assignment in Data Set One, the researcher collected students' sentences written after the third listening and their post-listening paragraph. Analysis of the students' sentences revealed that eight (73%) students were able to state the main idea, and seven (64%) were able to provide supporting details. There were some language control errors with use of prepositions, conjunctions, possessive pronouns as well as verb agreement and spelling. These errors were typical for approximately six (55%) students. Analysis of the students' post-listening paragraphs revealed that nine (82%) were able to provide the main idea as well as supporting details. Nine (82%) used new vocabulary from class discussions and song lyrics. Eight (73%) demonstrated basic control of language structures such as subject/verb agreement and correct usage of the past and present tense. The most common language control errors noted were associated with masculinity versus femininity of nouns, spelling, and the use of accents. Seven (64%) provided a reflection on the perspective of the target culture.

For the second assignment, the researcher again collected students' sentences written after the third listening and their post-listening paragraph. Analysis of the students' sentences written after the third listening revealed that ten (100%) students were able to provide the main idea of the song. Six students (60%) provided supporting details and demonstrated stronger language control of subject/verb agreement and the use of the past tense. Analysis of the student paragraphs revealed growth of both student understanding of the song's message and written language ability. Nine (90%) students provided the main idea along with supporting details using new vocabulary from class discussions and lyrics. Eight (80%) students demonstrated basic control of language structures such as subject/verb agreement and accurate use of past and present tense. As with the first paragraph, the most common language control errors noted were associated with masculinity versus femininity of nouns, spelling, and the use of accents. All students were able to provide a reflection on the event, and approximately half of the students made a comparison of the target cultural event with an event in their own culture.

Analysis of data from the students' oral presentations revealed that students were able to demonstrate in writing an understanding of the cultural event recounted in the song, provide supporting details, and reflect on the event. Speaking in front of the class proved difficult for

several students and may be an indicator that students' written language ability developed more than their oral ability. Seven (64%) students were able to sustain speech most of the time but occasionally resorted to English when they lost their place on their slides. Three (27%) students presented completely in the target language without reading from their slides. It is important to note that two of these students were native and/or heritage speakers. Approximately six (55%) students demonstrated some signs of anxiety as evidenced by their use of filler words, long pauses, and resorting to reading directly from the slides. Some of these signs may be due to a general fear of presenting in front of the class, but they may also be attributed to speaking in the target language.

Data Set Two revealed that four of 11 students (36%) asked clarifying questions, and five of 11 (45%) demonstrated understanding of the first song's message. For the second song, six of ten (60%) asked clarifying questions, and seven of ten (70%) demonstrated understanding of the message. This may be due to the difference in the types of songs, with students appearing to be more engaged during the second song. Analysis of Data Set Three revealed that students felt they developed language and cultural knowledge through the use of authentic music focused on historical and contemporary events. The analysis also revealed that students enjoyed the incorporation of authentic music in the classroom.

Conclusions

The researcher found evidence to support the use of authentic music focused on contemporary and historical events to develop language and cultural knowledge. The researcher’s use of intentionally scaffolded L2 through performance-based instructional strategies helped students understand the deeper messages within the authentic music. Students demonstrated growth in the areas of understanding the main idea and supporting details and the ability to express their own thoughts on the topic, essential elements of the Intermediate high level of proficiency (ACTFL, 2012a/2012b). Survey responses indicated that, overall, students enjoyed learning about cultural events through authentic music. However, students' presentational writing was better with the second song than the first, and this song conveyed emotions differently. Both songs dealt with an adverse event, but the second song was more positive in that it demonstrated hope, and the students were able to make stronger connections, which were shown in their written reflections. This finding may indicate that the type of music can have an effect on student engagement and understanding.

While the action research study provided useful results, the researcher believes that the research would have been more effective if the researcher had had the opportunity to spend more time in the classroom before and during the investigation. Since the researcher was not student teaching in the classroom, there was not a sufficient period of time to build relationships with the students. In addition, due to the low number of students participating in the action research study, the results are difficult to generalize.

As a result of this action research study, the researcher gained insight into the importance of using action research as a method to develop effective teaching strategies and assessments to support the development of oral and written language ability and cultural knowledge. From this experience, the researcher learned how to document student growth over time and that the use of data is valuable in gathering this evidence. She also learned how action research could be used to support specific teaching strategies. In particular, this study also showed the value of using authentic music as a communicative context for developing both language ability and cultural knowledge.

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American Girl Rising: The Effects of Incorporating Inspirational Video into the Secondary Mathematics Classroom

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The National Council of Teachers of Mathematics names equity as one of their top priorities; as such, equity has been the subject of much recent research in the field (NCTM, 2014). Specifically, NCTM (2014) states we must "increase the number of high school graduates, especially those from traditionally underrepresented groups, who are interested in, and prepared for, STEM careers" (p. 2). Historical test scores show that men have long outperformed women in math (U.S. Department of Education, 2012). More recently, women have caught up, with some reports showing that men and women perform equally as well in math and science (Grossman & Porche, 2014; Ross, Scott, & Bruce, 2012). However, government data shows that females are still underrepresented in science, technology, engineering and mathematics (STEM) careers compared to male counterparts (Beede et al., 2011). If motivation is a factor causing females to avoid STEM careers, educators have a responsibility to address this in our classrooms.

In this study, I investigated the effects of a series of math lessons incorporating the documentary *Girl Rising* on high school students' mathematics motivation and desire to pursue STEM education and careers. *Girl Rising* tells the true stories of nine young women, each fighting for her education in developing countries where barriers to education are much more significant than in the United States. This study examined one way teachers can engage students in the mathematics classroom, using social justice narratives, in order to encourage them to pursue STEM careers.

Literature Review

There is great breadth in the literature examining gender and racial gaps in mathematical performance, attitude, and career-field entry and ways to combat such inequality. Research focusing on student motivation and the interrelated effects of gender stereotypes and confidence is of particular relevance.

Research has shown a number of ways to improve student motivation in the mathematics classroom. Ahmed, van der Werf, Kuyper, and Minnaert (2013) and Frenzel, Pekrun, and Goetz (2007) conclude that math lessons that excite students, encourage them to value their education, and show teacher supportiveness will increase student motivation. Bittick and Chung (2011) found that narratives can increase motivation and enjoyment in the mathematics classroom, especially for females.

Researchers have investigated a number of causes of the gender gap in STEM careers. Some studies have found that while women perform equally well to men in mathematics, they still often have less mathematical confidence (Elmore & Oyserman, 2012; Hargreaves, Homer, & Swinnerton, 2008; Ross et al., 2012). It follows that women are less likely to enter math-heavy fields if they do not feel confident in math, even if they possess the capability to do so. Grossman and Porche (2014) and Ramsey and Sekaquaptewa (2011) found that students' stereotypes about female mathematical ability adversely affected female math performance. Johnson, Barnard-Brak, Saxon, and Johnson (2012) found that females perform better in conditions of no stereotype.

Methodology

This action research project sought to examine effects of a series of math lessons on students' motivation, perception of stereotypes, and desire to pursue STEM fields using mixed methods. The 90-minute lessons each included a video clip from the documentary *Girl Rising*, a discussion of the story told in that portion of the film, and a math lesson connected to the story. There were two lessons over a two-week period. Participants in this study were 50 members of two Integrated Math II Honors classes in a suburban school in the southeast.

Data for the study included surveys, class discussions, and semi-structured interviews. The surveys and interviews were used to gauge the effects of the lessons on student motivation, engagement, opinion of math, perception of math stereotypes, desire to pursue further math and science courses, desire to pursue STEM careers, and perceived value of education. T-tests were used to determine significant differences on pre- and post-surveys as well as between demographic groups. Open-ended survey responses and interviews were coded for keywords and themes. Codenames were used when discussing student interviewees. Class discussions lent

insight into how engaging the lessons were and how the lessons affected students' valuation of education, as well as how effective the lessons were at provoking thought about stereotypes.

Results

Survey data showed a few significant changes pre and post, and a few differences between groups. In conjunction with the results of the class discussions and interviews, the most significant findings from the data were students' increased valuation of education, engagement in the lessons, and lack of stereotype relating to mathematics ability. Survey responses were coded, with "strongly disagree" equal to one, "disagree" equal to two, "agree" equal to three, and "strongly agree" equal to 4.

These lessons gave students an opportunity to reflect upon their valuation of their education. In comparing pre- and post- survey responses, students more positively responded to the statement "My education is important to me" after the series of lessons (mean of 3.77) than they did before the lessons (mean of 3.71). It is also significant to note that on both the pre- and post-surveys, this was the question that got the highest agreement values from students. Class discussions about the documentary often centered on the importance of education, and how American students sometimes take theirs for granted. For example, students spent significant time during the discussions comparing the hardships shown in the documentary versus their own education. They spoke about why education was important and why they were thankful for the opportunities that they were given, which the subjects of the documentary did not have. In interviewing the students, they continued to discuss how the documentary contributed to their valuation of their own education. Tracy stated that, "After watching the movie, we paid attention more in class because we were thinking about how not all students have that opportunity."

Overall, students had a positive opinion of the lessons as a different way to learn math, with average student ratings of the lessons equal to 3.15 for enjoyableness and 3.13 for engagingness. The class in which these lessons were implemented was a fairly traditional math classroom, where the teacher taught mostly through lecture along with drill and practice. Students rated the research lessons well on the post-survey. On survey open response items, students stated things like: "[the] videos are very engaging, I enjoyed them a lot" and "the lessons were more fun than usual math lessons." In the interview, Katie stated that she liked the lessons because "they related to the real world and not just random problems."

These lessons attempted to alleviate stereotypes about which type of people are more naturally gifted at mathematics. However, results showed that students, for the most part, did not harbor such stereotypes. Or minimally, they did not voluntarily admit to doing so. The two survey items with which the most students responded that they disagreed or strongly disagreed, both pre and post, were those claiming that one gender or the other was better at math (means of 1.54, 1.48, 1.81, 1.83). Further breaking down a male-biased stereotype, females more strongly agreed with the statements that they were good at math (3.14 vs. 2.94) and that they could be successful in the math classroom (3.63 vs. 3.53) than their male counterparts. In discussing gender stereotype, most students claimed they had not heard or felt the effect of such a stereotype. Students stated things during discussion such as "gender has no effect on math ability." In their survey open response, students said, "someone's ability at math is determined by their effort at succeeding, gender has nothing to do with math" and "Gender has nothing to do with intelligence." However, class discussion brought up some examples of stereotype, with one female student even stating she decided not to be an architect because it was a "male" career. Survey responses also indicated the existence of stereotype. The students seemed to want to avoid believing that such stereotypes exist, even while backhandedly acknowledging them. In general, there was evidence of some stereotype about math ability; however, students were hesitant to acknowledge or discuss it.

Discussion

Situating the findings of this study in the larger body of literature, there are a few noteworthy points. Students' valuation of education, the strength of female mathematical confidence, and the apparently minor role of stereotypes for these students deserve further attention. The lessons focused on the hardships of attaining an education for students around the world, which may have led students to a greater valuation of their own education. Students stated that the videos also led them to work harder in class, thus increasing their motivation. This adds to the findings of Frenzel, Pekrun, and Goetz (2007) that student valuation of education has positive benefits to student educational success.

Beyond the study finding a lack of student buy-in to harmful mathematical stereotype, the data also showed that females did not lack confidence in math. This is an important finding that contradicts other studies, including Elmore & Oyserman (2012), Hargreaves et al. (2008), and

Ross et al. (2012). As these studies emphasized the import of confidence on future mathematical success and entry into STEM careers, this is a very positive finding of the study. While nuanced, the students' hesitancy to address stereotypes about math while displaying some evidence of such stereotypes aligns with microaggressions that women may experience in math classes and math-related fields. Grossman and Porche (2014), Johnson et al. (2012), and Ramsey and Sekaquaptewa (2011), among other studies, emphasized the negative effect microaggressions and subtle stereotypes can have on female performance and entry to STEM careers. While this study attempted to alleviate stereotype, the short amount of time allotted to these lessons restricted their efficacy in addressing these problems. Students need more opportunities in class to reflect upon and address negative stereotypes that may have adverse affects on their futures.

This study found that connecting mathematics lessons to social justice can indeed motivate students, causing them to recognize and discuss the value of their education. Further, we see that either stereotype did not play a heavy role in the lives of these students or they were hesitant to acknowledge that it did so. Further study is needed to determine whether these types of lessons can encourage women to enter STEM fields and to examine the prevalence of stereotypes in today's high schools.

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History as a Pathway to Social Justice Engagement

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Social studies teachers can successfully integrate social justice education into their curriculum in the interest of promoting their students' social justice engagement (Johnson, Oppenheim, & Suh, 2009). Though approaches differ, social justice education programs all promote student social justice engagement through student-centric social studies curricula. Consequently, they introduce the topic through the lens of experiential education that directly connects to the lives of the students. Under these circumstances, teachers begin with the lived experiences of their students and then extrapolate from those experiences a theory of social justice. This particular action research project seeks to probe this methodology of experiential education within the subject of history by asking the research question: How does connecting historical social justice movements to contemporary issues affect students' social justice engagement? This sort of historiography reifies the interconnectedness of the past and the present and forces students to consider the relationship between the historical topics at hand and their responsibilities as citizens in contemporary society.

Literature Review

Keeping in mind the inherent constraints upon defining social justice, I offer this definition as the foundation for my successive research: Social justice consists of ongoing moments of consciousness raising that translate into individual and collective efforts to oppose oppressive inequities and enact liberating solutions. Such inequities may afflict human beings, other living creatures, and/or the ecosystem as a whole and inhibit their full flourishing. This definition of social justice presupposes both awareness and activism. In light of students' relative lack of agency as minors, I define activism as both students' actions *and willingness* to engage in social justice (Nelson Laird, Engberg, & Hurtado, 2005).

Bell (2007) argues for the practical application of history with regard to social justice. First, history reveals the origins and persistence of systems of oppression that makes sense of the contemporary tentacles of oppression stretched throughout society. Second, history provides

organizers with models of successful social justice movements from which current groups can draw inspiration. Others advocate that teachers present socially just historical narratives by "re-membering" those who belonged to marginalized groups, such as peasants, women, children, and non-Europeans (Lerner, 2009; Zinn, 2003). Finally, some advocate that social just history courses include actual opportunities for students to engage in related social justice activities (Ciardiello, 2004).

Methodology

In order to answer my research question, I taught a three-day unit on several historical social justice movements in an A.P. Human Geography class. The presentation of this material distinguished itself from traditional historiography on two counts. First, I eschewed an emphasis on the movement's leadership in favor of highlighting the roles played by participants, especially young people, and the rhetoric that drove them to action. Second, I pushed students to find similarities between the historical social justice movements we were studying and contemporary concerns. In so doing, I hoped students would find cause to see present day problems as defining opportunities for them to oppose injustice and promote liberating solutions.

This study took place at a local high school and included 21 students in the class who completed the study. I collected data from three sources. First, I administered a pre- and post-unit survey, the Social Justice Scale (SJS), designed to measure students' willingness to engage in social justice. Following the completion of the unit, I conducted a semi-structured interview with a focus group of six self-selected students. Finally, I maintained a daily journal throughout the action research study.

The bulk of the data analysis occurred following the conclusion of the unit when I coded student responses to Likert scale questions (a scale of 1 to 7) on the pre- and post-unit questionnaire and tabulated responses based upon each category laid out in the SJS. Then I used descriptive statistics in order to determine differences between the two sets of responses. Next I transcribed student responses from the focus group. I coded these transcripts according to the categories laid out in the SJS: general beliefs about social justice, self-confidence and social justice, and intentions to engage in social justice. Once the qualitative data was coded, I compared it to the results of my quantitative data analysis of the Likert scale responses in order to determine similarities and differences. Finally, I identified themes in the overall data set that enabled me to respond to my research question.

Findings

Students' responses during the post-unit focus group and the differences between pre- and post-unit responses to the SJS indicate that this unit of study positively impacted students' social justice engagement. Students indicated that they gained a deeper awareness of the need to engage in a variety of social justice issues and expressed a tentative willingness to do so, even as some members of the focus group hypothesized that they might not be able to make a significant impact beyond the level of personal relationships.

Student Beliefs about Social Justice

This unit prepared students to formulate new definitions of social justice based upon their responses to the class work. During the focus group, several students gave credit to this unit and its survey of various historical social justice movements for giving them the language and knowledge to talk about social justice. In addition, the unit raised students' awareness about a variety of social justice issues in the past and present and convinced them of the need for people to act for social justice. Changes in student responses on the SJS seem to bear out that this unit was effective in raising awareness about social justice issues and the need to act to bring about positive solutions. The overall average of student responses from before and after the unit also saw an increase from 6.07 to 6.31, indicating that the unit affected students' beliefs about social justice and its continuing importance.

Student Self-Confidence and Social Justice

In reflecting upon their beliefs about their ability to act as efficacious advocates for social justice, the focus group was more ambivalent than they were about their beliefs regarding the importance of social justice in general. Most seemed unwilling to claim that they could "change the world" or "start a movement," though several seemed to believe they might be able to make a small impact as individuals. If not all of the students believed in their ability to achieve success in the campaign for social justice, several expressed a sense of confidence found in working with like-minded individuals. Although the participants in the focus group were doubtful about their ability to promote social justice successfully, student responses on the SJS suggest a trend toward a greater sense of self-confidence among students who perceived themselves as potential agents of change. The average of all categories saw an increase from before to after the unit, growing from 5.37 to 6.11.

Student Willingness to Engage in Social Justice

With regard to their willingness to engage in social justice, students' responses during the focus group seemed to depend in part upon their prior commitments. One student, who had already expressed an interest in promoting various issues, appeared ready and willing to continue her advocacy. Others found the broad survey of social justice movements paralyzing and doubted their ability to make a difference. Were they to attempt to engage in social justice, the focus group participants listed several avenues by which they would pursue this path, including joining school clubs and organizations, raising people's awareness through conversation, and enlisting the financial and personal support of popular celebrities and multimedia users to advance social justice causes.

Of course, it is not enough for students merely to express a hypothetical plan of action; they must also pursue it. Yet, two students were honest enough to admit that in spite of what they had learned they did not expect that they themselves would engage in social justice following the conclusion of this unit. Even so, the overall average of student responses on the SJS increased from 5.36 to 6.06.

Discussion

Students admitted that at the commencement of this unit they were unfamiliar with contemporary social justice issues. Moreover, they lacked the language to even define social justice as a concept. Several students, however, interpreted social justice through the lens of the Civil Rights Movement (CRM) and racism directed at African Americans. Unfortunately, students' knowledge about the CRM has not translated into a broader knowledge about or engagement with social justice as a broader concept. In many ways, instruction about the CRM has actually prevented students from connecting its concerns to other social justice issues—past and present—while also standing in the way of students who might draw inspiration from the CRM in their own lives (Branch, 1986; O'Brien, 1988). To counteract this trend, teachers need to move beyond "Great Man" narratives of history and situate the CRM within a long and persisting stream of civil and human rights campaigns that extend beyond the CRM (Tuck, 2010; Zamudio et al., 2009).

Both the quantitative and the qualitative data from this study indicate that social studies can facilitate consciousness raising and make explicit the connection between history and students' lives. More difficult, however, might be raising students' awareness about systemic

causes that prevent individuals and groups from gaining civil and human rights. Individual social justice issues, like decolonization or free speech rallies, are important topics for study in the history classroom; tying them to systemic forces of oppression requires more abstract thought, but it is necessary if students are to understand the complex causes of injustice (Kahne & Westheimer, 1996). In order to do so teachers must first make students aware of the injustices in the first place. The students in this study knew very little about social justice and what they did know was fragmentary at best. Once teachers convince students of the reality of social injustices, they can then assist students in investigating the complex individual, local, national, and international causes (Torres-Harding et al., 2014).

It is, of course, insufficient merely to raise students' awareness about social justice. Social justice necessarily presupposes action (Freire, 2000). Social justice education must move students toward engaging in concrete social action (Picower, 2012). Raising students' awareness about historical social justice campaigns and connecting them to contemporary concerns does not necessarily lead to social justice engagement. To engage students in social justice, teachers must maintain a sustained focus upon social justice as a historically persistent goal among marginalized groups. The best way to do this is to teach history through the lens of social justice, integrating the topic into every narrative and biography (Bender-Slack & Raupach, 2008; Johnson et al., 2009).

With regard to students' apprehension about their own potential to effect social change, there are two paths forward. Many of the students, when asked where they might go in order to engage in social justice, named school clubs and organizations that support advocacy and service learning. If teachers want to promote social justice engagement, then they should leverage students' knowledge of and participation in preexisting school groups. Connecting the work of these groups to historical social justice campaigns enables students to make realistic connections between the past and their own efficacy as potential agents of change. Similarly, Kahne and Westheimer (1996, 1998) suggest that service learning can be utilized as a means by which students engage in social justice issues.

No matter what pedagogical approach is taken, Goodman (2000) suggests that motivating people from privileged groups to act for social justice requires teachers to appeal to three sources of motivation: (1) empathy, (2) moral and spiritual values, and (3) self-interest. Whether educators promote service learning or research papers or group investigations, these three aspects

of motivation serve as important guideposts in the quest to increase students' social justice engagement.

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Constructing Explanations: How Teachers Can Support Students in Extracting Scientific Evidence from Documentaries

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Collecting and analyzing evidence is an important skill for all scientists and non-scientists to possess. It is important that all citizens understand basic science concepts and are able to interpret current research presented in the media, in order to make informed decisions on legislation and health care. Students practice these skills when constructing scientific explanations, one of the practices incorporated in the Next Generation Science Standards (NGSS Lead States, 2013). One framework for constructing explanations is a three step model that incorporates claim, evidence, and reasoning (McNeill & Krajcik, 2012). Science students typically gather evidence from the quantitative or qualitative data gathered from classroom experiments. However, it is difficult for students to capture evidence for every science phenomenon inside the four walls of a school building, such as global climate change or the significance of the loss of a keystone species. In these cases, students must rely on the data collected by scientists in the field. Students can analyze and interpret the data presented in science literature; however the data may be more significant when it comes from image-rich documentaries.

Films as a supplementary source of information is not a new concept. In fact, they have been used in the classroom since 1910 (Reiser, 2001). Traditionally, movies turn students into passive learners. However, by asking students to incorporate significant data from these movies into scientific explanations, students may make that leap from passive to active learning. Teachers must support students as they extract and evaluate the evidence when writing scientific explanations. This study looks at the supports that students have identified as helpful when extracting information from documentaries and determining what to use as evidence to support their claim.

Literature Review

Use of visual images as evidence in the social sciences

Currently, there is little if any research on documentaries as evidence in science education. However, there is research on utilizing images to supplement learning in the social sciences. Researchers have found that pictures and documentaries can inform students of the ideas and values that were present in the time of its creation (Kuzma & Haney, 2001; Masur, 1998). Specifically, films are used because they conceptualize abstract concepts or bring to life events that occurred before students' lifetime (Kuzma & Haney, 2001; Coventry et al, 2006). Kuzma and Haney (2001) found that documentaries shown in a history class, challenged students to be critical thinkers and to identify useful information.

Science classrooms as well can use information presented in documentaries, such as interviews, maps, graphs, statistics, and images as both quantitative and qualitative evidence. As in the social sciences, students will have to use critical thinking skills to not only identify the pieces of evidence, but also to analyze them for their relevance and accuracy.

Supporting students to identify and evaluate evidence

When constructing explanations, students commonly struggle with identifying appropriate and sufficient evidence to support their claim (McNeill & Krajcik, 2007; Sandoval & Millwood, 2005). Research shows that peer-collaboration supports students when constructing explanations (Kaartinen & Kumpulainen, 2002; Nastasi, Hogan, & Pressley, 1999). Another support commonly used are anticipation guides. Pegg and Adams (2012) found that in science, anticipation guides are used to support students' understanding of science concepts and to support students with argumentation skills.

Woelders (2007) used anticipation guides to support middle school students' viewing of historical documentaries. The study found that anticipation guides were effective at supporting students to find specific evidence in the films to answer questions (Woelders, 2007). Science teachers can also use anticipation guides to help students find and evaluate evidence in documentaries. Anticipation guides encourage students to evaluate why they believe a statement is true or false, and assess if there is any evidence that supports their belief.

Research Question

This research analyzes the supports used to help students use and critique information from documentaries, in order to answer the question, "Which supports do students identify as helping them to find information in films to serve as evidence in scientific explanations?"

Methods

Setting and Participants

This research was conducted in a high school honors anatomy classroom located in a midsized city in the Southeastern United States. The high school has a population of approximately 1,800 students. 12.6% of the students are African-American, 6.7% are Hispanic, and 74.3% are white. The school runs on a block-scheduling model with students attending four ninety-minute classes each day.

Students in the study were members of the researcher's classes during her student teaching internship who returned signed assent and consent forms (n=20). All students were invited to participate, though participation was voluntarily and required parent and student permission. Permission was acquired through a signed permission slip outlining the purpose of the study and the students' rights of privacy and confidentiality.

Description of the Activities

During a two month period, students watched four documentaries and wrote a total of four explanations, one for each documentary. Each activity was accompanied by an investigation question that could be answered using evidence from the documentary. Students were variously supported for each activity. Students were supported by guided video questions, starring important questions, anticipation guide, and talking with a partner.

Data Collection and Analysis

Data collection included the four scientific explanations from the four previously described activities, a survey, student artifacts, and the researcher's observational notes from the lessons. The survey asked students: 1) "What supports did you find helpful/not helpful?" and 2) "How did you determine what evidence you would include?"

Explanations were analyzed to determine students' ability to use information from the documentary as evidence and to determine how students' ability changed over time. The evidence was coded for five criteria on a 0-2 scale. The criteria were: investigation question alignment, claim alignment, quantity of evidence, type of evidence, and evidence source. These criteria were selected to determine the appropriateness and sufficiency of the evidence.

The survey was used to identify what supports students found helpful or unhelpful to better support future students. It was also used to understand how students decided which evidence to use in order to better support students.

Results

As shown in Figure 1, students were successful at aligning the evidence with the investigation question from the beginning of the study; however, students' scores varied for the criteria, aligning the evidence with the claim, including sufficient quantity of evidence, and including a variety of information that would best support their claim. By the third explanation whether due to practice from writing explanations or the supports given, all students received 2s (the highest score) for aligning their evidence with their claim. While students were successful at providing appropriate information, they were not as successful with providing sufficient information. Students' scores did improve in these criteria as shown in Figure 1; however, students could still use additional support to improve even greater.

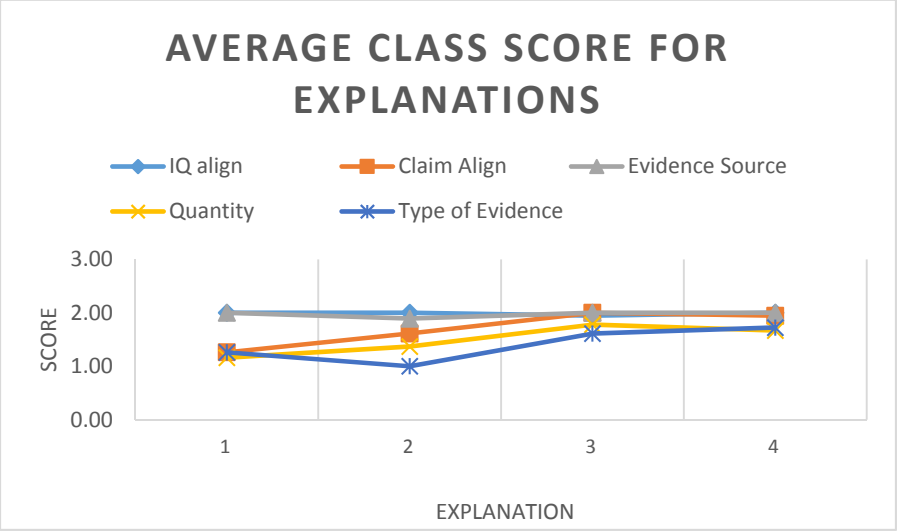

Figure 1: Average class evidence scores for the five criteria. This figures shows how students' scores changed throughout the study.

Students identified talking with a partner and the guided video questions as the most helpful supports when determining what information to use from the documentary. From their identification and their ability to do so, it appears that both are good supports for helping students select appropriate evidence. Starring guided questions was found to helpful by about half the class. Therefore, an additional support or modification of starring questions should be considered for helping with selecting sufficient evidence.

The anticipation guide was selected as the least helpful support and most unhelpful support. However, based on students' explanations, anticipation guides did not appear to harm students' ability to select evidence. The anticipation guide was also only used once whereas the guided questions were used three times and the starring questions and talking to a partner was used twice. This may have affected students' perception of the helpfulness.

Discussion

At the beginning of the study, students had difficulty with identifying appropriate and sufficient evidence. This supports previous research that found that students struggle with these aspects of writing explanations (McNeill & Krajcik, 2007; Sandoval & Millwood, 2005).

Talking with a partner was identified as the most helpful support by students. This reinforces previous research that identified peer-collaboration as a strong support for argumentation (Kaartinen & Kumpulainen, 2002; Nastasi, Hogan, & Pressley, 1999). In addition guided video questions were identified as helpful. Students identified it as a way they chose what information to include. Anticipation guides were identified as not helpful by students. This was surprising as Woelders (2007) and Pegg and Adams (2012) showed the positive effects of anticipation guides for selecting evidence.

Despite the supports, students still struggled with identifying sufficient evidence. For future use of using documentaries as evidence in explanations, teachers should include written supports to clarify the amount of evidence needed for explanations. This could be as simple as numbering the evidences expected on a handout. Also, even though students identified talking with a partner as helpful, teachers could also have specific questions for students to discuss that help with identifying sufficient information.

Future research can be done to determine what supports may be needed to support students with including sufficient evidence. Previous research showed that anticipation guides are a useful tool for helping students practice argumentation and selecting evidence from texts and documentaries. Despite, students' identification as anticipation guides as not helpful, the scores that assessed the appropriateness and sufficiency of the evidence increased when the anticipation guides were used as a support. Even though this increase could be due to other factors, it would be interesting to do further research on the effectiveness of anticipation guides. Specifically, how the statements written for the anticipation guides could be maximized to support student achievement.

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The Long and Short of It:
The Effects of Sudden Fiction in the Secondary English Classroom

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There is a canon war in the field of English education (Milner, Milner, & Mitchell, 2012). Proponents of the existing English canon support a mastery of classic American and philosophical literature that represents a national "shared body of information" (Hirsch Jr., Kett, & Trifle, 1988, p. 9). Contrary, individuals with divergent views on the contemporary English canon feel that it lacks diversity in text format, text authorship, and textual characters (Steinberg & Kincheloe, 2012). As a result, it is more imperative than ever for secondary English teachers to work toward a more balanced curriculum.

A literary genre that can be used to balance the curriculum and engage students with new forms of literature is sudden fiction. Within the context of this study, sudden fiction is defined as a work of fiction under one thousand words in length. This rising genre appeals to the skills found in Moffett's Universe of Discourse, including textual reception, textual production, oral reception, and oral production (as cited in Fulwiler & Young, 1982). These skills are more commonly called reading, writing, listening, and speaking, respectively; sudden fiction, therefore, may be read, written, heard, or spoken. This particular research study focuses specifically on textual reception and production, and this study aims to answer the following question related to the secondary English language arts classroom: How does the use of the sudden fiction genre impact students' textual reception and production?

Review of Literature

Literature has dominated the English language arts classroom since the 19th century. In Arthur Applebee's (1993) study of secondary schools, he found that most English curricula were organized around "individual major works" (p. 84). The same study asserts, "the overall emphasis in the curriculum remains on selections by white, male authors from an Anglo Saxon

tradition" (Applebee, 1993, p. 110). Exposing students to a wider breadth of texts will "require students to develop a range of literacies" (Callow & Zammit, 2012, p. 70) as well as skills transferable across curriculum areas. Literary critics have characterized the past couple decades by a surge in literary pluralism. Literary pluralism refers to the deliberate variations of gender, race, sex, and culture that authors are infusing into their texts to appeal to the ever-diversifying American audience (Metzidakis, 1995). One way to accomplish the goal of a pluralistic literature curriculum is to employ a multitude of shorter and more diverse texts, such as sudden fiction.

While the term sudden fiction has gained notoriety in the past three decades, a long-standing form of sudden fiction has been present in Europe and the United States for a century; for instance, renowned authors, including Ernest Hemingway and Franz Kafka, have written texts that classify as sudden fiction for many years (Renshaw, 2005; Stern, 1996; Tindall, 1992).

Today's digital age directly impacts the shape of literature. *Flash Fiction Online*, a web-based sudden fiction forum, uses RSS feeds and e-mail to deliver new sudden fiction stories and articles to subscribers each month. This platform directly complements the idea of Moffett's four balanced English skills mentioned previously; *Flash Fiction Online*'s sudden fiction pieces are delivered in text and audio format reflecting the distinct value of a textual and oral reception of the sudden fiction stories (Pratt, 2009).

Methods

This study took place in a 10th grade honors English class at a mid-sized high school in the southeastern United States. The study began with the administration of a pre-inventory designed to reveal students experience with and perceptions of the sudden fiction genre. Students examined eight works of sudden fiction in total over the course of the study. For each individual text, students read and annotated individually as well as in small groups of two to three students; students also listened to one or more oral performances of the sudden fiction text, recited a portion of the text aloud, and wrote a short reflection on their experience with the text.

While reading, annotating, responding, and listening to these eight sudden fiction works, students worked simultaneously on their own sudden fiction stories. Students had two, three-minute informal meetings with the researcher to discuss their writing process and concerns. Students peer-edited one another's writing using a series of guiding revision handouts. This study culminated with students presenting their original writing to their peers. Students then reflected on the process of textually receiving and producing sudden fiction through an open-

ended unit reflection and a post-inventory. The post-inventory mirrored the pre-inventory, except for its addition of three short-answer questions prompting students to consider sudden fiction's value to the curriculum, to an outside audience, and, ultimately, to themselves as readers and writers. The data were analyzed using constant comparative analysis to discover emerging themes. First, quantitative post-inventory responses were tallied and compared directly to pre-inventory responses to measure change in students' attitudes toward sudden fiction textual reception and production as well as their opinions of sudden fiction alongside other genres of text. Next, post-inventory qualitative responses were open coded to reveal emerging categories, and these categories were axial coded alongside the student written responses to the unit reflection prompt to create overarching themes.

Results

The analysis of student artifacts, including student pre- and post-inventory responses, student unit reflections, and student exit tickets yielded results particular to the research question: How does the use of the sudden fiction genre impact students' textual reception and production? The themes that emerged in relation to the skill of textual reception reflect the students' preference for reading shorter texts multiple times accompanied by thorough analysis over longer texts with smaller pockets of textual analysis. The themes that emerged in relation to the skill of textual production are rooted in the value that students' place on individual expression and creativity. Overall, student perceptions of the sudden fiction genre improved. Additionally, student understanding of the textual reception and production of sudden fiction increased, and the increased understanding of textual production was greater than that of reception.

Textual Reception

"Short and easy." The majority of student participants made explicit mention to sudden fiction's characteristically short length in their post-inventory responses. In several student responses, the idea of brevity was mentioned immediately prior to the concept of entertainment and/or ease of the unit as a whole. Many students expressed that they enjoyed the short length of the texts simply as a change of pace from longer texts in the regular English curriculum. Another recurring reason located in post-inventory responses was that students favored the short length of the sudden fiction genre because it fit with their adolescent lifestyles as the texts were not time consuming.

Academic standards. Students felt that the textual reception of sudden fiction lent itself to the instruction of the following literary devices and concepts: tone, mood, high/low/neutral diction, thesis, and sensory detail. Of these literary devices, the most prevalent in student reflections was diction. Students also felt that sudden fiction texts lent themselves to critical thinking, since the same story could be interpreted multiple ways or read several times to uncover layers of meaning.

Textual variety. Post-inventory responses revealed that the majority of students would recommend the sudden fiction genre to a friend. The major rationale cited for this recommendation was the great variety the genre offered; the variety of content was most commonly broken down into two facets: topic and tone. Students felt that their friends could each find a story with the tone and topic they preferred to read at a given time**.**

Textual Production

Personal interest and pride. Post-inventory responses revealed that the majority of students would choose to write sudden fiction recreationally because of the genre's entertainment factor. Many students stated that they liked the genre personally or found the stories interesting. Qualitative analysis of student unit reflections revealed a salient theme of pride that students developed toward the textual production of an original work of sudden fiction. Students additionally expressed the enduring effect this pride had on their view of themselves as writers. Students communicated a feeling of increased confidence in and demystification of narrative and creative writing after their own processes of writing, revising, editing, and presenting an original sudden fiction text. Researcher field notes further revealed that students' creative writing experience was mainly limited to poetry prior to this unit.

A distinct genre. Student pre-inventory data suggest that most students did have some experience with reading sudden fiction but did not have experience with writing or speaking sudden fiction. Therefore, the class discussions of each sudden fiction text and the act of writing an original piece of sudden fiction featured in this study were unique experiences to student participants. The coding of post-inventory responses alongside student unit reflections revealed that this novelty was precisely what engaged students with sudden fiction writing.

Students enjoyed learning about the characteristics that made sudden fiction a unique genre: purposefully vague/twist endings, heavy description, and brevity. In their post-inventory responses, students most often mentioned the characteristic of the vague/twist ending. Students

felt the excitement of uncovering a story's ending during the textual reception phase and the gratification of creating their own original twist ending during the textual production phase.

Structural freedom. Students felt that narrative writing reflected the creative side of English language arts. Most student participants embraced the freedom that this study's narrative writing assignment afforded them. Additionally, students saw narrative writing as a vehicle for individualism and self-expression. Beyond the open nature of the narrative prompt and draft writing stage, students also reflected on the pre-writing and revision stages of sudden fiction textual production. Several students offered explanation for their growth in the revision stage in particular, stating that they had not considered the revision and rewriting phase as a cyclical process previously but instead a one-and-done process where a draft is revised and rewritten once before submitting an absolute final copy.

Discussion

Studies advocate that canonical literature dominates the public English classroom (Applebee, 1993; Polikoff, 2012). Students in this study engaged with a unique genre of literature, sudden fiction, for a three-week duration. The qualitative data supports that student exploration of non-canonical texts prior to the study was limited. The majority of students enjoyed the novelty of the sudden fiction genre and the variety it offered them in topic and tone. A few students distanced themselves from the genre specifically due to the newness of the genre; these students devalued sudden fiction because it lacked presence in the English curriculum previously.

Additionally, studies have shown that students who engage in all four of Moffett's Universe of Discourse skills (reading, writing, listening, and speaking) within a given genre of literature gain a firm grasp on the similarities and differences of that genre to previously studied genres (Bonnici, 1985; Kallan, 2000). Students in this study most commonly compared sudden fiction reading to its closest genre—short stories—and most often compared sudden fiction writing to arguably its most distant genre—expository writing. Student responses suggest that after exploring eight works of sudden fiction, students were able to evaluate the genre alongside other genres (i.e., fiction novels, non-fiction novels, poems, short stories, newspaper/magazine articles, online blog posts, and plays) by comparing and contrasting the genres' characteristics as well as evaluating their own personal engagement with these genres.

The data in this study bolster Downes and Bishop's (2012) findings that suggest 21st century students excel at processing information quickly and are more engaged with materials that are shorter in length. Furthermore, several students expressed that reading a single text multiple times to uncover layers of meaning was challenging. The difficulties and enjoyment students experienced in this unit complement Schlechty's (2005) findings, which suggest an engaged student will be a student interested in the content of their work despite any challenges it may present. Overall, this study demonstrates the value of sudden fiction in the secondary English classroom; sudden fiction is a genre that features an engaging variety of texts, challenges its reader, and lends itself to development of students' textual reception and production skills.

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Reflecting on Revision:

Student Reflection and Metacognitive Awareness in the Writing Process

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Writing in the secondary English classroom presents an opportunity for students to develop metacognitive thinking that enables them to understand and direct their own learning processes. The revision process, which requires direct thinking about the writing process and the use of strategies for specific tasks, presents an ideal opportunity for developing students' metacognitive awareness. Secondary writing instruction, however, often presents a narrow conception of revision that may limit deeper thinking about revision as a conceptual activity (Beach & Friedrich, 2008). In order for students to develop more complex understandings of revision and become metacognitively aware of their own thinking during the revision process, students must engage in purposeful reflection during the writing process (Parks, 2014; Yancey, 1998). In order to investigate the relationship between reflection, metacognitive awareness and revision decisions, this study asks the research question, "How does students' metacognitive awareness of their revision process develop through structured reflection?"

Review of Literature

The term "metacognition" refers to one's knowledge about one's own thought processes (Brown, 1978; Flavell, 1976). Theories of metacognition generally include both knowledge about one's cognitive processes as well as the ability to monitor those processes, also called metacognitive control (Tarricone, 2011). Researchers have divided metacognitive knowledge into declarative, procedural, and conditional knowledge, which refer to what one knows, how one applies that knowledge, and knowing "why, when, and where to use knowledge—especially strategy knowledge" (Tarricone, 2011, p. 167). Metacognitive awareness refers to all types of metacognitive knowledge as well as metacognitive control (Schraw, 1998).

Applying these frameworks to the writing process, Hacker, Keener, & Kircher (2009) argue that "writing is applied metacognition," (p. 160) because writers constantly switch between

performing and monitoring cognitive processes. Still, writers may differ in their ability to articulate their thinking about the implicit processes involved in writing, which include text production, reading, planning, and revising.

Literature on revision elaborates on the implications of these frameworks of writing for individual writers. Revision is defined broadly among researchers and practitioners, often following Murray's (1978) claim, "Writing is rewriting" (p. 85) and Fitzgerald's (1987) conception of revision as "making changes at any point in the writing process" (p. 484). Depending on their level of writing experience and preferred drafting strategy, students may have differing conceptions of revision (Beach, 1976; Galbraith & Torrance, 2004; Sommers, 1980). Experienced writers often have complex goals for revision that involve making significant changes to meaning and content over multiple drafts, while novice writers often focus on minor alterations during revision (Harris, Santangelo, & Kerr, 2010; MacArthur, 2013; McCutchen, Francis, & Kerr, 1997).

Structured reflection provides the link between students' metacognitive awareness and their writing practice, leading to greater metacognitive control (Tarricone, 2011). Many practitioners use reflection as an instructional tool to encourage students to think directly about their goals for writing and their compositional strategies (Kittle, 2008; Parks, 2014; Yancey, 1998). Most of the reflection exercises used by these instructors focus on the composition process as a whole, demonstrating the need for this study, which focuses on reflection activities specifically directed toward the revision process.

Methods

This study paired structured reflection activities with specific writing assignments in order to examine the relationship between structured reflection, students' metacognitive awareness of their revision process, and students' revision practices. Research took place in a mid-sized high school in the southeastern United States. Participants were thirty-three 10th grade students in an advanced level, writing-intensive English II Seminar course focused on the study of world literature. Students in this course regularly wrote two-page papers outside of class; during the study, students received explicit instruction related to strategies for revision, structuring an argument, and planning.

After completing a pre-questionnaire that asked open-ended questions about their writing and revision processes in general, students completed reflection exercises for three writing assignments to measure their metacognitive awareness at various points in the writing process. Students responded to reflection journals after completing each of the three writing assignments, which asked them to reflect on their holistic writing process for the assignment. Students filled out "self-talk" index cards for the first writing assignment, on which they recorded their thoughts related to peer editing comments and plans for revision. In order to investigate students' specific strategies for revision, students completed revision guides for the final two writing assignments, on which they listed the two most important revisions for their paper and briefly explained their rationale for these revisions. Following the completion of the revision process for the final writing assignment, students completed a post-questionnaire to measure their metacognitive awareness at the end of the research study.

Data from students' responses on these reflection activities were analyzed using constant comparative analysis, including open, axial, and selective coding (Corbin & Strauss, 1990). The researcher created open codes for each data collection artifact based on repeated phrases in students' responses and developed categories based on the codes that appeared across artifacts. Categories were combined to create themes; four themes emerged from this coding process in response to the research question.

Results

Since the four themes that emerged in response to the research question, "How does students' metacognitive awareness of their revision process develop through structured reflection?" came from data analysis of students' articulations of cognitive processes related to revision, they function as examples of students' metacognitive thinking. Responses from the reflection activities mostly revealed students' metacognitive knowledge, although a few suggested examples of metacognitive control. The four themes that emerged from data analysis include distinct revision practices, revising for specific tasks, processes related to revision, and locating revision within the writing process.

Distinct Revision Practices

Students' descriptions of their revision practices on the pre- and post-questionnaires primarily conveyed students' declarative metacognitive knowledge. These responses described

two broad categories of revision practices: surface revising and deep revising. Students with surface revising practices referred to making changes to grammar and mechanics and described revision as a matter of fixing mistakes or polishing the writing to make it more presentable. Other students described deep revising practices in which they clarified, developed, altered, and added ideas to the content or focused on changing the structure of the paper. Several students referred to both types of revision practices, indicating an intentional sequence in which they performed surface and deep revising. Comparing responses from the pre- and post-questionnaire did not reveal a substantial change in students' descriptions of their revision practices; several fewer students referred primarily to surface revising on the post-questionnaire.

Revising for Specific Tasks

Students' responses from the self-talk index cards and the revision guides provided examples of their thinking about specific tasks and revision strategies, conveying procedural and conditional metacognitive knowledge. In general, the self-talk index cards for the first paper described surface level tasks, while the revision guides for the second and third papers referred to more complex revision tasks. The revision guides for the final writing assignment contained the most responses that included the students' rationale for making specific revision decisions.

Processes Related to Revision

In response to items on the pre- and post-questionnaire related to the writing process in general, students often referred to planning, reviewing, and evaluating as they related to revision, providing further examples of declarative knowledge about their revision and how it fit into the writing process. Students referred to increased planning in the form of brainstorming or creating an outline for the last two writing assignments, which required the use of textual evidence. Throughout the reflection activities, students referred to reviewing or reading over their writing as a final step in their revision process in which they caught mistakes or discovered areas that needed clarification. Students also referred to considering their writing from a reader's perspective and evaluating how well they conveyed their argument.

Locating Revision within the Writing Process

In addition to describing the relationship of these processes to revision, students described ways that they strategically located revision within their own writing process; some of these responses conveyed intentional decisions about the revision process. Most students wrote

that they preferred to write a first draft quickly as a way to explore ideas without thinking about structure or mechanics, with the majority of revision taking place after they had gotten all of their ideas down on paper. Other students wrote that they preferred to spend more time planning or creating an outline to avoid making deep changes to their ideas or writing during or after the actual composition of the piece. Several students discussed the importance of repeating revision as a way to develop and improve their writing. The intentional choices made by several students to spend more time planning or defer revision to a later point in the writing process conveyed their ability to control their revision process based on knowledge about their drafting preferences.

Discussion

The themes presented above describe the types of metacognitive awareness that students' articulated through the structured reflection exercises. Students' descriptions of distinct revision practices demonstrated varying levels in their knowledge of revision as a conceptual activity, as the literature on experienced and novice writers describes (Beach, 1976; MacArthur, 2013; McCutchen et al., 1997; Sommers, 1980). Several students were able to provide more complex descriptions of their revision practices on the post-questionnaire, suggesting a development in their metacognitive knowledge—in their declarative knowledge, specifically.

The self-talk index cards and revision guides revealed the most about students' procedural and conditional knowledge, as they provided an opportunity for students to describe their revision choices related to specific tasks. The progression in complexity of students' revisions listed and their stated rationale for making these revisions indicated a development in their conditional metacognitive knowledge.

Students' descriptions of revision within their own writing process reflected frameworks for revision as a function of drafting strategy proposed by Murray (1978) and Galbraith and Torrance (2004). On the whole, students' responses from the post-questionnaire, which exhibited more complex statements of their own drafting and revision strategies, suggested that students developed in their metacognitive awareness of their drafting strategy and were able to make decisions about their revision practices based on that knowledge.

Findings from the study were limited, however, by the low completion rate of revisions for the writing assignments and the reflection activities. Higher numbers of completed reflection activities may have revealed greater or fewer changes in students' metacognitive awareness.

Additionally, all of the data collection artifacts required open-ended responses, which in some cases did not provide a consistent basis for data analysis over time.

Future teaching and research should incorporate structured reflection exercises as part of the regular routine for writing assignments. In addition, future research could collect artifacts of students' actual writing in order to compare descriptions of their revision to their actual revision practices or incorporate explicit instruction about reflection exercises in order to help students see reflection as a means of developing metacognitive awareness.

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Culturally Relevant Pedagogy in a Public Secondary Social Studies Class

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In the spring of 2015 I entered what will hopefully be a lifelong pursuit of teaching history at an historic time. As the Pew Research Center stated in August 2014, non-White students are the majority in public schools for the first time in our nation's history. As a white southerner who grew up in a homogenous area, attending a high school with a population that was over 95% Caucasian, I wanted to better understand how to teach history to students in a school system that is infinitely more diverse than the area I grew up in and was educated in. There is a large achievement gap in all subjects between white and African American students, and this is true of U.S. history (Journell, 2008; Parsons, 2006). The goal of this research is to help better prepare for a diverse classroom in which Culturally Relevant Pedagogy (CRP) can be used to better facilitate learning, student interest, and increase the achievement of African American students in a subject that has so often left them out.

The Problem

For over five decades, the achievement gap has been a persistent problem for teachers and educators across all grade levels and subject areas (Braun, Chapman, & Vezzu, 2010). The National Education Association (NEA) has defined the achievement gap "as the differences between the test scores of minority and/or low-income students and the test scores of their White and Asian peers" (2014). However, the achievement gap can go beyond standardized test scores. It is more about equity, or lack thereof, than simple test scores. The gap includes access to appropriate materials, opportunities, and programs to better facilitate the learning, interest, and achievement attained by disadvantaged minority students in our schools (Griner & Stewart, 2012).

The Consequences

Sampson and Garrison-Wade (2011) have referred to this gap inducing disengagement among African American students as "cultural discontinuity" (p. 280). That is, the history curriculum presented to them does not connect to the experiences, culture, and individualism that

African American students bring into the U.S. history classroom. This "cultural discontinuity can produce apathy, academic disengagement, and school discontent" as well as "a well-documented academic achievement gap that has repeatedly shown that African American children are lagging behind academically in all areas" (p. 280). By failing to acknowledge the diversity of experiences, culture, and race of one's students, teachers are allowing one group of students to get ahead.

Research Question and Study Significance

The guiding research question for this study is: How does the use of Culturally Relevant Pedagogy and Culturally Relevant primary sources increase students' interest and engagement in a U.S. history class? It was my hope that as a teacher who is conscious of my, as Martell termed it, "whiteness" (2013) but who is also aware that the cultural differences my non-White students bring into the classroom, I could influence how students learn, and naturally, how I teach (p. 67). Culturally Relevant Pedagogy continues to be a much debated and researched topic. In carrying out this study in a North Carolina public high school I was able to add to an ongoing discourse of how teachers can better reach non-White students in public school settings. This study was also significant in showing future pre-service teachers, and other teacher practitioners, which areas of Culturally Relevant Pedagogy still need to be explored further or more extensively.

Literature Review

The Achievement Gap

One of the most persistent and researched problems in education today is the Achievement Gap. One of the most apparent gaps in United States education is that existing between White and African American students (NAEP, 2014). There are numerous types of studies and research on this topic, however a mix of studies on the gap was used for this research. What is uniform in these studies is the undeniable fact that the United States' education system is facing a crisis in which African American students are falling alarmingly behind their white peers, and that a solution needs to be found for the sake of our minority students (Banks, 1998; Braun et al., 2010; Griner & Stewart, 2012; NAEP, 2009, 2010, 2014; Sampson & Garrison-Wade, 2010; Chen, Fantuzzo, LeBoeuf, & Rouse, 2012; Morris & Monroe, 2009). If the achievement gap is allowed to grow, we risk allowing our minority students to fall further behind, not only in school, but possibly in life (Fantuzzo et al., 2012).

Limitations of Curriculum

Many studies detailing African Americans' relationship to U.S. History often start, or deal entirely, with the shortcomings of history curricula. Some scholars have pointed to the superficial treatment African Americans have received in U.S. History texts and standards, and still some have argued that U.S. History textbooks, curriculum, and standards are outright means of White dominance and Black oppression (Anderson & Metzger, 2012; Banks, 1998; Banks & Nguyen, 2008; Journell, 2008; Martell, 2013). However, most scholars writing on the disconnect of how U.S. History is taught agree that African Americans are largely marginalized in the curriculum to issues of slavery, are rarely connected to progress in the United States, and leave African American students greatly lacking in the story of their people *and* their country (Anderson & Metzger, 2012; Banks & Nguyen, 2008; Chikkatur, 2013; DiCamillo & Pace, 2010; Epstein, 1998; Hansen, 2009; Howard, 2001; Journell, 2008).

Culturally Relevant Pedagogy

Ladson-Billings (1995) and numerous other scholars strongly advocate for the use and benefits of Culturally Relevant Pedagogy and teaching due to its success in connecting and engaging African American and other non-White students across numerous subjects, as well as its ability to raise achievement if administered properly. That is not to say it is either easy to implement or barrier free; one must make a concerted and constant effort to implement CRP regardless of the numerous barriers teachers face daily (Epstein, 2000; Esposito, Davis, & Swain, 2012; Gay, 2001; Griner & Stewart, 2012; Howard, 2001; Ladson-Billings, 1995; Martell, 2013; Osborne, 1996; Parsons, 2005; Sleeter, 2001; Stairs, 2010; Young, 2010).

Methodology

This action research study took place in a rural North Carolina public high school with a high poverty rate. It was initially hoped that participants would be selected from the classes I taught and would be African American. I hoped to have five to eight African American eleventh grade students with close to an even mix in gender agree to participate in the study. However, the county in which the study was conducted is overwhelmingly Caucasian; due to a lack of diversity and lack of student interest in participating in the study, the only participant was a Caucasian female.

Data Sources

This study used multiple methods of data collection. Questionnaires, interviews, research notes, and student reflections (Young, 2010) were used in order to collect data for this study.

Data were analyzed through coding and analyzing participant responses to questionnaires and interviews.

Findings

The participant in this study was a high performing student named Holly. She was generally well behaved, participated well above the class average, and was rarely a discipline problem. The findings of this study are organized in two important themes: the participant's inability to see African Americans beyond the scope of slavery and struggle, and the participant's answers to research questions that are seemingly meant to please the authority figure, in this case myself. It is hoped that these findings will further inform research on CRP for those wishing to implement such pedagogy in the future and will inform my own future teaching.

Of the two common themes that were found to be present in this research the most apparent was that of the participant Holly being unable to see beyond slavery in regards to African Americans' place in US History. When pressed to see African American history as a whole, that is, beyond slavery and oppression, she continually displayed an inability to go beyond slavery. When I verbally pressed Holly to perhaps think about American History as a whole she stated, "no slavery always comes to mind, I don't know about all that other stuff…" By "that stuff," Holly was referring to other important events in American history that the researcher named in an attempt to push Holly to think about American History as a whole.

The second theme present in this research study was the participant's eagerness to please those she viewed as authority figures. This was present not only during our time together as researcher and participant but manifested itself early in the context of student and teacher. Holly would often times seek visual or verbal cues that she was "on the right track," the right track being what she thought I would want to hear. Therefore, it is my belief that because of this trend being present that Holly's answers, and the outcomes of this research, are skewed to a certain degree. Had the pool of research participants been larger this may not have been a problem. However, as stated, the lack of participation and diversity in this study added to this problem.

Discussion

During my time teaching, interviewing, and analyzing questionnaire answers with Holly it was very apparent Anderson & Metzger (2011), Journell (2008), and others were correct in that curriculum had given a skewed concept of African Americans and other non-White cultures to students. This shows that previous research and my own thoughts seem to be correct. That is

students have no knowledge of African American history, or African Americans within the narrative of US history outside of slavery or struggle. In fact I would argue that based on Holly, many Caucasian students have *no* knowledge of African Americans within the narrative of US History *except* for their knowledge of African Americans and slavery.

Implementing CRP as a pre-service teacher was exceedingly difficult. CRP is a challenging pedagogy for any teacher; I was simultaneously trying to learn how to teach as well as properly implement CRP in a classroom. This proved to be incredibly difficult and at times close to impossible. For future research I would recommend that a firmly established educator or instructor attempt to complete such research. Yet another difficulty that future researchers may run into when trying to implement CRP is that of a lack of student participation. Although sixty students were given the paperwork to potentially participate in this research only two returned the paperwork and only one properly answered questionnaires and attended the agreed upon interview times. In closing it is with certainty, based on my experiences attempting to implement CRP, that while CRP is a potentially viable and very valuable asset to educators it can be difficult to implement.

Conclusion

Culturally Relevant Pedagogy has the potential to be an incredibly powerful tool for educators in all settings. The need for Culturally Relevant Pedagogy is there and very obvious. With problems such as the achievement gap, an overrepresentation of African American males in prison, and a large lack of interest in history, CRP and instructor training in it is more than necessary. However, as research cited in this paper has shown the implementation of CRP, especially in a public school setting, proves incredibly difficult and at times virtually impossible. There must be further research in the area of CRP implementation in public schools in order to make it a more viable tool. Although it is very difficult to implement in the public classroom CRP is necessary in order to increase engagement and achievement in history classrooms among all students. As long as a lack of cultural sources persists in public school curriculum CRP will be a necessity among educators.

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Solving with Reflection: The Use of Writing in a Secondary Mathematics Course

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Introduction

In secondary mathematics courses, students' trepidation and reluctance to communicate is a major issue. Students' oral contributions to class discussions are limited due to fear of being incorrect and possible embarrassment, while their written communication to their teacher in the form of their work is in a language containing symbols and characters they do not fully comprehend (Gough, 2007). These concerns are evident as incoming high school freshmen are often promoted from middle school without being proficient in mathematics. Students enter high school without even a novice level of understanding and are introduced to new content. Aware of their content deficiency, they disengage from mathematics. This was evident in my classes during the 2013-2014 school year. During lessons, students were regularly engaged in the lecture segment and often displayed understanding of the content being presented. Nonetheless, when asked to complete individual assignments or communicate their understanding, many students were unable to thoroughly explain their answers and reasoning. Because of this, students' effort and attitude toward mathematics suffered significantly, leading to poor performance in the course. My research addressed the need for writing integration in mathematics courses as a preparatory tool for the word problems most commonly found on unit tests and end of year exams. I attempted to answer the following research question: Can journal writing in a mathematics course increase student achievement on word problems as well as improve their attitude towards mathematics? The purpose of this study was to find ways to cultivate students' communication skills in mathematics. These skills are a requirement for success in all disciplines within school as well as outside the classroom.

Review of Literature

Self-efficacy has a significant role in students' learning, particularly in mathematics. Self-efficacy is defined as the level to which a person believes in his own ability to successfully perform a task or obtain a particular goal (Bandura, 1988). Because self-efficacy is someone's

own perspective on his ability to successfully complete a task or reach a goal, it often dictates that person's willingness to attempt a task or goal (Bandura, 1993). Once assessed, a course of action needs to be considered to affect positive change in a student's belief in his or her abilities and attitude toward the content and its practicality. One method tested as a possible tool to increase these factors is journaling. Using various styles of journaling in education can create situations in which the student has an opportunity to reflect on course material, his or her perception of that material, and how to progress in handling it (Fritson, 2008).

Being able to communicate explanations of solutions is a goal of the NCTM's Process Standards (2000). The inclusion of writing in mathematics curricula can help students build those skills through practice. Specifically, the writing-to-learn initiative was implemented in the mathematics classroom to meet different needs of students (Miller, 1991). Miller investigated how different forms of writing all assisted the teacher in instructing the students. These writings granted teachers access to student thoughts and afforded them knowledge on how students think about the work given and how they problem solve. In theory, students with greater conceptual knowledge communicate this by writing more extensively about mathematical concepts than those with lesser knowledge. In 2007, Nickerson explored this theory using journaling as a review mechanism for test preparation. The students used journals to aid them in remembering all the necessary concepts covered in the content. In their journals, they used examples to explain problems as if to a student who was not as proficient in the course. He found that students who scored in the upper quartile used their own voice and vocabulary in describing the concepts they had learned. Conversely, students that scored in the lower quartile used information directly from the book to write in their journals.

Metacognition is defined as awareness or analysis of one's own learning or thinking processes (Merriam-Webster). Journaling offers moments for students to ponder their approach towards a particular mathematical task (Dunlap, 2006). Once students have accessed their metacognitive skills, they are better able to investigate problems, make recommendations, and complete tasks on their own (Dunlap, 2006). Learning how to access one's metacognition will afford the ability to pay attention to the detail that is required when communicating mathematically. Completing tasks in a format in which they can see the step-by-step format associated with some problem solving methods, students are able to self-direct their learning

with assistance from their metacognition (Miller, 1991). When required to put mathematical concepts into their own words more meaningful learning takes place for students.

Writing allows for understanding conceptually, which can cause an upsurge in self-efficacy levels of students, inevitably heightening students' conceptual knowledge by increasing communication skills. It enables more communication directly between student and teacher, allowing for necessary changes to instructional planning or individual techniques used for students. It can also assist students in learning how to properly use metacognitive skills and awareness, particularly when solving problems that are unfamiliar or expansions on current content.

Methodology

This study was completed at a public high school in the southeastern United States. It was conducted during one week of my student teaching requirement to complete my Master's Degree at Wake Forest University. The eight participants for my action research came from one section of the course Advanced Functions and Modeling, a year four math course.

Collection of data occurred during a three week period through two devices: student work and surveys. Surveys were completed in weeks one and three while student work was completed in week two during the execution of the study. Forms of student work consisted of journal entries solving problems by proof writing and open-ended questions. Three times during the week of the study, students wrote reflections based on students' feelings and perceptions toward recent content learned. Students were asked to write specifically about knowledge gained, what elements of the class seemed helpful. When completing mathematical tasks, students were instructed to solve the problems using a proof-writing format writing step-by-step instructions, as if demonstrating or presenting how to a solve problem to a peer or instructor. Open-ended questions were completed as warm-ups and exit tickets. These questions sought to engage participants and encourage them to share their content knowledge. Participants also completed a pre and post study survey to identify the progress made during the study. The researcher created surveys consist of 10 questions and employ a "yes," "no," and "somewhat" answering system along with open ended questions.

All student work was coded to show any themes related to student self-efficacy and attitude toward mathematics. Proof-writing problems were coded with the above themes in addition to being coded for activation of student metacognitive skills while completing a task.

Open-ended questions were analyzed according to student's willingness to share their work. The pre and post-surveys were analyzed to discover each students potential growth related to self-efficacy, attitude and confidence in ability to communicate.

Results

The data from participants identified several tendencies when applying this approach to learning mathematics. Post-survey responses revealed that seven of the eight participants saw an increase in self-efficacy due to the writing assignments in the study. Students displayed this by using terms acknowledging their ability to complete the task provide. This was also shown by an increased amount of words used in written assignments.

With increased self-efficacy, students became more willing to share their work. In three class sessions prior to the study none of the students elected to share their work unless called on. When called upon to answer content related questions participants shared information 15% of the time. The remaining 85% of the time students either claimed to know nothing worth sharing or said they had not completed the task. However during the study participants shared information voluntarily 3.4 times a class period for a total of 17 times during the study. The information shared when called upon also increased to 73%. In the post-survey, four of the eight participants claimed that writing more in math encouraged them to share their work more often. Two of those four mentioned that they wanted to share their answer to not only help themselves better understand the content but also help the other students, claiming that their questions may help everyone figure it the answer. Furthermore six of the eight students said that the proof writing process makes it easier to share their answers whether volunteering or called on by the instructor.

This, along with students completing tasks writing in step-by-step format, made it easy for students to communicate their knowledge with increased confidence and a greater understanding of the task. The step-by-step format also afforded students the ability to target their mistakes more quickly due to their work being more organized and easier to follow.

Unfortunately the improvements and achievements made by the participants during the study was not sufficient enough to collectively change their attitude toward mathematics. Only one participant indicated a higher level of attitude for the content in the post-survey. For this participant, the addition of written assignments provided him with more information to utilize as a study tool. These assignments assisted him in understanding that mathematics is more about the process of how to solve a problem, not just completing computations.

Discussion

The increase in self-efficacy and communication displayed by students was due to a rise in understanding through the use of a literacy approach to learning mathematics. This increased understanding adjusted all the factors in which a student calculates their self-efficacy as defined by Schunk (1989). For the students, more writing implied more knowledge about the content, therefore boosting their ability and decreasing the difficulty of the task. Writing in a modified proof format further assisted in the increase of self-efficacy remedying the thought that mathematics is a right or wrong discipline (Miller, 1986). Furthermore, similar to Fritson's (2007) study all the participants saw an increase to their self-efficacy with the inclusion of journaling. The increased self-efficacy experienced by the participants granted them the necessary courage to share their work within the class as a whole and with their classmates when working in groups. Due to the implementation of these written assignments, the participants saw a rise in the level of achievement. This was particularly noticeable in class assignments.

Instructors of mathematics courses should encourage students to reflect on their knowledge through the forms of journaling and completing tasks employing a proof-writing format. Both of these concepts provide students with feedback on their progress related to the content they are learning. In addition, when done properly, these methods reveal a student's strengths and weaknesses notifying them of what their focus should be related to the topic being covered. Doing so places further emphasis on the process more than the computation needed to complete a mathematical task. Making mathematics about knowing which algorithm to use eliminates some of the confusion for students when solving problems (Nickerson, 2007). Teachers should also consider implementing literacy elements throughout the school year, including these strategies within all units. The addition of these forms of writing and completing tasks will contribute to student success in math courses and could potentially become a tool for students to then apply in other content areas as well.

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Problem Posing in the High School Mathematics Classroom

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Problem posing is a method of teaching that emphasizes critical thinking. It involves students generating new problems and questions aimed at exploring a given situation. Problem posing can also include the reformulation of a problem during the process of solving it (Silver, 1994). Problem posing as a teaching method stems from a constructivist view of learning. Constructivist learning theory maintains that knowledge is constructed by the individual using his or her own experiences and contrasts with the view that knowledge is deposited from the teacher to student. George Polya (1957) believed that students who pose their own problems end up being more motivated to solve them compared to the instances when problems are posed from a teacher or textbooks.

According to the NCTM Principles and Standards for School Mathematics (2000), students should be making connections and solving problems from a wide range of contexts so that they are more able to adapt and be more flexible to the changing needs of a future workplace. The foundation of the Standards is to prepare all students for work and citizenship, to give them positive mathematical dispositions, and the conceptual basis for further study.

Literature Review

While most studies conclude that a student's problem posing ability is positively correlated to his or her problem solving ability, Silver and Cai (1996) concluded that students who are able to generate effective problems are not always the most efficient of problem solvers. In their study of 509 sixth and seventh graders, students were asked to complete a problem posing task and eight problem solving tasks. The researchers also concluded that inquiry-oriented mathematics instruction that includes problem posing tasks can assist students to develop more creative approaches to mathematics.

In a 2012 study carried out by Bonotto, it was found that young students (ages 10-11) were able to create mathematically relevant problems with over 98% in one school studied and 100% in the case of another. Of the problems generated by students, over half from both schools

were solvable. A major implication of that study is that students of that age are aware of what mathematical problems are and have the potential to create their own. Kilpatrick supports the idea of including these problem posing activities earlier as he wrote in 1987, “there is documented evidence that young children’s creativity and open-mindedness in generating and solving problems dissipate as they progress toward the higher school grades”.

While studying 509 middle school students’ problem posing and solving abilities, Silver and Cai (1996) observed that once students begin to generate problems that are mathematical in nature, they tend to continue to generate such problems. As part of their study, the students were given a prompt and asked to write three different questions that could be answered from it. More than 70% of the problems posed were classified as mathematical in nature. Silver and Cai also observed that nearly 80% of the students generated at least one mathematical question. This study shows that it does not take long for students to learn how to pose their own problems making it a feasible activity to incorporate into high school mathematics classes.

In a study of prospective math teachers, Lavy and Shriki (2007) observed that the participants were “not daring in their problem posing” and tended to stick with writing more familiar types of problems. On the plus side, the study found that problem posing, when implemented appropriately, can develop mathematical knowledge and consolidate basic concepts.

In practice, it should be expected that the variety of student abilities will generate a variety of problems. In a study of 154 sixth and seventh graders tasked with writing a difficult problem for a friend, Ellerton (1986) found that students classified as gifted in mathematics tended to write non-word problems and instead wrote more abstract and computationally heavy problems. From that observation and student interviews it was concluded that those students thought that word problems are only perceived as difficult while instead problems with “tricks or twists” are in fact more difficult. In the same study, the students classified as less gifted in mathematics tended to pose problems more closely related to book problems.

Problem posing activities give students a chance to take ownership of their learning and the act of problem posing is a naturally creative process. If implemented correctly, problem posing activities can add a sense of personal relevance of the subject matter to students. From a survey of 352 mathematics students, Afari, Alridge and Fraser (2013) found that personal relevance and teacher support have a statistically significant influence on students’ enjoyment of

mathematics and more importantly self-efficacy. Studies in educational psychology have long shown that self-efficacy is a good predictor of student achievement. The purpose of this study is to determine the ability of high school students to problem pose and if problem posing impacts self-efficacy and attitudes among students in their math classes.

Methodology

The participants of this study were 25 students in the researcher's two Advanced Functions and Modeling classes. The participants consisted of high school juniors and seniors. The high school is located in a small city, and the diversity of the city is reflected in the demographics of the sample.

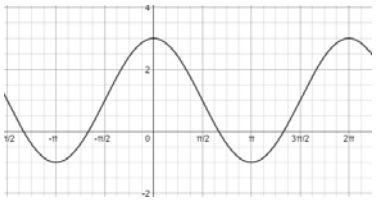
As part of their regular instruction, the students wrote and submitted their responses to the problem posing prompts and activities. The prompts were given to the students as either warm up exercises or exit ticket summary exercises over the span of a 6 day unit on angles and right triangle trigonometry. After completing the instructional unit and assessment, the participating students filled out an anonymous survey and participated in a small focus group.

Results and Discussion

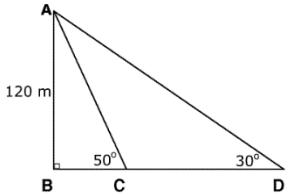
The following prompt was given as a warm-up to review the previous day's material of solving 30-60-90 and 45-45-90 triangles: *Write two equations using either* $sin(\theta)$ *or* $cos(\theta)$ *whose solution is* $\frac{1}{2}$. Responses to Prompt 1, fit into four categories: problems with correct solutions, problems that fit the correct format of the prompt but did not fit the correct solution, problems that simultaneously did not fit the prompt and were not correct representations of trig functions and angles, and partially written on papers that could not be categorized as problems.

After recognizing that so few students wrote actual questions with prompts on the first day's submission, question stems were written on the board below the second day's problem posing prompt. The following prompt was given at the end of the second day: *Write a problem regarding the material that has been covered in this unit that you think could be on tomorrow's quiz. Possible questions stems: Find, Solve, Use, Determine.* Of the responses from Prompt 2, 62% of the participants wrote problems with actual question prompts. Only 57% of the participants wrote something that was solvable given the information they included and 14% of the participants wrote something that was unreadable or nonsense. All solvable problems were one-step and followed the format of problems that were either on their homework from the previous night or were similar to examples worked on in class.

The third prompt was given as a warm-up on the fourth day of the unit to review the previous day's material: *Write a question that a peer could answer regarding the graph of this trig function.* Of the responses from Prompt 3, 76% included question stems and were solvable. The typical solvable problem written by the 76% was along the lines of "Find the equation of the cosine or sine graph" which was what the students worked on for homework the previous night. To find the actual equation of the graph was a challenge to students but the question showed little creativity. Two of the questions submitted asked to describe a situation that the graph would model. Students did not have similar problems for homework but it was a discussion point in an example we worked through the previous day.



The following prompt was given on the last day of instruction before reviewing for the test: *For the next 5 minutes write as many problems as you can that utilize the given figure. Then take the next 5 minutes to write solutions to the problems you can solve.* Students were given a full 10 minutes to write and solve their problems. In that time, 92% (23/25) of the students were able to write a solvable problem and a total of 72% (18/25) of the students wrote two or more problems. All the problems that were written included a solution given by the student. After analyzing the responses, it was concluded that students tended to not write problems that they knew they could not solve.



After completing the review, the class ended by writing problems given the final prompt: *You are standing 20 feet away from a tree and you measure the angle of elevation to be* 38°. *Write as many problems as you can using the given information.* Of the responses, 40% of the participants wrote at least one solvable problem and 20% of those participants wrote two problems. The remaining responses either did not have enough information to solve (32%), did not pertain to the situation (20%), or only included a sketch of the given information (8%).

Students showed an increase in ability to write problems with question stems from the first problem posing prompt to the last, but when given a more abstract prompt like the last one, they struggled with including enough information in their problem to make it solvable. Students also consistently responded with having lower than average interest in mathematics and feeling as if their mathematical abilities are low. Of the participants, 92% reported having a low or very low

interest in mathematics and 80% responded that in general their mathematical abilities are low or very low. After completing the problem posing activities, 64% of the participants responded that they were neutral in being more interested in mathematics, 1 student responded in agreement that the activity increased his/her interest in mathematics, and the remainder of the participants disagreed.

When asked to compare how they felt about mathematics before and after the problem posing activities one student said, “I have never really liked math because it is boring and hard, but I thought asking my own questions like with the tree was cool. I never thought about that kind of question being math.” Another student said that he “would still not use problem posing outside of class.”

Only 7 of the 25 participants agreed that the problem posing activities were confusing. Of the 25 responses, 17 agreed that the activities gave them confidence on the material while 3 were neutral, 3 disagreed, and 2 strongly disagreed. After asking the focus group participants about their mathematical abilities, one student said, “I am not great at math but I felt more comfortable studying after the [problem posing] activities because I had to think about what we were learning instead of just following a process to solve problems.” Other participants mimicked her response and one added that he did not think that he “[has] always had the ability to question things, but that does not mean that I am more confident in my ability to answer the questions.” These student responses fall in line with the survey responses to question 6 as 80% (20/25) reported that after completing the problem posing activities they rated their abilities to problem solve were average or below average. When asked the same question during the focus group, one student responded with “I wrote down problems that I knew the answer to so I don’t think that I learned anything extra from doing [the activity].”

Based on the student submissions, responses to the survey and focus group questions, it was concluded that problem posing can be an effective study tool for the material at hand but does not increase self-efficacy or attitudes toward mathematics in general. With practice, students did illustrate that they have the ability to pose questions, but very few strayed from textbook-like problems showing that they were likely just regurgitating problems that they had already worked on. Similarly, when it came time to solve their own problems a noticeable trend was that students wrote problems that they already knew how to solve, illustrating that their ability to problem solve did not change.

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Oral Presentations and the Writing Process: Improving Students' Confidence through Sharing Writing

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Writing classrooms can function solely around instructional practices that emphasize traditionally-accepted, formal elements of writing without considering the implications of dated essay prompts and writing assignments on student motivation. Students may dread a research essay that they feel lacks purpose and that will simply be evaluated by the teacher and then discarded. However, teachers have the power to incite life into students' writing by making a few simple changes. When students infuse their writing with their own interests and then are able to share their work with a receptive audience, it is possible for students' feelings about themselves as competent writers to improve (Milner, Milner, & Mitchell, 2012; Saunders, 1985). With this in mind, this study explores the research question: How do students' oral presentations of their own writing impact their perceptions of themselves as writers?

Review of Literature

Behizadeh (2014) cites real world relevance as an important factor in improving students' perceptions of the writing process. Behizadeh posits that the "real world" means activating students' "funds of knowledge rooted in their personal interests, family and cultural experiences, social life and community knowledge" (2014, p. 29). Butcheri and Hammond (1994) echo this sentiment and acknowledge that when teachers allow students to write for a purpose, they may be able to observe the practical applications that writing can have in the world beyond the classroom. One way Behizadeh (2014) sees activation of real world relevance is through providing students with a sense of audience.

The importance of audience in writing is paramount, as writers are often asked to perform many tasks to please readers including "aiming at, assessing, defining, internalizing, construing, representing, imagining, characterizing, inventing, and evoking audience" (Park, 1982, p. 248), all of which may prove difficult if students lack a direct sense of exactly who their audience

entails. The lack of connection to any sort of audience may be influencing students' negative perceptions of the writing process in general (Jeffrey, 1981; Yagelski, 2009). Cohen and Riel (1989) note that "skills are no longer learned in the context of their use; instead, they are decomposed into subtasks that are taught in sequences," which causes "writing… [to] become decontextualized" (p. 144). This process of decontextualizing writing becomes problematic as students perceive the writing process as one that focuses on grades and neglects real world connections (Cohen & Riel, 1989; Milner et al., 2012).

Oral presentations serve to engage students who may have felt a sense of reluctance toward the writing process due to their labels as *bad writers*. Oftentimes, if a student feels validated in his or her ability to be heard through sharing writing, he or she will continue to speak up and share original ideas (Mueller, 2005). By participating in oral presentations, students "feel that they are taken seriously as people with minds, and this confidence can increase motivations to write well" (Saunders, 1985, p. 385). Megyeri (1996) notes that through having students share their work, teachers convey the attitude that their writing "deserves an audience, some recognition, and a moment of appreciation" (p. 74) which will, in turn, cause students to enjoy the process of writing. In an effort to bring a sense of audience and real-world purpose into the classroom, many researchers and professionals discuss the idea of performance literacy. Performance literacy may broadly refer to "live, scripted and embodied activities" (Fishman, Lunsford, McGregor, & Otuteye, 2005, p. 226), which bring to life the content of writing and thus promote literacy through movement and speech. By allowing students to have an outlet for their ideas in addition to the writing process itself, performance literacy allows students to express themselves fully and see the writing process as a more rewarding and productive endeavor.

Methods

This study took place in an English III Honors classroom located in a high school of about 1,500 students in a midsized, urban city in the southeastern United States. Students participated in a three-week process of writing, revising, creating a presentation, and presenting an oral form of their essay to an audience. The prompt for this research essay asked students to choose a time period and type of media in American history and to discuss how this media shaped American values during the selected time period, a prompt purposefully meant to offer students freedom of topic choice.

This study began with a pre-questionnaire in order to gauge students' current perceptions of the writing process, themselves as writers, and themselves as speakers. Next, students participated in a two-week long writing process in order to create rough drafts of their essays. After completing their rough drafts, students began the process of planning their presentations using a planning template provided by the teacher-researcher. After completing the writing and planning process, students presented their writing to their classmates. These presentations lasted for a total of three class periods, each of which included about eight to ten students presenting.

Following his or her individual presentation, each student completed a performer exit slip in order to record initial reactions in the minutes after presenting. Similar to the performance exit slips, each student performer was asked to complete a rubric about how he or she believed the presentation went. During the class period following the presentations, students were asked to complete a post-questionnaire that was nearly identical to the pre-questionnaire. By again collecting students' perceptions of the writing process, themselves as writers, and their personal comfort levels when presenting to an audience, the researcher gauged how these perceptions changed as a result of students' oral presentations of their writing. The researcher also took field notes during the study to better inform results. Field notes were written as often as possible about different activities in class and observations about the writing and presenting processes. The data were then analyzed using constant comparative analysis and percentile comparison methods.

Results

Confidence in Writing

In analyzing data from this study, the researcher realized that various factors affected students' perceptions of themselves as writers. The confidence built or negated by factors including grades, structured writing, and past writing experiences serve to explain why certain students do well with sharing their writing while others find the process painful and difficult to endure. One particularly salient theme present in both the pre- and post-questionnaires that seemed to affect students' feelings toward writing in school was the impact of grades on students' own self-worth. This focus on grades was also present throughout the entire process of writing and creating presentations because although the researcher informed the class that the presentations were meant to be for sharing ideas and would be graded minimally, students still requested a rubric to show them exactly what they needed to make a good grade on the

presentation. That the risk of a grade was present alarmed many students and caused them to become much more rigid in the structure of their presentations.

Although students desired structure throughout the study regarding guidelines in both the writing and speaking process, in the pre- and post-questionnaires, many students cited a lack of freedom in the topic, structure, and content of writing as reasons for making the process less enjoyable and for decreasing student confidence. Although topic choice and lack of freedom in writing seemed to affect students' perceptions of themselves as writers a little less deliberately than grades and feedback, students continually noted that the more freedom afforded by the writing instructions, the more enjoyable the overall process.

Confidence While Speaking

The second major theme that emerged from the data was the idea of students' confidence while speaking as indicative of the value they placed on sharing their writing. Students who had less confidence speaking seemed to indicate that sharing with the class made the writing process less enjoyable and, thus, decreased their confidence and comfort in their writing abilities.

After reviewing the post-questionnaires, the researcher identified four different categories of students within the class: a) five students who liked both writing and public speaking, b) four students who liked neither writing nor public speaking, c) one student who disliked writing, but liked public speaking, and d) seven students who disliked public speaking but liked writing. The students who fell into the category of liking both writing and public speaking seemed to exhibit the least amount of change in their answers on all different forms of data; namely, these students continued to feel confident as writers and speakers throughout the process. Conversely, the students who liked writing but disliked public speaking expressed the greatest change in confidence. Each of these seven students cited either receiving positive feedback or high grades in the past as reasons they liked the writing process in general. However, each of these students also expressed some form of anxiety at the prospect of speaking in front of the class. Overall, students who liked writing but disliked public speaking seemed to express more unhappiness with themselves as writers after speaking than did the rest of the class.

Although only five out of seventeen students answered that they "strongly agreed" or "agreed" to the statement "I enjoy public speaking" on their post-questionnaires, nine out of the seventeen students cited some value in sharing their work with the class. While students who agreed that they enjoyed public speaking noted the affirmation of their abilities as reasons for

valuing public speaking, four additional students discussed the valuable growth they gained from the experience, as well. Although the number of students who enjoyed public speaking barely changed from the pre- to post-questionnaire, students who were comfortable enough with the presentation process discovered new benefits related to their own self-confidence and writing abilities after sharing their writing.

Discussion

Recent educational literature has dealt with authenticity in writing instruction being achieved by allowing students choice in their writing topics and removing the focus from grading as the most important aspect (Behizadeh, 2014; Milner et al., 2012). The present study echoed this assertion, as students cited a lack of freedom in academic writing caused by pressure to get the grade and, therefore, to please the teacher and the class. Namely, students in this study associated writing primarily as having strict rules, and they believed that completing writing assignments was a necessary part of the process of receiving a good grade. Additionally, this study found that "topic choice" for students may involve giving students even more freedom in the topic selection process than has been previously articulated in past research.

Past studies have dealt with the benefits of students sharing their voices in the classroom and the positive effects that sharing has on the authenticity of writing instruction (Behizadeh, 2014; Butcheri & Hammond, 1994; Cohen & Riel, 1989). The present study found that the benefits of oral presentations on students' writing were not as universally positive as previously articulated; specifically, many students desire a more differentiated form of oral presentation in order to feel comfortable with presenting. The present study also revealed that the anxiety experienced by some students is not easily overcome and can even affect students' perceptions of themselves as writers if it is not managed appropriately. Thus, this study finds that oral presentations, in the broadest sense of the term, may not work to increase confidence in all students; namely, this study revealed a need to differentiate the types of oral presentations required in the classroom based on students' confidence levels and skill levels.

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Exploring the Relationship between Student Filmmaking Projects and Motivation Levels in a History Classroom

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Secondary school social studies classrooms often suffer from a disconnect between students and content, as students often don't see how historical concepts relate to their lives (Bernstein, 2013). As a result, motivation levels typically remain low for students in these social studies courses. In this study, I explored how implementing a small group filmmaking assignment affects student motivation levels for learning the content. Students, in groups of five, were to research a given historical figure, write a historical fiction script, film and edit their short film, and finally upload the finished product to YouTube for the rest of class to view. Findings showed a marginal increase in motivation levels; however, student focus was a large issue as many students used a majority of the time for socializing instead of staying on topic.

Literature Review

Social studies classrooms in secondary schools across the United States face a difficult problem relating to keeping students engaged in the material (Bernstein, 2013). The purpose of this study was to discover what effect having students make historical fiction films has on their motivation levels for learning the material presented in these subjects, and also how their engagement levels are affected.

Impacts of Assigning Group Work

Hancock (2004) found in a study of university-aged students that those students who were subjected to high levels of peer orientation and collaboration reported higher motivation levels in learning the material in class. The goal in several studies included in this review is to examine how group work affects the atmosphere of a class, including how much level of comfort students have with their peers. In environments where students feel a higher degree of orientation with their peers, comfort levels are increased, and students feel more encouraged to become active learners (Hancock, 2004), group work has been shown to increase collaboration and orientation with classmates (Schumaker, 2005). The specific research question for Schumaker's

research was what effect does an increased level of peer orientation have on a higher education student's motivational levels?

Methodology

The core of this research study revolved around the effect of having students create short historical fiction films on their motivation levels for learning the content. In a western humanities course, students were broken up into five groups of six. Groups were chosen by the researcher to ensure that the groups are not comprised of predetermined groups of friends in order to study how the group dynamic changes throughout the study. Each group was assigned a historical event surrounding the unit on Roman Emperors. Students were tasked with creating a short historical film (approximately five to eight minutes in length) surrounding the event. The students wrote a script that was entirely their own based on the analysis of historical resources involving their event. Students then went through the filmmaking process, such as determining a suitable location for filming, casting themselves as the actors, determining who fills the other roles involved in the film creation process, such as cameraman, director, etc., and shooting and editing the film. A rubric was provided to each group before the students begin working on their film to serve as a guide into what is to be included in the film, what the different roles are that the group members must take, etc.

Participants/Setting

This study took place at a relatively high-achieving and affluent public high school in the Southeastern United States. The participants were thirty secondary school students at the aforementioned high school enrolled in a history course. The majority of the participants were white, native English-speakers, which is something that needs to be taken into consideration when trying to replicate this study in other academic environments. In addition, five participants were African-American and four participants were Asian.

Data Collection

Data were collected in multiple manners in order to achieve triangulation to ensure more reliable results. The first way that data was collected was a questionnaire that was given before and after the study is conducted. The questionnaire included a series of questions with Likert-style response options that attempted to determine the students' interest level in the social studies as a whole, as well as more specific questions about the ways they are usually presented with information in social studies courses, their perceived effectiveness of those methods, and their

opinions on group work. The questionnaire given following the study included the same questions as the one given before the research is conducted, as well as some free response and Likert-style response questions regarding the perceived effectiveness of the filmmaking process on their interest level in the content.

In addition to these questionnaires, the finished product of the short films was used to assess the effectiveness of having the students create short films on their ability to learn and analyze the content. When viewing the films, I analyzed the dialogue in the films and the setting/tone/etc. of the film to see if the students were able to extract the important themes from their specific topic, thus determining whether or not the filmmaking process was successful in having the students comprehend the material.

As a third method of collecting data for this research study, I conducted interviews with four participants who volunteered to be interviewed. These interviews were conducted before the research study takes place, and immediately following the conclusion of the assignment, after all of the films are showed to the class. The interviews followed a semi-structured format with some guiding questions that allow for a higher degree of flexibility both in the responses from the participants and follow-up questions by the interviewer. In the interviews that take place prior to the beginning of the filmmaking process, the focus of the interview revolved around why or why not the participant enjoys the social studies classes they have taken in the past and are currently taking. The purpose of these pre-interviews was to get a first-hand perspective on how students perceive the social studies in secondary schools, and how these attitudes have come to be. Following the conclusion of the assignment, I conducted post-interviews with the same participants that participated in the pre-interviews. These interviews focused on any changes in attitudes towards social studies following the study, as well as gauging the effectiveness of the filmmaking process on those students' enthusiasm levels and interest in the content during the course of the study.

As a final method for evaluating the effectiveness of the study, I utilized my own observations of participants throughout the study, recorded in a field journal. I focused on any differences I perceived with regards to student attitudes and behaviors from before the study began, and after the study began. I focused on what effect the group work has on the classroom environment, how active or inactive students are in participating in their groups, and how excited

students are to complete the assignments, specifically focusing on effort on the part of the participants.

Findings

The results of this study were somewhat mixed. While the student interviews and the fairly high quality finished products indicate that the assignment was effective in increasing motivation levels, field observations and survey results pointed were less positive. Four major themes stuck out in the results of the study, those being student's views on socializing during group activities, changes in peer familiarity, a belief in the lack of relevancy of material covered in school across disciplines, and finally amount of pride taken in film assignments when compared to other traditional group work assignments.

Group Work Socialization

One of the major findings that developed from the data was that although most students were visibly enjoying the filmmaking assignment, it was evident that a large proportion of the participants were using the majority of their group work time to socialize rather than focusing on the work at hand. This was evident in several of the data sources used for this study, including the surveys. In the pre and post-surveys, very little changes occurred with regards to student responses for the statement "I typically enjoy group work in school." The largest change, however, was the jump in students who "strongly agreed" with this statement. While at first glance that seems like a positive result, if you look at the percentage of students who responded "agree" to that statement, it decreased about the same amount as "strongly agreed" rose.

Peer Familiarity

Developing social skills and garnering a greater understanding and appreciation of your peers are important aspects of schooling and valuable assets to have in the "real world." Another major finding I uncovered in this study, informed particularly by field observations and surveys, was that students demonstrated a higher degree of familiarity with their peers during the assignment, as well as after the assignment was completed. In the pre-survey, 65.4% of participants either agreed or strongly agreed that they were fairly outgoing individuals. This number increased 3.7% to 69.1% in the post-survey, indicating at least a few students began feeling more confident interacting with their peers. Also, when asked to respond to the statement "I feel comfortable collaborating with all members of my class," there was a decrease of 3.3% in responses that indicated students either disagreed or strongly disagreed with that statement.

Lack of Content Relevancy

If students do not feel that what they are learning is necessary to their lives or meaningful in any way, they will likely not be very invested in mastering the material. This is why an emphasis of this study was to determine how students felt about what they were learning, and to see if these views were impacted by the filmmaking assignment.

Pride in Film Assignments

Since the majority of the participants in my study were seniors, they had been in the public education system for approximately twelve years. In that time they have had to complete several traditional group work assignments countless times, such as making posters or PowerPoint presentations. A very interesting finding was that students took more pride in an assignment that they knew would be screened for the entire class and uploaded to YouTube; they exerted considerable effort to make a high quality final product. During the filming phase, one of the motivating factors I noticed if students got too off track, was that at least one student in the group would remind the rest of the group that the whole class would see the final product, and that it would be embarrassing if their film was of very low quality.

Discussion

The results of this study were somewhat mixed with regards to its intended goals. The central question for this study was does the process of making small group student films increase motivation levels for learning in a secondary school classroom? Because I collected data in four separate ways, including individual student interviews, surveys administered anonymously by all participants both before and after the study, the finished products, as well as my own field observations, I collected data that both supported and was also inconclusive regarding whether or not the film assignment increased student motivation levels.

Student Socialization

One clear finding from this study was that a large percentage of participants used a significant amount of time allotted to complete the student films for socializing rather than staying on topic. Webel (2013) outlined one possible drawback to assignments such as the film assignment: he found that when high school math students were given the opportunity to work in groups, they often were more focused on socializing and interacting with friends than staying on topic. Webel, however, attributed this to having groups comprised of students who were already friends, and thus an important aspect of my study was that I assigned groups comprised of

students who I believed had relatively low orientation levels with one another. Even though groups were created in this manner, several groups of friends would still socialize with one another despite being in different groups.

Increase in Student Engagement

One common theme from the results of all of the individual interviews was that students may feel unengaged during traditional methods of classroom instruction, namely teacher-centered lecture. Using technology in social studies classrooms has the added benefit of increasing student engagement, as students are presented with information in a more attention-grabbing medium than traditional lecture (Huneycutt, 2013). Increased levels of engagement are an integral part of increasing student motivation as Huneycutt outlined, and thus the inclusion of technology as part of the assignment was an integral aspect of the study in an effort to increase student motivation.

Conclusion

Though there were several limitations that certainly affected the results of this study, many of the findings positively answered the central research question, that the creation of small group films increases student motivation levels. Several factors that were explored surrounding this general topic, including the relationship between technology and student motivation, and the effectiveness of increasing peer orientation with increasing motivation levels, supported previous research that was studied in preparation for this study. Future studies should take place in a 'core' class, preferably with underclassman to explore how motivation levels are affected in a more traditional class.

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The Influence of Student Constructed Historical Fiction Narratives on Student Engagement and Understanding of History

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The research question for this study was, how does having students construct their own narratives of historical events affect the students' retention of and enthusiasm for historical topics? By providing the students with content material through a variety of different mediums I expected to target an assortment of student learning styles. These students were asked to apply the information they had gathered in the creation of their own historical narrative. This was done over the course of a unit project that employed a series of individual activities. These activities pushed students to see historical figures, events and locations in the same light that they viewed the characters, places and events in their favorite novels, movies or television shows. In this way, history shifted from memorization and became a series of stories, with historical figures becoming main characters and key events being the suspenseful climax. This gave students the opportunity to connect with the material on a more personal level and gain a greater understanding of the culture and society of a particular time and place (Jordan, 1992).

Literature Review

Historical fiction can be used as a very effective source when exploring a topic through a multimedia approach. This type of resource has also been explored in much of the literature. Using historical fiction within the classroom can improve student engagement with the material (Gewertz, 2012) and improve the students' retention of the material above that of traditional methods (Crawford, & Zygouris-Coe, 2008); yet, historical fiction should be used with caution because it can lead to confusion amongst the students over what exactly is fact and what is fiction (Coulter, Michael, & Poynor, 2007).

The use of historical fiction has increased student engagement and interest with history content material. Jordan (1992) conducted a number of surveys and interviews that showed that

students found historical fiction more relatable and easier to understand than readings from textbooks and primary sources. Additionally, students felt that they had a better grasp on historical figures, their motives, and the social and cultural context surrounding historical time periods after reading historical fiction (Jorenby, 2007; Smith, 1991).

This study was conducted with four of English Language Learner students. A 2014 article by Kim and Garcia reported on a long-term study investigating ELL students and why they often experience "persistent academic underachievement" (p. 300). In the study one student responded by saying, "I know how to speak already. Writing, I just have hard time to write like grammar and everything… when I write, like a story, I don't know how to put it together" (p. 308). Similar statements were made by other students in the study who claimed that they felt very confident in their ability to speak the language but really struggled when it came time to write long paragraphs or spell big words.

In Fránquiz and Salinas', (2013) piece, the authors claim that students being able to articulate themselves effectively vocally in class does not necessarily reflect their ability to fully comprehend or transfer the information they have gathered. Instead the authors claim that "Findings showed that the practice of historical inquiry through primary sources and document-based questions assisted students in developing English, academic vocabulary, and academic concepts in the learning of American history" (p. 339).

The existing literature shows that there has been a great deal of research about historical narratives and having students manipulate varying historical mediums in order to gather information. Through my study I attempted to add to the field of history education by pushing students to create their own works of historical fiction through the use of a narrative based approach and the analysis of a variety of historical sources. Primary and secondary sources and historical fiction provided students with the information they needed to construct their stories while the act of creating the story pushed the students to develop their skills in reading, writing, analysis and creativity.

Methodology

This study took place in a Title I school located in an urban neighborhood in a mid-major city. The student population is roughly 1280 with the majority of the students being from

minority and low-income backgrounds. Around 73% of students currently qualify for free and reduced lunch programs. The students selected for this study were those assigned to the honors and one of the ELL world history classes in which I was student teaching. Ten honors and four ELL students chose to participate. These students ranged in age from 14 to 18 and the study took place over a two-week period in the spring semester of the 2014-2015 school year.

In this study the students were asked to construct their own narrative histories over the course of the Middle Ages Unit. Students were presented with the units' information through traditional lecture as well as through a variety of multimedia sources. These sources included, but were not limited to: primary sources, historical fiction excerpts, images of historical artwork, contemporary music and poetry and short video clips. The fundamental expectations of the final narrative assignment required that the students accurately use at least three historical figures, two settings, and one major event as a part of the plot of a historical fiction story. In order to accommodate the difference in writing ability between the Honors and ELL classes the length of the paper required of each student varied.

For this study I gathered both qualitative and quantitative data. The qualitative data were used to measure student interest, engagement and enthusiasm for the material. I analyzed the data by recording the frequency of each selection and then using a series of tables and charts to show themes and changes over time. The quantitative data were used to measure how well the students retained the information taught over the course of the study. I analyzed the quantitative data by looking at class averages on the unit tests and narrative assignment, the differences in scores over time for each student and the average growth/decline of each student's work. The data were first put into a spreadsheet with each student's scores on the scaffolded worksheets, final narrative, unit quiz and previous quiz average for the class listed. The data were then organized into a series of data tables and charts that were analyzed via descriptive statistics.

Findings/Results

Over the course of the 10-day unit students expressed a growing interest in historical figures, events and places. Surveys showed a steady growth in interest and enjoyment of the topics through the student responses to both the Likert Scale type questions presented to them. Figures 1 and 2 show how students responded in each of the surveys to question #1 (do you enjoy history?) and question #2 (do you find historical topics interesting?).

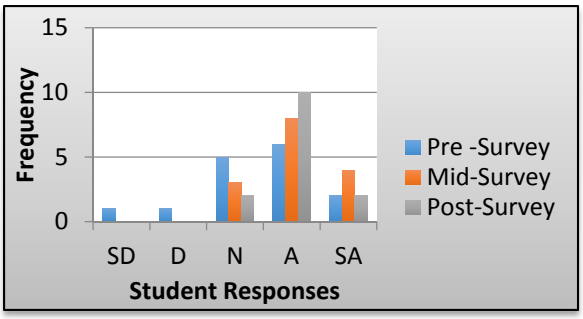

Figure 1. Student responses to survey #1.

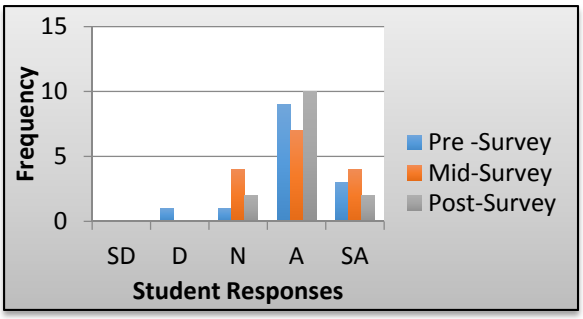

Figure 2. Student responses to survey #2.

A number of students also stated their interest or enjoyment with the project through the free response questions that gave students the opportunity to comment on the study during each survey. In response to the mid-study survey question, "What parts of the narrative project have you like the most?" one student responded, "I liked learning about the medieval events," while other students said that they liked, "making up my own story along side history" and how the project "was put in parts." Similarly, the participants further expressed their enjoyment for the project when answering the post-survey question, "What parts of the narrative project did you like the most?" Six participants responded with a statement about how they enjoyed the element of creativity that the project allowed the students to use while engaging with the history. Another student stated, "I…actually liked writing the paper because it puts all the info together so I can understand it better."

Despite the struggles that the students experienced, as a whole the students scored fairly well on the final narrative. The average score on the narrative project was a high B, approximately a 91%. Through my interactions with the students I came to notice that when addressing content and grammar related errors that the students' final papers contained far fewer errors they typically did on previous writing assignments. It should be noted that the scores on the final narrative did not necessarily reflect the score that each student received on the unit quiz. Some students received roughly the same scores on each assignment and some students had a large degree of variation between the two scores. The average score on the final narrative for all participants was 91.3%, while the average score on the unit quiz was 77.9%. This is a difference of about 14%, or two whole letter grades.

Four of the fourteen participants in the study came from an ELL class. The data from these students was very positive with all four of the students displaying some form of growth between their average quiz grade and their score on the unit quiz at the end of the study. As a group they averaged a growth of 17.2% rising from an average of 59% to 76.3%. Of the four students who participated from the ELL group one of the students, Margaret, a consistent A-B student, had a much lower ceiling for potential growth than the other three participants resulting in a growth of only 2.2% for this student. When the data is analyzed excluding this outlier, the average score on the unit quiz stayed near the previous average of 76.3% with a 75.0% average. However, the average of the participants previous quiz grades dropped nearly 7 points (or a whole letter grade). This resulted in a much more profound growth in the students' quiz grades with an average growth of 22.2%.

In terms of retention almost every student stated that they felt that the writing project was helping them remember the content information. Survey question #5 asked the students to respond to the statements, "The narrative project has helped me to better remember the information that we are studying this unit" on the mid-study survey and "the narrative project helped me to learn and understand the material" on the post-study survey. On the post-study survey, 13 of 14 participants reported that they agreed or strongly agreed with this statement.

Discussion

This action research study aligns fairly strongly with the previous literature that is associated with the topics studied. The growth experienced by the majority of participants cannot be attributed to any one factor, but it does reflect the claims of other researchers who have stated that historical fiction makes the material more engaging for students (Gewertz, 2012). Furthermore, the students' exposure to and manipulation of primary and secondary sources during the research phase of the project could have also further helped to solidify the information in the minds of the students like it did in previous studies (Monte-Sano, 2011). Finally, the dramatic levels of growth shown by the ELL students also reflect the impact of writing on ELL students discussed in the literature despite it being transferred from language acquisition to historical understanding (Fránquiz & Salinas, 2013).

This study yielded a dataset that allows for the deduction of a number of different conclusions. The qualitative data suggest that the completion of the narrative project led to

increased levels of enjoyment and interest in history for the participants. More importantly, the quantitative data drawn from the project and the participants' quiz grades suggests that the completion of the project led to a greater understanding of the unit's historical concepts for the participants who were not already demonstrating exemplary levels of understanding. This was especially true for the students from the ELL class who all showed academic growth. This could be due to the increased exposure to the language that the students experienced throughout the project. Having to navigate the material during the research process led to the ELL students having greater exposure to new words and phrases from the content material.

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Use of Pre-Reading Strategies in Facilitating Reading Comprehension of Authentic Texts in the Secondary Spanish Classroom

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Literacy is currently of national concern across academic content areas as is reflected in national educational standards (American Council on the Teaching of Foreign Languages, 2014; National Governors Association Center for Best Practices & Council of Chief State School Officers, 2010; Partnership for 21st Century Skills, 2004). The standards and performance-based approach to teaching world languages underscores the importance of teaching a foreign language (L2) using the three modes of communication: interpersonal, interpretive, and presentational, with proficiency development as the goal. Proficiency refers to what learners can do with language in terms of speaking, writing, listening, reading and cultural knowledge in unrehearsed real-world communication situations. Literacy plays an important role in the five primary goal areas of the *World-Readiness Standards for Learning Languages* known as the 5Cs: Communities, Connections, Communication, Comparisons and Cultures (ACTFL, 2014). The role of literacy is most pronounced in the standards for Communication and Cultures. The Communication Standards call on students to "understand, interpret, and analyze what is heard, read, or viewed on a variety of topics" and the Cultures Standards give students the goal of using "the language to investigate, explain, and reflect on the relationship between the products and perspectives of the cultures studied" (ACTFL, 2014, p. 1). To achieve these standards, students must develop their literacy in L2, or their non-native language. While literacy may not have received as much emphasis in L2 instruction in the past (Hadley, 2001), the proficiency-focused classroom must recognize that literacy is central for communication, and that renewed attention to the issue of reading in the L2 classroom is needed.

Review of Literature

When considering how to help students develop reading comprehension in the L2 classroom, an initial concern should be the kinds of texts students will read (Crossley, Louwerse, McCarthy, & McNamara, 2007). There are many categories of texts that world language teachers can use, including literary, informational, and technical texts as well as correspondence,

journalistic works, and *réalia*, or products from the culture (Hadley, 2001). In addition to considering the kind of text to incorporate, world language teachers should consider whether to use simplified or authentic versions with their students. The potential benefits of using authentic texts are plentiful, ranging from increased cultural knowledge to better overall performance on L2 assessments (Maxim, 2002). Working with authentic texts gives students opportunities to examine directly the products, perspectives and practices of the target culture, building cultural knowledge in the process.

Reading comprehension is affected by both reader-based and text-based factors. Text-based factors contributing to comprehension include text-length, the presence of visuals, discourse signaling cues, grammatical structures, and vocabulary (Grabe, 2009). Beginning L2 readers may benefit from longer texts because they provide more context for them to make inferences (Maxim, 2002). Although research supports using longer texts with students, Shrum and Glisan (2009) caution that such texts may intimidate novice learners and suggest that the inclusion of visuals may help to make the task more approachable. Carrell and Wise (1998) recommend that teachers avoid assigning texts on topics in which students have low-interest or low background knowledge and allow students to select their own texts when possible. Schema theory explains the reading process as a fundamentally constructive one, in which understanding is the result of interaction between the text and the reader's background knowledge (Nassaji, 2007). Reading is a necessarily interactive process that occurs between the reader, who brings his or her own preexisting schemata, and the text (Grabe, 2009).

Reading is a highly complex act: though a fluent reader may make these processes seem effortless, reading is a cognitively demanding act that requires much active thinking, especially among beginning L2 readers (Grabe, 2009). In order to reap the benefits of reading authentic texts in the L2 classroom, appropriate scaffolding is essential (Hadley, 2001; Shrum & Glisan, 2009). Scaffolding for reading comprehension can take many forms, including presenting a progression of increasingly difficult texts and the presentation and use of reading strategies (Brown, 1999; Clark & Graves, 2005).

An important first step in preparing students to read an L2 text is the "pre-teaching/ preparation stage" (Hadley, 2001). This helps students activate their background knowledge and schema about the material they are about to read. The reading process should also include attention to subsequent stages, including decoding while reading, checking for comprehension

and using exercises to think beyond the specific text itself (Hadley, 2001). By engaging in meaningful readings of authentic texts, language students can move past superficial understandings of culture and gain a deeper appreciation for cultural practices, products and perspectives (Bocci, 2014). The researcher investigated the research question: How do pre-reading strategies facilitate reading comprehension of authentic texts in a high school Spanish class?

Methodology

This action research project included 26 participants in an Honors Level III Spanish classroom at a North Carolina high school. The research was conducted April 8-22, 2015. Parents/guardians signed informed consent letters; students under the age of 18 signed letters of assent; students over age 18 signed informed consent letters. Data collection occurred during normal instructional delivery as part of assignments completed by all students. The researcher used a coded system to protect participants' privacy and assigned each of the participants a different letter, A-Z. Upon completion of the study, all data collected were stored in a locked filing cabinet in the office of the researcher's adviser.

The study generated three data sets, the first of which consisted of data collected from student work. Students read three authentic texts and completed six written comprehension questions about each one. The researcher reviewed students' written responses to evaluate how well they understood the main idea of the text and important supporting details, characteristic of Intermediate level proficiency (ACTFL, 2012a; ACTFL, 2012b). The researcher also reviewed students' written responses to track their written language development with respect to language control. Students completed a presentational writing assignment, which was evaluated along the same lines, and participated in a book-club style discussion about the third text.

The pre-reading strategies for Text 1 were led by the researcher. The researcher presented background information with PowerPoint and other multimedia and asked students oral questions, employing the interpersonal mode of communication. The researcher also presented the cover of the storybook and the first page, asking questions about the title, pictures, and perceived keywords to activate their schema about the topic of the text (Grabe, 2009). For Texts 2 and 3, students researched background information in small groups and orally presented findings to classmates. For Text 2, the researcher asked oral questions as with Text 1. For Text 3, the researcher did not ask students oral questions; students were directed to read and

independently employ pre-reading strategies similar to those used with Texts 1 and 2, including considering the title of the text, skimming and identifying key words, paying close attention to visuals and using the comprehension questions to guide their reading.

The second data set consisted of field notes taken by the researcher during instruction and observations based on video-recordings of instruction. The third data set consisted of student responses to a 12-item survey completed after instruction about their perceived reading ability and their experience with the texts and class activities.

Results and Discussion

Analysis of data revealed certain trends about the development of reading comprehension and language ability with authentic texts. The researcher evaluated students' progress comparing their performance on comprehension questions for each text. Students' written responses were evaluated in terms of completion, accuracy, and language control. The point value of each question corresponded to its level of complexity, ranging 1-3 points. For Text 1, students received on average 10.4 out of 12 points for completion and by Text 3, 11.4 out of 12 points. Students maintained or slightly increased their accuracy from the first to third texts, attaining on average 88% and 89% accuracy, respectively.

The researcher analyzed language control in students' written responses, which was rated 1-4 using a rubric based on the Fairfax County Public Schools PALS Holistic rubric for presentational writing (Fairfax County Public Schools, 2013). The researcher looked at verb and adjective agreement, use of vocabulary, and punctuation. Students maintained or slightly improved their language control from Text 1 to Text 3 (3.1 and 3.2 on average, respectively). In the presentational writing task, students produced significantly more written language, so the researcher was not surprised that scores dipped somewhat (average=3.0 points).

On the written survey, most students (18, 69%) indicated that they understood the main ideas and supporting details of the texts. When asked about the pre-reading activities, most (18, 69%) agreed or strongly agreed that they helped their comprehension. Despite students' success in comprehending the study texts, only 12 students (46%) agreed or strongly agreed they could read authentic texts in general. In terms of language ability, 18 students (69%) agreed or strongly agreed that they were able to use new words or phrases they learned from the texts in their final writing task and/or the group discussion. Among the types of tasks completed (reading the text and answering comprehension questions, completing presentational writing task, participating in

the group discussion) students ranked "reading the text and answering questions" as being most difficult. When asked why that task was most difficult, 10 students (39%) referenced "unknown words." Students agreed or strongly agreed that they liked selecting their own third text (21, 81%). Student preference was incorporated because one of the study's underlying goals was to increase student interest in reading, and it seems to have had the intended effect: 20 students (76%) indicated they were open to or actively desired to read more authentic texts.

Conclusions

Overall, students showed progress in their ability to comprehend authentic texts, as evidenced by their success answering comprehension questions, completion of the writing task and participation in the group discussions. Students demonstrated that they understood the main idea and some supporting details of the texts they read (ACTFL, 2012a). The performance of most students exceeded the anticipated Intermediate level, displaying features of Advanced level proficiency (ACTFL, 2012a; ACTFL, 2012b). Students were able to make inferences and derive meaning from the context and linguistic features of the texts as demonstrated in their responses to comprehension questions and their remarks during the final group discussions.

This research supports the practice of engaging students in purposeful pre-reading activities to develop their background knowledge on the subject of a text and activate their schema about pre-existing knowledge they may have. These Intermediate level students were able to successfully read and comprehend authentic texts and in the process use the three modes of communication to develop their language ability. As a result of the study, the researcher gained valuable insight about the purposeful incorporation of authentic materials in the L2 curriculum. Furthermore, the study enlightened the researcher about the lack of confidence some students experience while reading, despite their ability to meet and exceed proficiency targets. As a result, the researcher plans to make literacy central to her teaching in the future to help students develop both their language abilities and their confidence.

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The Effects of Introversion and Extroversion on Whole-Class Discussion

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Students bring not only a wealth of outside experience with them into the classroom but also their own natural dispositions and temperaments. Particularly poignant are students' personalities as they relate to communication preference. Students, as individuals, fall somewhere on the extroversion-introversion spectrum; where students fall on this spectrum directly affects how students prefer to participate and share their thoughts (Hirsh, Hirsh, & Hirsh 2003; Myers, McCaulley, Queck, & Hammer, 1998).

Teachers are responsible for facilitating whole-class discussion as a means of teaching oral communication skills while being attentive to students' communication preferences. Yet, little research has been conducted or best practices established for differentiating learning based on personality or communication preference. As such, this study attempts to answer the question: What are the effects of introversion and extroversion on whole-class discussion in the secondary English Language Arts classroom?

Review of Literature

Extroversion and Introversion

Extroverts typically desire to be around other people; they recharge and find energy by engaging with others (Cain, 2013). People with a preference for extroversion also tend to prefer action over reflection and enjoy working in groups. Of importance to note, individuals with a preference for extroversion prefer oral communication as they talk things over in order to understand them; they are quick to share their thoughts freely, even when their thoughts are not fully developed (Cain, 2013; Hirsh et al., 2003; Myers et al., 1998). When processing new information, individuals with a tendency toward extroversion prefer to speak, think, and then speak again (Hirsh et al., 2003).

People with a preference toward introversion are typically more focused internally than extroverts. Introverts often require alone time to process events and recharge (Cain, 2013). When

processing new information, introverts tend to think first, then speak, and then think more. When problem solving, these individuals enjoy starting the process individually (Hirsh et al., 2003). Individuals with a tendency toward introversion prefer communicating in small groups, and introverts often keep their thoughts to themselves (Cain, 2013; Hirsh et al., 2003; Myers et al., 1998).

Whole-class Discussion

Communication is at the core of human interaction. Yet, teaching and scaffolding oral language is often minimal or nonexistent in the secondary English language arts (ELA) classroom (Baker, 1968; Milner, Milner, & Mitchell, 2012; Nystrand, Gamoran, Kachur, & Prendergast, 1997). Not only is oral communication an aim of the 21st century classroom and the Common Core State Standards, but the intertwining of thought and language through speaking is also essential to learning (Milner et al., 2012). Like all successful oral language activities, whole-class discussion is comprised of two elements: speaking and listening. Whole-class discussion is a means by which students can convey already established ideas, but it also serves as a way to prompt new thoughts and generate new insights.

As synthesized above, current literature and research convey the vital role communication preference can play on students' communication styles while also considering the value of oral language in the ELA classroom through whole-class discussion. Nystrand et al. (1997) have found that whole-class discussion is rare or altogether missing from many ELA classrooms. Yet, it is whole-class discussion that might allow teachers to maximize all of their students' communication style preferences to teach effective oral communication. Given the lack of research on this specific topic, this study is imperative to better understand students' in-class needs and determine best practices for understanding and using students' innate communication preferences.

Methods

This study was conducted at a mid-sized, suburban, magnet high school located in the southeastern United States. Participants in this study were selected through a mixture of convenient and purposeful sampling. Students from the researcher's Advanced Placement (AP) Literature and Composition class were selected as participants for this study. Participation in this study was completely voluntary; all 29 students in the class were invited to participate and, in the end, each student provided the proper consent and assent forms needed to participate.

This study was designed to investigate how students' preference for extroversion or introversion affected whole-class discussion while allowing the researcher to learn how best to facilitate whole-class discussion amongst students through differentiating instruction according to different communication preferences. More specifically, this study aimed to examine how students' tendency toward introversion or extroversion determined their participation in whole-class discussion while working toward increasing oral communication practices throughout the class. To do so, this study used quantitative analysis of audio-recorded whole-class discussions in conjunction with qualitative analysis of inventory data, pre-and post-test questionnaire data, and student journals to examine the effects of introversion and extroversion on whole-class discussion in the ELA classroom.

For the purposes of this study, students placed themselves on the extroversion-introversion spectrum through a self-reporting inventory, adapted from Susan Cain's (2013) book, *Quiet: The Power of Introverts in a World that Can't Stop Talking,* and various journal entries, which also served as artifacts for the study and were analyzed qualitatively. These inventories and self-reflections were used to measure extroversion and introversion in students, and data collected from these instruments served as a foundation for other artifacts.

Students were asked to complete a pre-and post-test questionnaire. This questionnaire measured self-reported class participation over time. This tool also measured student perception of class participation that was compared against the audio transcription of class participation and the researcher's observational notes. Students provided detailed information on these questionnaires. Data were coded and analyzed and allowed the researcher to gain a deeper understanding of what triggers students' willingness and desire to participate vocally in whole-class discussions.

Three whole-class discussions were audio recorded, transcribed, and analyzed to compare to students' perceptions of their participation in whole-class discussion. During class, the researcher set up a tape recorder to capture student voices while also jotting down student names as they spoke to ensure accuracy of the transcriptions. These whole-class conversations were transcribed only to denote who spoke and for how long they spoke; content of what students' said was not transcribed as it exceeded the purposes of this study. That is to say, this study examined students' willingness to participate in whole-class discussion and how their

participation might be influenced by extroversion or introversion; this study did not evaluate the quality of students' responses or depth of understanding.

Following the three audio-recorded whole-class discussions with structured processing time intervention, students wrote a journal entry reflecting on their participation in the whole-class discussion. These journals were completed independently and students were free to write whatever they felt about the discussion; there was not a specific prompt for these journals.

The researcher took extensive observational notes and memos throughout the study. These notes and memos served as reflective pieces on the data collection process and considered how students were engaging and responding to the components of whole-class discussion and understanding their own personality and communication preferences. While informal, these notes served as reminders for the researcher regarding days when students (individually or collectively) were particularly engaged or disengaged, the amount of side conversation during whole-class discussion, how often the students raised their hands before speaking, and when students addressed the teacher directly as opposed to the whole class.

Results

Quantitative analysis of students' introversion/extroversion inventories and transcriptions of whole-class discussions shows that students are aware of their communication preference and accurately reflect on their class participation. Further, transcriptions show that there is a slight bias for extroverts speaking up in whole-class discussion. Analysis of this audio recording also revealed many side conversations between smaller groups of students; however, these conversations were about the topic at hand and related to the whole-class discussion.

Analysis of the students' introversion/extroversion inventories, pre- and post-tests, and student journals revealed six major themes: students are aware that introversion and extroversion affect them; students fear being wrong; students speak when they have a personal connection to the material; students want to show and hear differing opinions but do not firmly grasp how to agree as part of whole-class discussion; students view listening as participation; and students prefer small group discussion. `

This study found overwhelming data that students choose not to participate in whole-class discussion for fear of being wrong. Across the pre- and post-test, thirty unique comments were made directly stating that students would not participate in whole-class discussion because they were worried about being incorrect. Extroverts made eighteen of these comments.

Eighteen out of twenty-nine students made a point in their reflections to note that their likelihood to engage in a whole-class discussion increased when the topic connected to them personally. Ten of these students were extroverts.

Based on the qualitative data from student journals as well as the pre- and post-test questionnaires, many students seem to understand that part of the value of whole-class discussion is being able to hear a variety of ideas and perspectives on the subject. There was a clear difference between introverts and extroverts as extroverts expressed the desire to hear and, more importantly, to share divergent opinions. Furthermore, the data revealed that students were unsure of how to express agreement. That is to say, in whole-class discussion within the secondary ELA classroom, students had little to no conception of how to engage during a large conversation when their ideas aligned with what had already been said.

This study revealed that students viewed listening as a form of participation in whole-class discussion. Here, there is a strong correlation between who explicitly stated that they were listening to the conversation and who stated that they view listening as a form of participation. Of the twelve direct references to listening, half were made by extroverts; however, these six references were made by the same three students. While the number of comments between introverts and extroverts was equal, more introverted students explicitly discussed listening in their journals and pre- and post-tests. Furthermore, of the five introverts who directly expressed that they participated in whole-class discussion by listening, three were strong introverts.

Finally this study revealed that students preferred small group discussions to whole-class discussions for a variety of individual reasons with no bias toward introversion or extroversion.

Discussion

This study found that introversion and extroversion do have an impact on whole-class discussion. Extroverts participate more frequently and at higher rates than introverts. Objectively and subjectively, students participate in whole-class discussion more when the topic is connected to their personal lives. Surprisingly, introverted students expressed an increased willingness to participate in whole-class discussion on personal topics. Thus, introverts may be misrepresented and stereotyped as shy and unwilling to share personal information (Cain, 2013); this study suggests this stereotype may not always be true. At the same time, research does show that introverts prefer sharing in a more personal or intimate setting (Cain, 2013; Hirsh et al., 2003; Myers et al., 1998). Therefore, it is surprising that introverts were more likely to cite personal

connection as a reason to speak up in whole-class discussion. One hypothesis for this discrepancy is that while introverts were more likely to participate vocally when the discussion included room for personal connection, extroverts may not have needed to address personal connection as an increased reason for participation since they were more apt to participate anyways. At the same time, while introverts may be more likely to participate when the topic can be connected to personal experiences, it is not at the expense of extroverts. Objectively, based on the transcriptions of the whole-class discussions, extroverts still participated vocally more often than introverts when the discussion was more personal in nature. Instead of introverts talking more than extroverts in this situation, the whole-class conversations on more personal topics were more robust, included more voices, and were sustained for longer periods of time. While introverts expressed the same desire to engage in more personal topics during whole-class discussions, they also expressed little desire to express divergent opinions as part of these discussions. While not all introverts expressed this feeling, all students who expressed a negative view of expressing divergent opinions were introverts. On the whole, students preferred small group discussions to whole-class discussions regardless of communication preference. This may be a result of students tending to view small group discussions as a more natural form of conversation but not view whole-class discussions as such. Another factor in the desire for small group discussions may be due in part to students, in their quest to express only "right" answers, not following traditional conversational norms by not knowing how to respond and engage when their ideas or opinions had already been stated.

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Use of Authentic Film in a Secondary Spanish Classroom to Develop Language Ability and Cultural Knowledge

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In the 21st century global society, it is imperative to interact with members of diverse cultures and communities around the world (Jackson and Malone, 2009). To meet the needs of the workforce in the United States, it is crucial to advance world language education, making it a priority in grades K-12 so that students have the opportunity to develop both language ability and cultural knowledge. Language and culture are naturally intertwined. Kuo and Lai (2006) state, "in a word, culture is the foundation of communication" (p.2). The use of culture as a context for communication in a world language classroom can provide opportunities for students to experience other perspectives and see the world differently. One's understanding of culture can influence communication, and according to the position statement on global competence published by the American Council of Teaching Foreign Languages, this ability is recognized as knowing "how, when, and why to say what to whom," (ACTFL, 2014, p. 1).

Review of Literature

The use of authentic film representing Hispanic cultures in the Spanish classroom provides learning experiences that can help students develop language ability while they gain knowledge of the practices, perspectives, and products of cultures in which Spanish is spoken. An important feature of authentic film in instruction is that it encompasses all these dimensions of culture that would otherwise be unavailable to the students. Language alone is the surface of the rich experience that language and culture provide together (Curtain & Dahlberg, 2010; Rouxel-Cubberly, 2014). The ability to see and experience culture through a window, as in film, is an invaluable bridge to the language (Rouxel-Cubberly, 2014).

In general, exposure to products of other cultures can expand students' perspectives of the world and how the people of the culture use the products and practices in their daily lives (NSFLEP, 2014; Curtain and Dahlberg, 2010). By using authentic films to teach a foreign

language, the audience can see the different perspectives, products and practices that native speakers uphold and use in their culture (Herron, 1994; NSFLEP, 2014). Comparatively, the use of film in the world language classroom as an authentic communicative context also provides opportunities to develop students' interpretive ability as well as oral and written expression.

When using authentic film in the world language classroom, the incorporation of purposefully designed activities provides students with the time and direction needed to comprehend films by directing their attention to essential parts of the film (Beckmann et al., 2013, Herron, 1994). Particularly, when designing pre-viewing activities, the language teacher should set up the theme of the film so students are familiar with the topic and do not become overwhelmed with information (Herron, 1994, Chung & Huang, 1998, Swaffer & Vlatten, 1997). Activities should be purposefully sequenced in order to allow students to form their own meaning and opinions of the events within the film (Swaffar & Vlatten, 1997).

Authentic film from Hispanic cultures is a useful tool in creating a meaningful communicative context for language learners. Libbon (2008) emphasizes the need to appreciate the ever-changing component of the development of culture and language. Furthermore, in order to truly communicate, one must first understand the culture of the society (Libbon, 2008; Togozzi, 2010; Curtain & Dahlberg, 2010; Robinson-Stuart & Nocon, 1996). Language and culture are inextricably intertwined; through the medium of film, students are able to learn about cultures of different societies and develop language ability.

Methodology

This action research study included 24 students in a Level 3 Honors Spanish class and took place between April 14 and May 5, 2015 in a central North Carolina public high school. Data collection occurred during normal instructional delivery as in-class assignments and homework completed by all students. For this study, the researcher selected three authentic films *El laberinto del fauno* (Del Toro et al., 2006), *Entre nos* (La Morte, 2009), y *La gran familia española* (Bovaira, 2013). Authentic film refers to film made for native speakers by native speakers. The teacher-researcher used performance-based strategies that focused on oral and written language development characteristic of the Intermediate range of proficiency in Spanish (ACTFL, 2012a). The study included three data sets: student work, field notes, and a student

survey. Data were collected on three days to assess students' oral language development: April 14, April 23, and again on May 5, 2015 for students' culminating projects.

The teacher-researcher collected data for the first data set by using one oral question to assess students' language development after they viewed a selected clip from each film. The teacher-researcher used the statement "*Pienso que____,*" (I think that _____.) in response to the question *"¿Qué piensas sobre la relación entre (Personaje 1) y (Personaje 2)?*" (What do you think of the relationship between (Character 1) and (Character 2)?) In their responses, the teacher-researcher looked for students' oral and written language development characteristic of the Intermediate range to describe the way that two characters in the film interacted in terms of dynamics within their family, both positive and negative circumstances that families endure (ACTFL, 2012a). On each of the days when data were collected, she used a checklist of specific language features to document students' ability to use accurate language in expressing understanding about familial relationships and evidence of cultural knowledge provided in their responses. The final student product involved a culminating group project that students presented to the class on May 5, 2015. The teacher-researcher used a rubric aligned with the checklist for the two previous clips to document students' use of accurate language, understanding of familial relationships, and evidence of cultural knowledge. The teacher-researcher focused on these specific language features: the subjunctive mood, choice of vocabulary, subject-verb agreement, subject-adjective agreement, use of Spanish/English, and pronunciation.

The second data set consisted of field notes that the teacher-researcher took throughout the study and from video-recorded instruction. Field notes included the teacher-researcher's observations and reflections on the students' development of oral language ability and cultural knowledge. At the conclusion of the study, for the third data set, students were asked to complete a teacher-created survey. The purpose of the survey was to investigate students' beliefs about the performance-based instructional strategies used to develop their oral language ability in Spanish as well as gains in cultural knowledge about the familial relationships depicted within the clips. The teacher-researcher investigated the use of instructional strategies using the three different data sets to answer the research question: How does the use of authentic film help students develop language ability and cultural knowledge in a secondary Spanish class?

Results and Discussion

In the first data set, the researcher found that students' language developed over the course of the study. The researcher observed that as instruction progressed, students demonstrated more accuracy in their responses, and they were more at ease in providing responses. The first time that the teacher-researcher asked the oral question after viewing *El laberinto del fauno* (Del Toro, 2006), the students who answered the question generally were able to describe the dynamics of the relationship. However, the students used more present tense in their responses at this point in time. During the subsequent data collection points in which the students answered questions and did the culminating presentation about *La gran familia española* (Bovaira, 2013), most students responded accurately to the question. As the study progressed, the data showed that students were able to use the subjunctive clause accurately at the beginning of the sentence; however, they were not able to use the correct form of the verb in the second part of the sentence. This finding shows that they were making progress in their understanding of the use of the subjunctive, but that they were still having difficulty in accuracy of use.

The findings from Data Set Two, the field notes, showed that student engagement sparked discussion and created a positive learning environment. Students' interest could be seen from their enthusiasm and questions they asked. Specifically, students asked for the name of the third film they viewed in class. The students wanted to watch the rest of the film outside of class with subtitles to delve further into the culture and find out if what they comprehended from the film actually happened.

The findings from Data Set Three, the student survey, revealed that, in general, the students believed the use of authentic film in the Spanish classroom helped them improve their language ability. However, when asked about how helpful the activities were, many students stated in their responses that they felt they needed more preparation in advance because they could not understand what was happening in the film clip. The teacher-researcher found that students were able to connect language to culture by using film as a medium. One recurring pattern throughout the responses in the survey was that students expressed a connection between language, culture, and film. Thus, through this study, the students developed an understanding of what culture is and how it is depicted within the realm of film.

Conclusions

The teacher-researcher gained much insight about using authentic film in the Spanish classroom. Overall, the findings of this study showed that students' oral language ability improved over the course of the study. In the first data set, the researcher did not fully explain the directions, and therefore, this lack of clarity could have impacted the study. The number of students who responded accurately to the oral question increased progressively over time. Thus, the teacher-researcher believes students felt more comfortable with language usage after viewing each clip due to their increased familiarity with the context of the film and the syntax of the sentences used in responses.

One finding that that the teacher-researcher observed repeatedly throughout the study, in regards to language ability, was the students' progression from the use of sentences in simple present tense to an increase in the number of attempts to use more complex sentences in the subjunctive mood. Students still reverted to completing sentences using the present tense in some cases; however, the researcher saw an increase in confidence level over time as they attempted to use the subjunctive accurately.

The teacher-researcher experienced several challenges in conducting this study including finding film clips that could be shown in the high school setting. Since movie ratings vary from country to country, the teacher-researcher had to select clips carefully to be sure that the content was appropriate. It was difficult for the teacher-researcher to obtain the films as well. In addition to the limitations associated with finding films, the teacher-researcher also faced the challenge of student absenteeism. The time constraints of this action research study combined with the difficulty to find appropriate films made the study feel rushed.

Overall, all students showed growth in language ability and gains in cultural knowledge from the beginning of the study to the culminating project; therefore, the teacher-researcher believes that this supports the claim of Beckman et al. (2013) and Herron et al. (1995) that film is a useful tool to display language and culture in the classroom. In future studies, the teacher-researcher recommends using film over a longer period of time so that the viewing periods can be spread apart and preparation can be more thorough. The teacher-researcher will continue to use the tool of authentic film in the Spanish classroom and will explore performance-based instructional strategies to prepare and guide students in this experience.

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Inquiry before Instruction: How the Use of Mathematical Questioning before Presenting Methodology Affects Student Attitude and Performance

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This action research study was developed in order to assuage the fears of students who struggle to apply mathematics to the real world and with mathematics concepts in general. Students were asked to solve real-world problems using previous knowledge before being given the mathematical processes to solve them. By posing questions to students and asking them to inquire into the different methods of solving a problem before presenting the procedures, students were able to solve problems using different methods and understand the information they needed in order to solve a problem. By illustrating to students that they understood how to solve a problem before introducing a procedure to solve it, their mathematical confidence and ability to apply concepts to different situations were expected to increase. Existing research has shown that when students invent their own equations rather than being instructed of them, their ability to transfer and retain the deep structure of mathematical concepts increases (Chase, Oppezzo, & Schwartz, 2011). By asking the question, "How does student mathematical inquiry prior to instruction affect students' conceptual retention and attitude towards mathematics?" I gained an understanding of how students best learn and retain information.

Literature Review

In the education system today, students are increasingly expected to have the ability to apply mathematical knowledge to the 'real-world'. This expectation can be seen throughout the curricula enforced in schools as well as the standardized testing that students have to pass in order to be considered adept in their subjects (NCDPI, n.d.). Unfortunately, traditional teaching methods of rule memorization and procedural knowledge do not give the students the ability to apply the information they learn as effectively as those using a project-based approach (Boaler, 1998). The retention of formulas and calculated methods of solving problems does not translate to the process of adaptation and application that is necessary in the real world. Thus, students solely have knowledge of the method of completing a problem and when faced with real-world

application word problems on standardized tests, they struggle with application. This struggle has left students with decreased mathematical self-concept, which may lead to lower achievement since they reinforce one another (Marsh & Martin, 2011).

Problem solving refers to "the mathematical tasks that have the potential to provide intellectual challenges that can enhance students' mathematical development" (NCTM, 2014). Previously, math concepts and problem solving have been disparate topics within the mathematics classroom (Lesh & Doerr, 2003). Lambdin (2003), however, argues that problem solving skills and concept learning build on one another. Thus, the students need to learn mathematical concepts and the process of problem solving simultaneously. Complex problems usually need to draw on ideas from more than a single mathematics topic or even a single discipline (Lester, 2005). Mathematical procedures are developed to solve a problem, not vice versa, so procedural and conceptual knowledge cannot be separated or students will not evolve into effective problem-solvers (Baroody, Feil, & Johnson, 2007).

In order to capitalize on prior knowledge, questions relevant to the students must be presented that encourage powerful learning rather than merely rote memorization (Allen, 2013). Not only will real-world problems align with standards of the National Council of Teachers in Mathematics (NCTM), but they will also illustrate mathematical relevance to students. When students recognize the applicability of information to their own lives, they are more interested and have a better perception of the concepts they are learning (Kuhn & Dempsey, 2011). Since disengagement is a factor in low student achievement (NCTM, 2000), it is necessary to seek mathematical relevance to bolster student performance. This engagement will not only lead to the student understanding the information, but also the in-depth knowledge needed for transfer.

When students lack knowledge transfer, it can be seen in their performance in subsequent math classes, on standardized tests and in life in general. When comparing the effect of real-world application projects versus traditional methods of teaching, secondary students in the traditional classes performed poorly on exams because they could not choose which methods to use when faced with a problem (Boaler, 1998). During class, they had always been shown methods and then practiced them repeatedly. The students worked hard and rarely got questions wrong during the lessons, but could not transfer the knowledge during the examinations because they were worried more about using the correct procedures to solve the problem than solving the problem itself. They would focus on ensuring they used the right method, but had never been

taught to make sense of their work and therefore made mistakes (Boaler, 1998). Instead of learning the deep structures of the mathematical concepts, they had learned the surface structures, and without guidance they could not apply or recreate their knowledge.

When students are given ample time to explore such concepts prior to an explanation, the students think more deeply about the information (Marshall & Horton, 2011). This time for "free discovery" allows students to engage in more higher-order thinking than those students who are simply given explanations at the beginning of a lesson. Since students have to invent the structures, they will not take the solutions for granted and will understand more than how to solely apply the formulas they have been previously told.

Methodology

This research study was conducted while I was student teaching during the spring semester of 2015. The high school used in this study was located in a rural area outside of a medium-sized city. It is one of the most populated high schools within its district. About 20% of the students are African-American and just over 10% are Hispanic. The remainder of the students are white. One-third of the students are eligible for free and reduced lunch. The six students involved in this study were in a standard level Math III class. Math III offers an integrated curriculum where students learn concepts such as statistics, geometry and algebra during the same course rather than receiving instruction on the topics disparately (NCDPI, n.d.).

This study took place over one week. During this period, the students were asked to inquire about problems that were posed before being given direct instructions as to the methods of solving them. First, during the discovery portion of the exercise, a problem involving previously held knowledge was asked. The students attempted to make sense of the problem in their own terms and wrote how they completed the problem in their journals in pencil. Next, they paired with other students and shared their methods of completing the problem. If possible, they completed more of the problem in a different color pen. After working with a partner, we had a short discussion about the ways they could have solved the problem and the reasons why their answers were correct or incorrect. They then attempted to transfer the knowledge gained through inquiry to a similar problem during the invention portion of the exercise using the same process of working individually, with a partner, and lastly as a class.

In order to evaluate this method of instruction, three types of data were collected: student work, my own observations, and student surveys. The discovery exercises were evaluated based

on the students' success at relating the information they invented to mathematical concepts learned in class. Data was recorded regarding the number of questions the students were able to answer correctly during both the discovery portion and invention portion of the exercise. This illustrated when students were able to develop personal understandings of a problem and transfer that knowledge to develop a new concept. The ability of students to correct their misconceptions, if they had any, was also recorded. The open-ended survey questions were coded in order to evaluate the opinions of the students towards the discovery exercises. The questions were also coded in order to determine the consequences of self-correction, self-evaluation, and attempting problems and processes before being given answers or instruction.

Findings

Through observations and data analysis, a wide array of results arose. Results have been categorized into two overarching themes: student responses to the discovery exercises and discovery exercises as an effective pedagogical tool. The first theme focuses on the attitudes of the students toward the research study topic, including their reluctance, frustration, negativity, confidence and excitement. In the second theme, the success of the activities in catalyzing student learning was analyzed. These results include performances of students on the activities, comments about the activities from the surveys collected and observations of student learning.

Throughout the study, students had a variety of responses to the discovery exercises. These responses ranged from student uncertainty of the benefit of the tasks they had been asked to do, to frustration and anger at the tasks, to a complete acceptance of the challenge. Upon beginning problems on the first day of the study, many students exhibited a strong resistance to attempting problems they had not before seen saying "I shouldn't have to try these problems since you never taught us" and "you are the teacher so you should have to teach us first, it's not fair". By the end of the study, however, the students began to comment that attempting the problems was easier for them than trying to figure out how to use a given formula. They also became very passionate about getting the answers correct. In the surveys, all the students believed that correcting their answers prevented them from making the same mistakes later. Five of the six students thought the discovery exercises were helpful in learning, saying that they got to see multiple ways to approach a problem and they were able to build upon known information.

The students completed the problems in a variety of different ways and were able to discuss their findings with others during the partner work and class discussion. For example,

when the students were asked, “Marissa has five cents in her piggy bank and adds nine cents to it each day. How much does she have after two weeks?” they answered the questions in three different ways. The first student used her knowledge of addition to solve the problem. She simply started with five cents on day one, then added nine cents each day until she got to day 14. Thus, she correctly solved that Marissa would have $1.22 in her piggy bank. The second student multiplied 14 days by nine cents, then added the beginning five cents in order to get the amount after two weeks was $1.31. This was an incorrect method because on day one Marissa had five cents, so nine cents should have only been multiplied 13 times. She later corrected herself with the class and stated “That makes so much sense since you already accounted for day one”. The third student found out how much money Marissa had in her piggy bank after one week, then multiplied that number by two. This was incorrect because Marissa never started over again with five cents in her piggy bank the second week, so he got $1.18, an answer that was $.04 less than the correct answer. He later corrected his answer with his partner to obtain the correct answer.

After the students broke into partners and we discussed the different methods of solving the problems, they were then asked to apply their knowledge to solve more difficult problems. When asked, “How much money does Marissa have after a year?” five out of six students answered the question correctly during the invention portion of the exercise. The students consistently showed that they could transfer the knowledge they obtained through inquiry to other problems. Only half the students believed that attempting the problems before being given instructions was beneficial, however, illustrating that they do not see figuring out processes as a problem within itself. The students also had trouble creating formulas from concepts they understood, illustrating their aversion to notation and writing in mathematical terms.

Discussion

The aforementioned results directly follow the literature, which illustrated the benefits of taking a discovery approach to learning. As in Boaler’s study (1998), it was found that this open-ended learning style allowed students to create conceptual meaning rather than solely procedural knowledge. Rather than formula memorization, the students created individualized understanding so they could recreate procedures using logic. Since the discovery exercises capitalized on prior learning, the students had an easier time relating the new concepts to understanding that had already been developed. This coupled with real-world application problems allowed students to better recognize the applicability of the information to their own

lives, causing more interest and a better perception of the concepts they learned (Kuhn & Dempsey, 2011). The students were able to self-correct during this exercise, which helped them to alter their conceptual understanding and prevented them from making the same mistakes again. The "free discovery" period Marshall and Horton (2011) described allowed students to think deeply about the problems and derive multiple ways to figure out the answer to the same problem. The self-concept and achievement feedback loop that was discussed by Marsh and Martin (2011) was evident as when students understood the information, they became more confident in themselves and were more likely to defend their answers to others.

This study has impacted the way I will teach in the future. The study has shown the positive outcomes of allowing students to attempt to reason through problems on their own and correct any misconceptions they have individually. Although the students sometimes get frustrated, they are able to understand the information free of formulas and don't depend on rote memorization or procedural knowledge to find answers. The fact that the discovery exercises were linked to prior knowledge capitalized on the students' abilities and led to many students creating their own formulas to use when solving the problems.

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