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Creating Culturally Relevant Technological Operas in an Urban School

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Running head: CULTURALLY RELEVANT OPERAS

Creating Culturally Relevant
Technological Operas in an Urban School

BY

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DISSERTATION

Submitted in partial fulfillment of the requirements

For the degree of Doctor of Education

In the Graduate School of the

University of Missouri- St. Louis, 2007

St. Louis, Missouri

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Advisory Committee:

Dr. Joseph Polman, Chair

Dr. Carl Hoagland

Dr. Lynn Beckwith

Dr. Douglas Turpin

St. Louis, Missouri

Abstract

Creating Culturally Relevant Technological Operas in an Urban School

By Dianna Isaac-Johnson

The project described in this study developed due to the gap in achievement between African-American and white students. As music teacher I noticed my urban students could rap all the words of popular songs. Therefore I incorporated the use of technology with an authentic need to learn reading, writing, and lyric development for science and history content within a “hip-hop opera.” This study details the instructional sequence, in which students watched musical performances, learned songs with a karaoke machine, and wrote new lyrics for the songs based on history and science material. I combined the students’ lyrics into new versions of the songs, which they then learned and performed within a dramatic opera.

The mixed method research study, conducted in grade 2 through 6 music classes, addressed three questions: How does the *learning process* differ between culturally relevant hip-hop operas and culturally non-relevant operas? What do children who create culturally relevant hip-hop operas *learn* about history and science content compared to an opera utilizing music from outside the students’ culture? How does creating a culturally relevant hip-hop opera impact students’ *desire to learn* science and history?

A case study revealed that both culturally relevant and non-relevant operas could sustain students’ involvement in history and science, but students were more eager to participate in instruction utilizing culturally relevant melodies. The quantitative analysis was limited by small numbers of participants with complete data, but some results were obtained. Learning outcome measures revealed gains on basic understanding of some

history and science topics embedded in opera-based instruction, but the cultural relevance of the music did not impact the learning outcomes. A follow-up analysis revealed that involving the students in composition of lyrics based on any musical text, culturally relevant or non-relevant, led to greater learning gains than having students learn and perform texts written by the teacher. Analysis of interview results showed that some students increased their desire to learn history and science in school because of the opera instruction.

The importance of research such as this aimed at improving urban education is stressed, and suggestions for further research are made.

Dedication

This dissertation is dedicated to my loving husband Christopher, who has stood by my side and held my hand through sickness and health keeping me strong throughout this process. My daughter Deanna, who handled the older daughter responsibility with grace and maturity, my daughter Christian, who finally is learning how to do her part, and my son Joseph, for learning he too can help mom pull through with the grace of God. My parents Savannah and Joseph Isaac who always knew I could make them proud. I thank Jesus Christ for allowing me to be alive and regain my mental and physical abilities following my illness.

Acknowledgements

I would like to thank my committee members who made this dissertation possible. Dr. Joseph Polman, who has received and answered 100's of my e-mails and helped me to develop my theories in the use of technology within an educational music environment. He encouraged the use of urban music and education in order to increase learning for urban students. I will never forget having the opportunity to help catalog African-American history from a cemetery to the streets of JeffVanderLou.

Dr. Carl Hoagland, I thank you for developing my skills in digital cameras to GIS (geographic information systems). I appreciated how you taught me how to use computer-generated maps to identify data of people, places or things with color and amazing detail.

Dr. Lynn Beckwith, with whom I share a connection through my first elementary school, I thank you for supporting my interest in music and education. You provided me with many opportunities to showcase my gift of voice.

Dr. Douglas Turpin, I thank you for providing me with the opportunity to give the gift of professional musical performances to hundreds of the students whom I taught. My students and I will never forget singing on the stage of Powell Symphony Hall to the jazz great Freddy Cole who was so gracious and allowed me to take a picture with him and my mother. I am so appreciative of all your help throughout the years. And I am so grateful that you would come to the hospital to see me, even when I could not remember who you were. I did not know what a comb or a paperclip was and I know that miracles do exist in order for this dissertation to have been completed.

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Chapter 1:

Introduction

Many African American students have received below-average scores on standardized tests. According to the National Center for Educational Statistics for 2003 (see Figure 1), only 46% of African Americans tested at or above the basic level in reading, versus 73% of white students; 39% of white students were at the proficient level compared to 14% of African Americans (see Figure 2). Only 1% of African Americans tested at the advanced level, compared to 9% of white students. African American students receive below average scores in mathematics as well; at least 53% of them score at the basic level; however, since there are so few students scoring at the advanced level, the percentage registers at 0%.

Figure 1: Percentage of students at or above basic levels on standardized exams.

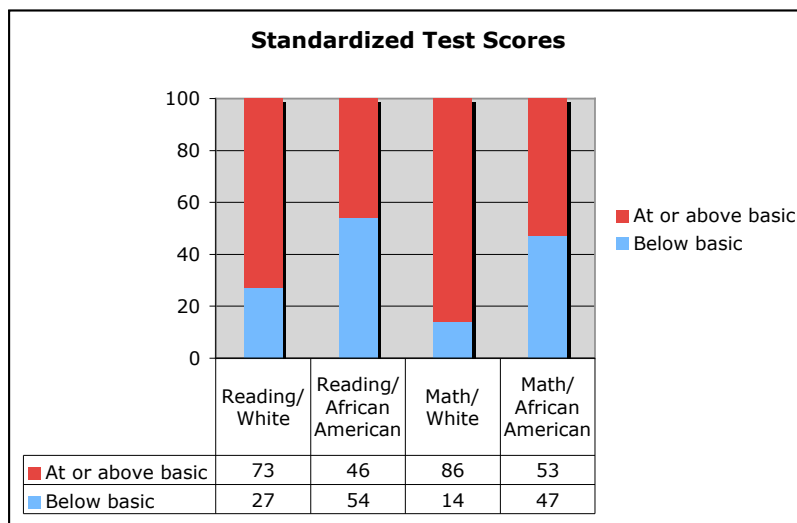
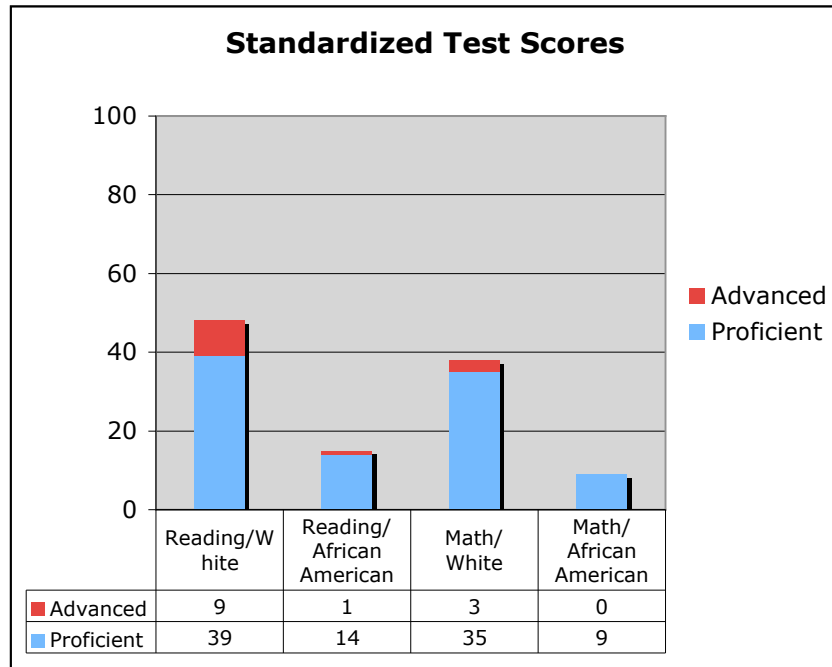


Figure 2: Percentage of students at higher levels on standardized exams.



Unfortunately, these tests may be culturally biased because students such as urban African Americans are tested on items which do not have relevance to their everyday lives. According to Barry (2005), the National Council of Teachers Mathematics (NCTM) documents acknowledge that cultural experiences, social background, and gender of students have been ignored in mathematics education. They state that differences among students are not taken into account in the teaching and learning of mathematics and too often, race, racism, and social justice are relegated as issues not appropriate for mathematics education when actually these issues are central to the learning and teaching of mathematics for all students. As a researcher who has worked in several schools, I have noticed that students may not have the same amount and quality of

textbooks, math manipulatives, computers, or software as some other students.¹ Even within the same district, there are differences in the test results of schools with ample funding versus those that lack funding. Martin (2003) criticizes NCTM for not taking a stronger position on equity. Martin's criticism focuses on the fact that the Equity Principle does not mention race, racism, and social justice. He states:

The Standards contain no explicit or particular references to African American, Latino, Native American and poor students or the conditions they face in their lives outside of school, including the inequitable arrangement of mathematical opportunities in these out of school contexts. I would argue that blanket statements about all students signal an uneasiness or unwillingness to grapple with the complexities and particularities of race, minority/marginalized status, differential treatment, underachievement in deference to the assumption that teaching, curriculum, learning, and assessment are all that matter. (p. 10).

Test questions ask everything from farm life to what one knows about the arts. The inconsistencies of African American students' achievement scores may be due in part to the lack of opportunities to visit a farm, an art museum, or other cultural institutions, which are discussed on the test. Educators must find ways to help all of our students succeed. The level of testing mandated by the federal "No Child Left Behind" act has caused an increasing number of educators to question its necessity in the schools. According to Mills (2003), teacher research is gaining a high priority in the United States due to George W. Bush's "No Child Left Behind". This piece of the accountability

¹ As is the norm in qualitative research conducted by teacher researchers, I use the first person in this research report (e.g., Creswell, 2004).

program has taken over the curriculum in most urban schools (Adams & Adams, 2003). Educators are expected to produce levels of improved achievement, while federal funds are further reduced or completely eliminated. This project addresses these broad issues by focusing specifically on culturally relevant educational practices utilizing music, to see the degree music impacts academic achievement.

According to Pinkard (2001), current instructional materials do not reflect the lives of African American students. Therefore, students are disconnected and uninterested in learning. Stan Lee (2005) believes the biggest problem in education is that students find learning boring and they feel it does not have a relevance to their real lives. In order to meet these demands for improved achievement and connect students more strongly to instructional material, I have been exploring the use of music, technology, and culturally relevant music in operas to create the desire to learn science and history. This process includes the use of internet searches for information, even in circumstances where this is made difficult, because the “digital divide” (Swain & Pearson, 2001) creates a situation in which school equipment is too old, there are too few computers or the computers present are in need of repair.

Cultural Relevance

The study I conducted as a researcher is unique because it examines the use and effects of a form of culturally relevant education in which selected urban music with a positive focus is incorporated into teaching elementary students about history and science. As a qualitative researcher, I examined what happens when students were provided the opportunity to rap to culturally significant music, and I as a teacher tried to

facilitate students learning science and history topics with urban beats and flavor.

According to Gay (2004), urban students are more likely to be engaged in exploring if the information is presented in a familiar and friendly environment, and if it has immediate value to their cultural group. For instance, students could research ethnic jump rope and clap games similar to my childhood games, which can be modeled to the classroom and on the playground.

Including culturally relevant content must be done carefully. One instructional technique called cultural modeling (Lee, 2003), for instance, first supports students in examining texts from their everyday experiences—such as African-American English signifying dialogues or rap lyrics—in order to help them bridge to doing similar practices with English literature. Signifying is a method of trading insults back and forth between individuals. A notable method of signifying is the “Your mama is so” insults. One day at Urban Elementary (the pseudonym of the school in this study), this game progressed from insults to piano keyboards being tossed around the room, all escalating to a fight resulting in a mutilated music stand. Educators must help change the way the message is delivered in order for it to be not only to be culturally accepted but also an effective learning tool. The first graders at Urban Elementary taught me “Eggs, cream, sugar, and butter tell your mama who’s your lover, a, b, c...” The letter the rope stops on while singing the song is the first letter in the name of the boyfriend. This is not the type of jump rope game I learned as a child at this school, and I have made efforts, which will be detailed later, to introduce the students to more positive lyrics.

The use of self is a qualitative method encouraged by E. W. Eisner. Eisner (1991) helped me understand the use of self as an instrument to engage the situation and

helped me understand its use during research. The process of using self within a study acknowledges there are multiple ways in which students can be exposed to the world through the use of artists, writers, and dancers, as well as scientists and even musicians. When students enjoy participating with the researcher during a jump rope contest, learning the Mono, Crypt Walk or Jungle Slide (the latest dances) then the use of self can create a caring relationship among the students.

According to Cazden (2001), finding ways to decrease the achievement gap between ethnic and social class groups is a national priority; unfortunately, the decision about allocations of funds for equitable distribution is beyond an educator's control. The use of the E. Des Lee Music and Art Collaborative provided urban students in this study exposure to the arts, which, among other outcomes, may assist in their ability to correctly answer arts-based questions located on standardized test.

In some cultures the art of storytelling has been passed down from generation to generation with the use of intonation and voice inflections used to create excitement within the storyline. According to Cazden (2001, p.11), topic-centered narratives focus on a single object or event, and are the more dominant form of narrative in middle class European-American society; episodic storylines follow common threads from episode to episode, sometimes changing topics, and they are more common in the African American community. White students may appear more verbally proficient if we are only looking for the topic centered story and not willing to listen to the episodic storyline with its twists and turns for dramatic appeal. Educators may lose the opportunity for the less topic-centered student to succeed through the tradition of storytelling, unless they help

students learn how to tell the storyline while focusing more on the topic without losing the excitement of the episodic moving lines.

Purpose

The purpose of this study is to explore the possibilities for culturally relevant learning through music which represents the African-American youth. It is possible that teaching African-American students through the use of their culture will increase their desire to learn, and their learning outcomes, without feeling as if they have abandoned their culture. According to Ladson-Billings (p. 11, 1994), many African-American students equate exemplary performance in school with the loss of their identity and “acting white”. Fordham & Ogbu (1986) also assert that some African-American students would rather do poorly in school and be accepted by their peers than succeed in the classroom and be seen as “acting white”.

Many African-American students consider education to be a way of “selling out” their community. According to Ogbu (1992) African-Americans constitute a “caste-like” minority population that resists academic competence. For African-American students, educators need to find ways of turning education into exciting methods of learning within an acceptably “cool” way of learning. Teachers need to find ways in which African-American students feel they are a part of the educational system, not just pretending that the books and material used in the classroom reflect who they are. Incorporating hip-hop opera utilizing technology is a promising avenue to accomplish education which is appealing to African American students.

Many African American students have trouble learning through “traditional” methods. Pinkard (2001) believes the use of culturally responsive instruction based in a student’s social situation and their culture will allow students to draw upon knowledge and strategies from their everyday lives. The possibilities of learning through music became apparent to me when I allowed students to bring in their own CDs (compact disks). Students with traditional learning disabilities and the regular students were able to rap each and every word. Therefore, the process made me ask the question: “How can these urban students retain all of the words of these songs?” Can it be that the students determined the music was important and/or culturally relevant to their own lives, or was it just the amount of repetition, which caused the students to remember every word? According to Howard (2003), teachers should be willing to change the methods of delivering lessons to students. The lessons should be culturally relevant, racially affirming, and socially meaningful for their students. The idea is that students will be willing to take chances to learn new forms of information if it is presented in a culturally friendly format. Administrators can provide cultural sensitivity training to the staff in order for all educators to be familiar with the cultural education needs of African-American students (Tucker, 1999).

In this study, hip-hop technological operas (see definitions) use music of African influences which is considered significant by the urban students. Through previous opera performances, I believed I discovered a unique learning opportunity within the songs, so I wanted to explore the effectiveness of the opera more formally through this study. It appeared to me that students displayed the willingness to learn

through operatic hip-hop mnemonic devices, if the music was considered culturally significant.

The use of historical poetry can emulate the use of African American Vernacular English in today's society. Ginwright (2000), in "Identity for Sale: The Limits of Racial Reform in Urban Schools", believes the fundamental argument is that minority students who perform poorly in school do so in part because the curriculum they encounter has little relevance to their lives and culture. Culturally relevant real music and lessons relate to urban students' real-world issues and interests. If African-Americans have the opportunity to learn the history of their culture, they may have a greater desire to follow in the footsteps of their ancestors who have fought for freedom, liberation and self-actualization (Kunjufu, 1984). Some students are not aware of the struggle their parents or grandparents endured for the right to vote, and if these issues are reviewed in history through DVDs or streaming video in the context of working on hip hop operas, then maybe they may not take these rights for granted. Through the use of technology students can download large pictures from the Internet to provide photographs to associate with the names of historic African-Americans, further enriching their potential connection to history.

Achievement Gap

What can music do to help bridge the achievement gap? According to Wallick (1998), reading words and music have many similarities, including interpreting abstract symbols and translating them into physical and cognitive expressions. The skills involved in reading musical symbols may transfer to those required for comprehending linguistic symbols and interpreting maps, graphs and charts. Computers can be used in

all types of classrooms. Students can research historical figures on the Internet. Science labs can use the new digital microscope and place information found by the students in digital videos, or just place them on a projector. According to Frankel (1999), general music classes now contain more computers, synthesizers and electronic instruments.

There are many ways music may impact learning and be able improve achievement when the process becomes more culturally relevant and can become an enjoyable educational experience. In a pilot study of hip-hop opera, students were able to recall, “The journey to Oregon took about 2 or 3 months.” Another student remembered “Wild Bill Hickok was one of the first Pony Express riders, and the horses could only be ridden for fifteen miles before another horse was traded in.” One student wrote the entire song to the tune of Yellow Submarine. Because I was so impressed with her ingenuity, her song lyrics were used exactly. She was able to sing:

We all work for the Pony Express
 The Pony Express the Pony Express,
 We all work for the Pony Express,
 The Pony Express the Pony Express.
 Lots of work everyday,
 Fixing stables bailing hay.

She also remembered, “I was too afraid to come out and take a bow and someone pushed me on stage when my name was called out for recognition for writing the entire song.” Her mother completed a parent survey for the researcher, and it stated she has that moment on videotape and also chuckled at how proud she was to see her extremely shy daughter almost falling on stage to take her well-deserved bow.

Maxwell (1996) informs us of the conceptual context, which is the system of concepts, assumptions, expectations, beliefs, and theories that supports and informs one’s research. I will address what is going on with culturally relevant educational operas and

why it is important to urban students, especially within an urban school. This study will build on the conceptual context of my assumptions and beliefs about how urban culture, learning, and combining theories on culturally relevant music-based methods can create an opera in a unique way for students who may have difficulty learning in traditional methods. By learning more about urban children and their culture, educators can incorporate the daily experiences of these students into lessons that connect curriculum content with their existing knowledge and interests, as well as exploring hidden assets, such as problem solving skills that urban youngsters often develop in non-school contexts.

Students need to have the opportunity to display their culture throughout their educational experiences. According to Hernandez Sheets (p. 17, 2005), student cultural displays are observable manifestations of the norms, values and competencies children learn in their homes and communities that provide valuable insights into who they are, how they act, and what they know. These cultural displays of history can develop cultural knowledge; practices, values, and skills that children bring to school emerge during social interactions, daily rituals and even can be used in learning situations. In an urban environment, students need to be aware of which cultural practices are acceptable in the classroom, and which to leave at home. The educational system can capitalize on some of these unique urban practices. This may include the use of hip-hop music as a learning tool, but discouraging the use of negative language, such as language demeaning to women in some rap music.

What motivates students to learn? Can there be an inner voice which motivates us to continue the experience? Csikzentmihalyi (1997) believes in the flow of the

experience which motivates and enervates individuals. For example, Csikzentimihalyi believes there is a connection between the difficulty levels of playing the piano, where the enjoyment of learning this skill provides the motivation to continue to learn the difficult task. All forms of education include difficulty in learning, but through the use of caring teachers with high expectations, entertaining learning experiences with a family or community type classroom, African-American children can succeed (Howard, 2001). In the pilot study when the students were asked if they would create another opera if given a chance all ten responded “yes”. When asked why, the answers were “it was fun”. One student said, “This was a really fun *learning experience*, because we were able to create our own words, dance steps and wear costumes.” Another student responded. “At first I did not want to learn about Mark Twain because he is boring, but when we worked together as a team we ended up having fun singing and dancing about what we learned.” The study did show through students’ responses that learning via the use of music could assist in increasing the enjoyment of the learning process.

Scope of the Study

Interdisciplinary techniques taught in the music room can be an asset to the regular classroom as well as the music room. The study was developed to find ways of incorporating music and other disciplines in an enjoyable teaching method. According to Wiggins and Wiggins (1997), there are those that are unsure of how to establish educational connections with music and education of other core subjects. Some teachers fear that developing unique culturally interdisciplinary programs could cost music educators their discipline. Rainbow and Froehlick (1987) write in their book *Research in*

Music Education, that as long as your investigation within another field stays true to both subjects and meets the criteria of learning in both subjects, then teaching and researching using music is appropriate. Every member of an urban school's staff needs to band together to assure that every student achieves success in the classroom. When schools develop the use of technology and culturally relevant music integration, teachers and students can benefit from this process without the music department losing the initial importance of learning music.

Definition of terms

Culture is an important part of this study. According to Merriam-Webster (2004) “*culture* is defined as: acquaintance with and taste in fine arts, humanities, and broad aspects of science as distinguished from vocational and technical skills”. A second definition of *culture* is: “the customary beliefs, social forms, and materials traits of a racial, religious, or social group: the set of shared attitudes, values, goals, and practices that characterizes a company or corporation.” This study will emphasize not only culture from being acquainted with fine arts, but also the customary beliefs, traits of a racial or social group and the shared attitudes of the social group.

Culturally relevant teaching as defined by Howard (2001, p. 136) is an attempt to create a schooling experience that enables students to pursue academic excellence without abandoning their culture in which ways of communicating, conceptions of knowledge, methods of learning and the overall context of the educative process are situated within a framework that is consistent with the students' cultural background. According to Ladson-Billings (p.18, 1994), *culturally relevant teaching* is successful in

educating African-American students because it empowers students through allowing the use of cultural referents to influence the students intellectually, socially, emotionally as well as politically, by using cultural referents to impart knowledge, skills and attitudes.

Cultural socialization can be defined as how people learn to live culturally (Lee, 2003).

Swain and Pearson (2001) define the “*digital divide*” as a significant difference in the access to and equity of technology experiences based on categories such as income, race, gender, location, or education

Ebonics is defined by MSN Encarta dictionary as African-American Vernacular English which is a **form of American English**: the variety of English spoken by many African Americans.

Hip-hop culture is defined by dress, music and by the neighborhoods students live in to the gang they are affiliated with (Ginwright, 2004).

Motown a trademark for a music company based in Detroit whose music, consisting of pop, soul, and gospel, was especially popular during the 1960s and 1970s.

Multicultural education is the study of characteristics or contributions of a particular cultural group. According to Manning and Baruth (2004), multicultural education concentrates on the strengths of a particular group in order to better understand their own culture and become tolerating of other cultures. In its comprehensive form multicultural education must be weaved into a school’s educational system including teaching math, reading, science, social studies or computer science. It must be included in policymaking, climate and performance assessment (Gay, 2004).

The study uses *opera* as a base line of learning. *Opera* is defined (Merriam-Webster, 2004), as “1: a drama set to music and made up of vocal pieces with orchestral accompaniment and orchestral overtures and interludes: specifically: GRAND OPERA. 2. The score of a musical drama. 3. The score of the musical drama 3. the performance of an opera and/or a house where operas are performed. Students will learn how to listen and create an opera, which for our purposes will be emphasizing the score of a musical drama, the music used within the production.

Rap music is music with urban beats, which uses the spoken language instead of singing. It can also be related to *singspiel*, which according to Freedictionary.com is an 18th-century German musical comedy featuring songs and ensembles interspersed with dialogue. According to MSN.com, the term *singspiel* (German for “sung play”) originally applied to all opera, and was later confined to opera with spoken dialogue.

Rap music is expressive and has innovative syncopated rhythms, laced with poverty and storytelling, which perhaps is one of the first expressions of hip-hop culture during the early 1970s, (Ginwright, 2004, p.32). *Rap and hip-hop* will be used interchangeably throughout this dissertation. Hip-hop music has had a positive and negative influence on mainly African Americans and Latino youth (Roach, 2004). The negative description of women as “bitches” and “hoes” is very demeaning to the females. “Hoes” is an ebonics term for whores. It has survived two decades with many artists emerging in and out of the celebrity eye. According to Roach (2004), there are several classifications of rap music including: ‘Gangsa rap, which discusses the joy of killing the other gang member before they kill you, “bling-bling” rap which celebrates materialism with the huge gold chains and gold covered teeth, “big pimping” rap which uses the

phrases “bitches” and “hoes” to describe the many women with whom male rappers have had sexual encounters. But there are other media companies who are producing gospel rap and educational rap artists. Unfortunately, these positive rappers are not as financially successful as their negative competitors. Since the late 1990’s Whites are the largest consumers of rap music, and prefer the negative rap (Roach, 2004).

Relevant is defined by Merriam-Webster as having significant and demonstrable bearing on the matter at hand. *Relevance* is the ability (as of an information retrieval system) to retrieve material that satisfies the needs of the user.

Significant is defined by Merriam-Webster as “the quality of being important,” therefore for this study I will define *culturally significant* “music as music, which has the quality of being important” to a social group.

Technology is the next term. Merriam-Webster (2004) defines *technology* as a “manner of accomplishing a task especially using technical processes, methods, or knowledge (new technologies for information storage)”. Music can be acoustic (of, relating to, or being a musical instrument whose sound is not electronically modified) or use music through a technical process. Technology can include the use of CD’s, MP3 players, karaoke machines, televisions and microphones in the music room. Harrington-Lueker (1999), states the biggest challenge in urban schools is that teachers and schools lack the vision of what to do with technology. This study will help teachers realize their potential to innovate with technology in their teaching, even with small amounts of training. According to Page (2002), at-risk students tend to respond positively to educational technology. Perhaps those poorer students, whose families cannot afford such

equipment at home, enjoy the opportunities to operate computers at school while their more affluent peers are less likely to view such equipment as novel (Cantrell, 1993).

Urban is defined by Merriam-Webster as: of, relating to, characteristic of, or constituting a city. *Urban schools* are in poorer urban communities that are defined by residents living in tenement building and with schools that are under-funded and poorly staffed (Adams & Adams, 2003). These schools have less money and have difficulty raising funds to improve the conditions of the schools. According to Ginwright (p. 28, 2004), urban schools are defined as schools which have to grapple with the day-to-day reality of poverty, joblessness, and the consequent crime that has become all too common for poor communities.

Significance of Study

This study may be significant to many educators that teach urban students, who may at times or during certain classes seem to lack interest in some subjects because their teachers' lessons may not reflect urban students' culture or neighborhood. Many urban students are faced with the difficulty of deciding whose behavior to follow as a model. Some African-American students haze fellow peers for speaking educated and/or emulating white students. Ethnically accepted urban dialect is considered unacceptable by many educators, but Ebonics is prevalently spoken by urban students in the classroom. The study will be significant if the researcher can show students how to preserve their culture while using Ebonics in culturally acceptable ways in art, music and some literature presentations, but also know how and when to use Standard English, such as

when one is being interviewed for a job. Technological operas can be used in education to help show when to cross the lines and why.

According to Manning & Baruth (2004), African-American students are faced with two different cultures, the urban neighborhood in which they live and must speak in urban dialect in order not to be teased by classmates, and also European-American culture in the classroom where they must speak Standard English. Cuban (2001, p. 181) asserts that the special needs of urban schools and the low income communities in which these schools are often located would require sustained attention to the links between the economic, social, housing, and political structures of the neighborhood and the quality of schooling. During this study the researcher emphasized music and education considered culturally relevant learning material in an attempt to satisfy the learning needs of the urban student.

Urban schools need to find more types of positive music to use in encouraging students to learn. The use of African-centered pedagogy (Lee, Lomotey & Shujaa, 1990) can help reduce the resistance to learning traditional materials, which lack cultural relevance and reduce students' ability to achieve pride, equity, power and wealth through education. The culture of students should be taken into account when lessons are being developed. According to Wertsch (1998), the use of cultural tools helps in developing a socio-cultural context in which individuals operate comfortably. We inherit affordances and constraints associated with the different cultural tools we use. Students who live in urban environments use certain cultural tools to survive. If a child's parents speak broken English or Ebonics, then the child may have a greater tendency to use the same type of speech patterns. In Polman's (p. 21, 2000), *Designing Project Based Science:*

Connecting Learners Through Guided Inquiry, appropriation is described as a means of students making problems their own. When students learn through appropriation, students take something that belongs to others and make it their own. Mastery is simply knowing how to do something. The goal in most education is to achieve appropriation and mastery. But a student can use another person's cultural tool and develop a certain amount of mastery, while maintaining an internal resistance to the process. Other times students will totally resist a cultural tool because it does not belong to them, and this will prevent them from developing mastery. This study explores whether students will try harder when their thoughts, heritage, and culture are incorporated in the learning tools, and thus develop more appropriation and mastery. In addition, technology can have useful affordances (p. 179, Polman, 2000) as a learning tool, but may cause pressure in the classroom when more time is spent on developing the use of the technology, rather than focusing on the lesson a teacher is trying to convey.

My students are fortunate to participate in an art and music collaborative, which provides opportunities for them to experience learning about an era through sight and sound. The E. Des Lee Collaborative was a great support to the classroom studied in this project through: opera tickets, storytellers, stage directors, symphony tickets, symphony player performances at our schools, Jazz at the Bistro performances at our schools and a local concert hall, and art presentations to Van Gogh at the St. Louis Art Museum, including tickets and transportation. Without the funding of this collaborative, many of my students would never have been exposed to the arts. Some of the students saw the opera "Dream of the Pacific", which is based on the story of Lewis and Clark. After

viewing the Lewis and Clark opera our students wrote a song to the melody of Aliyah's Miss You:

It's been so long since we have seen you
 What are we gonna do rowing in our canoe.
 Lewis and Clark said goodbye to you
 What are we gonna do we're still missing
 You we miss you.

Thomas Jefferson sent the Corps of Discovery
 To explore the land just for you and me.
 They met an Indian woman named Sacagawea;
 They became friends all the way to the end.
 Now they gone and life is not the same now,
 They were freezing cold in the rain.
 The great mountains, the Great Plains, the Snake River.

It's been so long since we have seen you
 What are we gonna do rowing in our canoe.
 Lewis and Clark said goodbye to you
 What are we gonna do we're still missing you
 Miss you.

Sacagawea's husband was a fur trader
 It started in 1804 and ended in 1808
 To make Thomas Jefferson's gateway to the west.

Students have enjoyed learning and singing to the music of their favorite singing artist with the latest hip-hop beats. It brings great joy to me to have students request to listen to that learning CD we created in music class. Not often do students request to listen to something educational during their free time.

Summary

Many students in urban schools can rap all the words to the latest "have sex, do drugs, shoot your neighbor and yo mama is a whore song, but yet they have difficulty remembering the teacher's last assignment. Through the use of educational operas,

students may be able to learn with cultural significance at the center of the assignment. During dance day in the music room, students were encouraged to dance and perform jump rope routines to enhance their ability to move to culturally significant music, but also learn through fun and games, which I still remember after 30 years. Opera, dancing, jumping, singing, playing and acting can be combined to create a unique learning experience which may help students succeed during academic assignments. This study examined how important culturally significant music is to this process, and how the operas contribute to learning and the desire to learn history and science content.

Chapter 2

Literature review

Achievement Gap/Needs of Urban Students

Educators must be aware of urban students' needs. When students complain of being hungry in a 10:30 a.m. music class, it is the educator who must be perceptive enough to investigate why the child did not eat breakfast, if the child's socio-economic status allows them to qualify for free and/or reduced lunches, and take the steps needed to show a new student how to make breakfast arrangements in the cafeteria. All teachers who are involved with a student should try to attempt to satisfy the student's basic need of hunger in order to move toward higher-order thinking skills. Students are not interested in learning when they can only think about how hungry they are. Cuban (2001, p. 181), claims that the special needs of urban schools and the low-income communities in which these schools are often located would require sustained attention to the links between the economic, social, housing, and political structures of the neighborhood and the quality of schooling. Urban schools are sometimes the only consistently positive force for many students, as the main source of meals and/or most of their positive interactions with adults. All of these items must be taken into consideration when working with low-income students.

The use of culturally relevant pedagogy can provide the means for urban students to learn through their culturally relevant experiences, and thereby improve academics. Howard (2003) believes some in the academic field consider that the most important goal

of culturally relevant pedagogy is to increase the academic achievement of culturally diverse students. Some teachers are able to improve algebra learning through culture by emphasizing the experiences and familiar environment of urban and low-income students (Gay, 2004). Learning through cultural relevance is necessary because books in many urban schools do not show faces and pictures of what African-Americans see every day. Educators can select books which increase their students' positive identity and cultural rules of engagement. Ginwright (2004) has shown that the legacy of slavery brought about a feeling of disconnection from the African cultural practices, life lessons and fundamental views for cultural survival and success in school. As a researcher, I am interested in exploring if students show improved academic performance when they have the opportunity to learn through the use of African-American music.

Urban students who wish to participate in many educational programs find their socio-economic needs are limiting their participation in instrumental music, technology and regular classroom research. Shields (2001) states that students and parents also indicated that lack of money can sometimes be a limiting factor in the amount, type, and quality of musical participation available to participants. Students who play instruments are usually the ones who score higher on standardized tests and are less likely to drop out of school.

At risk students can benefit the most from music and music technology. Rauscher (1995) discovered that students from economically disadvantaged homes that receive keyboard or singing instruction showed major improvements. Music programs within an educational setting may enable these children to learn on a much more equal footing with children from more affluent backgrounds. Forest (1995) performed a music technology

research project with at-risk students. Her research concluded that 100% of her students showed some gains. The after school program consisted of computer labs which combined keyboard skills, science, math, literature, art and movement. The combination of learning in this environment created a 15% increase in the Texas Assessment of Academic Skills test in this population, which was 70% Hispanic and 30% African American.

Palincsar & Brown (1984) developed a set of strategies for helping underachieving students in reading. This process of “reciprocal teaching” includes questioning, summarizing, clarifying, and predicting during a reading activity in order to help students understand what they are reading. This process was used in the opera libretto writing section of this study. Students were questioned about an historical figure, summarized what they had read about the character, clarified their understanding of who the character was and their importance in history, then concluded with predicting what the storyline of the opera could be from the classroom readings. The process of a learning community involves allowing students to be somewhat responsible for what they learn (Brown and Campione, 1994). Students should have the opportunity to design some of the things they are learning. If they are responsible for designing what they are learning they will be more inclined to learn more of what is needed to achieve success with the curriculum the teachers require. Students are more involved in the learning process if they believe their feelings about what is taught are taken into consideration.

Students can use patterns in order to learn in non-traditional methods. Many urban students have the ability to remember songs and rap due to the repetition within the music. Cazden (2001) believes human behavior searches for repeated patterns when

learning. The knowledge of how to use repetition while learning makes the process of learning a new skill similar if you are able to repeat certain patterns during the learning process. The use of African-American Ebonics is not just grammatically incorrect Standard English, but it is the use of cultural nuances and rhythmic patterns in which words are used and organized (Gay & Howard, 2001). If a student's parents use Ebonics, then the students are more likely to use this type of speech also. Even with years of college education, the more I am around friends, relatives and students who use Ebonics; the more I will occasionally slip and use familiar phrases like "momma 'nem" for "mom and them".

Are intelligence and/or achievement tests biased against the African American community? According to Kunjufu (1984), these tests are the most grossly abused procedures used in the educational systems. First the testing materials are biased against African-American students because they test on information these students are never exposed to in an urban environments. Kunjufu believes students are placed in lower educational tracks in order to continue to be required to receive subordinate level academic courses, reducing their opportunity to receive the education needed to learn in the highly technical computer information age. African American children are not uneducable; they just lack exposure to the testable information in the urban environment. Educators need to develop alternative methods of evaluating urban students, including the use of dramatizations, role-playing, and audio-visual journals. Students should also be taught how to study across learning styles (Gay & Howard, 2001).

African-American students can learn, especially when students feel a positive, caring relationship with their teachers, when learning is considered fun and entertaining

and when they are taught in a family-type classroom. According to Howard (2001), these three factors are responsible for African-American student success in the classroom. Howard's (2001) research with students and their opinions discovered a positive feeling for their teacher increased the students' effort in the classroom and teachers failing to show concern for students contributed to poor performance in the classroom. Research has proven that this instructional strategy can be instrumental in encouraging student relations and motivating academic involvement toward school (Wilson-Jones, 2004, p. 282). If educators of African-American students choose to use the research which shows how to excite the flame of learning among our students, then we can find proven success in the classroom.

The use of interdisciplinary dramas and operas can provide an alternative method of evaluating students, therefore providing a higher level of success in the classroom for economically disadvantaged students who may not perform as well on standardized tests. In the opera creation process described by Farris (2001), students are encouraged to make decisions on what they want to learn as well as the dances, choreography and songs used to develop the opera. These projects are enjoyable learning experiences because the students are not overly challenged to perform acts which are outside of their boundaries. If they are not singers, they can work on the set, or help in creating the technological prints needed to develop theater games or rehearsal CD's.

Socio-economic factors and the Digital Divide

Socio-economics create vast differences in the education students receive from school district to school district and even schools within the same district. These differences affect how students behave, speak, and are treated by educators. According to Clark (2000), technology can open totally new worlds to all students. Unfortunately, all students do not have the same access to technology at the same rate and pace. The Educational Testing Service indicates that when properly used, computers serve as important tools for improving student achievement (Clark, 2000). This report also indicated that when computers are used to teach higher-order concepts and when teachers are trained to direct students in such applications, computers are associated with significant gains in math achievement as well as improvements in the social environment of the school. New technology must require teachers to educate their student with the use of higher order thinking skills which are needed to learn the problem solving skills required in the new technological society (Kunjufu, 1984).

The urban school has many battles in terms of lack of funding for technology as well as what to do with what technology they have. Many educators argue that additional financial resources should be provided to urban districts, by the state, federal government or foundation grants, to assist educators to make the most of what technology they already have. Harrington-Lueker (1999), states the biggest challenge in urban schools is that teachers and schools lack the vision of what to do with the limited amount of technology. Educators need to find collaborative methods to help other educators use technology in the classroom. According to Tumposky (2001), those students who only

use computers at school and therefore have no access at home are less computer literate than students whose families own computers.

Many African Americans have experienced discrimination over the years, which has caused the lack of educational success in quality schools and resulted in the lack of employment opportunities (Manning and Barth (p.64, 2004). The lack of the opportunities has resulted in a higher percentage of African Americans being represented in the lower socioeconomic class. Students from the middle class score higher on standardized achievement tests and are more likely to finish high school and go on to college (Manning and Barth, 2004, p. 64). Urban students cannot compete equally with students from higher socio-economic backgrounds when they do not have the opportunity to use the Internet at their lower socio-economic home. This scenario is also termed the ‘digital divide’. Access and equity is not the same thing; therefore, putting a few computers in the classroom does not automatically decrease the gap between the “haves” and the “have-nots” (Swain and Pearson, 2001). The haves will continue to out-score the have-nots, due to the unequal playing field from home. Urban students without computers cannot compete with students who have the advantages of technology at home. The techniques used in this study cannot overcome the “digital divide”, but they give an example of how educators with limited technology can use what they have to learn within a new educational genre, or to determine what they should ask for within a limited budget.

Some schools need to move into technological education due to the changing workforce. Educational systems are designed to create a workforce based on the needs of corporations supporting educational funding. According to Kunjufu (1984), schools are

not offering the same curriculum or providing the same equipment across a given state. A different curriculum is needed in order to produce students who are technologically savvy. This curriculum should be provided for all students, not just the fortunate few.

According to Lee (1999), there is insufficient evidence of computer tools being used in schools serving students of color or students living in poverty. Very little attention is given to the impact of culture on how these tools are appropriated, especially in ethnically mixed groupings. Equity in technological education within the United States has not been achieved, but the same high scores for standardized testing are being required across the board, regardless of the inequities within each school district.

Joy of Learning Through Culturally Relevant Education

Many young people can use their experiences of living in urban America as a building block to dramatic opera (Bruer, 1993). “When evaluating culture it must contain a set of norms, it must also contain a set of interpretive procedures for rendering departures from those norms meaningful in terms of established patterns of belief” (Bruner, 1990, p.47). Students can use struggles in life to create characters that have had similar struggles in history. The use of historical poetry can emulate the use of African American Vernacular English in today’s society, In the article “Identity for Sale: The Limits of Racial Reform in Urban Schools,” Ginwright (2000) claims that minority students who perform poorly in school do so in part because the curriculum they encounter has little relevance to their lives and culture. School must explore ways of

relating to students' real-world issues. This way students and educators will find education culturally stimulating as well as a learning opportunity. Bruer believes

there is a connection between higher-order skills and the notion of transfer.

Higher order skills should transfer from school learning to real world situations and allow students to use what they already know in order to learn new things more rapidly (1999, p. 78).

Culturally relevant and multicultural education is needed in our urban schools for many reasons including the achievement gap, loss of teachers of color, and students feeling that the current school climate does not consider their culture and history to be a significant part of the educational system. According to Gay & Howard (2001), multicultural education is needed because teachers need to develop diverse knowledge and sensitivities to various aspects of education, including examining racial prejudices and assuming European-Americans have no culture and their cultural beliefs are the norms. Educators should try not to limit the use of educational materials that only emphasize the greatness of the European society and assimilating to become like them while in turn, abandoning the ethnic beliefs of many urban students. But educators should attempt to integrate the culture of the students they teach and consider developing a curriculum which teaches not only the inventions of African-Americans but also how African-American students can succeed from the lessons and skills provided by their forefathers, not just the forefathers stated currently in the history books written by European-Americans for European-Americans. Where are our history books? Students need to learn about the effects of social and educational treatments of different ethnic groups in the media as well as social justice for different ethnic groups in an educational

context (Gay& Howard 2001). Culturally relevant education incorporates the development of students through teaching the history and traditions of African-Americans (Mitchell, Bush & Bush, 2002). Urban students need to learn more about whom they are and where they came from.

Lee (2003) is a leader in cultural modeling. She has developed ways for students to learn through modeling behaviors, but using culture as the base of this modeling experience. Urban students are exposed to an enormous amount of negative idols to model, like the performers who use profanity in their lyrics through rap music. Cultural modeling finds positive or historical lyrics or facts that depict a moment in time and can translate into an excellent learning opportunity. Cultural modeling instruction first supports students in examining texts from their everyday experiences—such as African-American English signifying (a form of ritual insults) dialogues or rap lyrics—in order to help them make explicit and publicly accepted (Lee, 2003). The tacit strategy which cultural modeling employs helps students reason through the problems which these popular texts pose. The hip-hop technological educational opera can provide students with the opportunity to use words and phrases they are familiar with, but within a positive historical setting.

In response to literature, Lee (2003) discovered similarities between how speakers of African-American English produce and interpret figurative tropes in genres of talk such as signifying, and what expert readers do as they tackle such tropes in formal literary genres. This leads us into how different cultural socialization can be used in an educational setting. Cultural socialization can be defined as how people learn to live culturally (Lee, 2003). The needs of the student's socialization into society cannot be

ignored. Educators must be able to tune into cultural socialization in order to understand why urban students behave in certain unexplainable mannerisms in the eyes of non-cultural members. Using Black dialect in the classroom, especially with hip-hop operas, is a means of teaching language in a flexible manner so students make decisions on when to use Black dialect and when to use proper Standard English grammar in classroom writing and job interviews (CambellJones & CambellJones, 2002). Many African-American teachers can relate to the cultural dialect of a student's parents. African-American dialect can almost be considered a second language versus the Standard English used in the schools.

Many students are afraid of speaking Standard English for fear of being outcast by members of their ethnic group. But according to Tucker,

reading, writing, and speaking standard English, valuing working and studying and other so-called 'white middle class behaviors and values' were instrumental in helping the ancestors of African Americans to achieve freedom and success against all possible odds. (1999, p. 17)

Educators must be able to explain when to use correct English grammar and when to speak in the 'hood' with friends, especially since speaking Standard English is necessary to obtain a job. If students come from a home in which broken English and urban slang is the norm or if a high value is placed on speaking in this manner, then these students are at a disadvantage in the classroom (Howard, 2003). Howard (2001) found that students accept African-American teachers providing verbal reprimands to students more readily than white teachers because of their familiarity with such interactions. Students relate to

certain interactions and mannerisms of some teachers because they experience these types of interactions and communication styles at home.

Lee (2003) takes a strong stand as a leader in reminding us who the “at-risk” students are. There is a larger percentage of the African American population in poverty, although there are more Caucasians living in poverty. Though most children living in poverty are racially classified as White, the terms “inner city” and “at-risk” remain code words for those who are not racially classified as White. Several federal programs have been developed to assist urban students including Title I (known as the Better Schooling for Educationally Deprived Children Act) which is for schools that have a large percentage of children who live under the poverty line. This program also includes Head Start for underprivileged preschool children, which is designed to include the family by providing job training while allowing the child to experience success (Adams & Adams, 2003). This program was instrumental in providing the opportunity for families to rise out of poverty. I was in the first Head Start program which started in 1965 in an urban section of a large metropolitan city before our economic situation changed. I do believe a successful preschool and a higher socio-economic environment were two of the major factors in my success in my education through most of my years of school. Lee (2003) has been able to tap into why African American students are not succeeding as well as their counterparts. She uses technology and culturally relevant pedagogy in order to find ways to reduce the achievement gap between the two groups of students. There are many reasons why students succeed, including the beginning of a student’s educational experience, their economic and family environment.

Lee's expertise is for developing culturally significant pedagogy and relevant technology in order for urban students to be engaged. Music from spirituals to classical readings can easily be selected to have relevance to the culture one is trying to reach. Among the long-held misconceptions of urban students is that home and community experiences of such young people, particularly those living in persistent poverty, are viewed as deficits to be overcome by schools, rather than as resources on which to build (Lee, 2003). When parents, students, and educators use culturally relevant material to which the parents are also able to relate, then the parents may be more interested in providing assistance for the child. There should be joint efforts between the parents and the teachers in helping the child succeed; it should not be the entire responsibility of the school.

When students have the opportunity to be familiar with a subject or task they are more likely to be successful. The use of familiar cultural tools will make a difference in whether a student will achieve success. According to Wertsch (1998), when the use of familiar cultural tools are implemented, students with less advantaged backgrounds will begin to succeed on the same tasks they might otherwise have struggled with. Students use knowledge from their past experiences to build on their future learning. Hernandez Sheets (2005) discussed how students learn to use previously acquired cultural tools to supply them with the knowledge and skills needed to perform a new task. Thus, children use cultural tools from their repertoires of prior learning, knowledge, and skills to gain new understandings. For instance, when African-American students learn about the sizes and shapes of a subject, they may remember discussing how a palm of hot water cornbread is made according to the palm of your hand, because culturally in the past there

were no measuring devices and their ancestors measured according to the materials available. When teachers use similar, culturally relevant analogies, then students may understand concepts more easily. Culturally relevant teaching practices require teachers to first acknowledge how deficit-based notions of students continue to permeate traditional school thinking, practices, and placement. They must also critique their own thoughts and practices to ensure they do not reinforce prejudiced behavior. Second, culturally relevant pedagogy recognizes the explicit connection between culture and learning, and sees students' cultural capital as an asset and not a detriment to their school success. Finally, culturally relevant teaching is mindful of how traditional teaching practices reflect middle-class, European American cultural values, and thus seeks to incorporate a wider range of dynamic and fluid teaching practices (Howard, 2004). Urban educators should try to be able to relate to lower-class values and be aware that there is a difference in socio-economics and many of the life experiences higher socio-economic students have experienced. It may be easier for urban students to understand lessons if their language and cultural experience are considered assets by urban educators.

Creating hip-hop technological operas to incorporate technology and cultural relevance through music

According to Kunjufu (1984), the five forms of instruction include: written, oral, pictures, artifacts and fine arts. Through the use of the educational opera process, students are able to be exposed to all of these types of learning including oral story, picture, field

trips, song, dance and drama. In addition, Tucker (1999, p. 299) explains that a teacher of African American students can use oral, in addition to written expression by having students sing after writing down the words of a song to improve their writing skills. The use of patterns, form and style of writing and music can be implemented in several lessons in the regular classroom as well as the music room. All of these types of learning are incorporated in the process of creating a human slide show, and can be observed through workshops entitled “Music! Words! Opera!” The E. Des Lee Art and Music Collaborative provided these services to educators and students to learn in the summer and to be transferred to the classroom during the school years. These techniques have been explored in Flynn’s articles, which use drama to teach literature, math, science and music. Flynn and Carr (1994) believe drama can enrich the existing curriculum, especially language arts, and can be an effective teaching and learning method. Not only do the students enjoy this activity, but also they achieve the objectives, which include: setting, character traits, character motivation, conflict, and resolution. According to Farris (p. 277, 2001), teachers using drama to teach social studies and history are not as concerned with the performance as they are with the understanding of the historic events and the desire to explore certain themes and topic at a deeper level. Drama prepares students to be problem solvers and decision makers who can consider events from multiple perspectives (Farris, 2001).

Research has found that students learn more when they are engaged in the entire creative process. Higher order thinking skills may be developed when historical data presented through the use of technology is depicted with the use of more culturally relevant heroes for urban students in contrast to the most traditional history books, which

eliminate the African-American experience. M. Campbell was one of first to document the organizational steps needed to create educational operas on interdisciplinary subjects. According to Campbell (1995), a well-designed interdisciplinary project in music consists of six basic steps: 1) selecting a topic, 2) providing a rationale for studying a particular topic, 3) planning and getting started, 4) carrying out the project, 5) closing the project, and 6) evaluating the project. Campbell (1995) feels field trips offer students exposure to new areas of knowledge and can enhance the scope of any project; for example, visits to museums often help students gain new insights into specific topics. Actually visiting real operas and art exhibits makes an enormous impact on cultural development. Berman (2000) believes through attending live operas or creating original opera, children have the opportunity to pursue moral and ethical questions raised in the many sources for operas, which range from classical literature, history, children's literature, and biography, to contemporary social issues. The operas emphasized concern for contemporary social issues, which may be culturally significant to these students. Ginwright (2004) believes the use of hip-hop culture in education can be a highly effective mode of learning. He states:

Music, language, style of dress, poetry, and art can all be effective cultural vehicles to educate youth who have not responded in traditional methods. Hip-hop culture can encourage black youth to change their thinking about community problems and act toward creating a more equitable world. (Ginwright, 2004, p. 132)

If educators can tap into more culturally exciting modes of educating urban students through vehicles which interest them, then we can incorporate science or history

content, and develop new methods of learning with the student's cultural identity as the educational base of a lesson or opera performance.

According to Campbell (1995), interdisciplinary opera topics that are applicable to the everyday life of children can be selected to contribute to the overall school curriculum. Such topics may help individuals function in society and increase the value for study in schools as compared to study outside of school. It is important that all students have the opportunity to be exposed to the arts, especially when many of these items are placed on standardized tests and are foreign to urban children. According to Meacham (2000), exposure constitutes an approach to learning wherein advanced cultural and academic concepts and materials are made available to children. If students are never exposed to different cultures and situations, which technology and the arts can provide, schools are doing a disservice to these children. Classrooms displaying artwork by African Americans, the use of successful African Americans in examples and stories while teachings, and inviting African Americans to speak in the classroom are examples of using multicultural education in the schools (Tucker, 1999).

Rap music combines the artistic traditions of African and Black cultures and rap music integrates rhythm and blues, jazz, and reggae. It grew out of the gospel music tradition, which many students have experienced in their community (Pressley, 1992). According to Pressley (1992), rap music began in the late seventies with rappers Kool Moe Dee and RUN DMC, yet it was mainly heard on the east coast. The lyrics were about dancing and fun, but grew into political statements of oppression, poverty, gangs and degrading women. Persons who spend more time listening to rap music are not only finding means of handling the pain of living, but also using this as a method of escaping

their difficult environment. According to Steward (2004), rap began as a political tool used to express the injustice many African American felt about society. Unfortunately, the more profitable rap emphasizes drugs, sex and demeaning women. Educators have commented on the finer points of rap and hip-hop music and have found its style of connecting multiple words to music a value in the classroom (Anderson, 1991).

Educational opera can be a method of creating an interdisciplinary collaboration among educators, which allow for the integration of many subjects. History courses have several story lines, which allow for thematic connections between the visual arts and other subjects (Irwin and Reynolds, 1995). Educational drama uses more acting and less music, but students can learn how to perform their dramatizations in a rap form. Neelands (1994) suggests drama can be an education tool due to its ability to incorporate play, games, sports, cultural rituals, and can even give students an opportunity to portray events or experiences from their own lives.

Technology can be incorporated with an inter-disciplinary project. According to Duxbury (2000), technology can be utilized in creating portfolios accessible by the Internet, and students' works can be submitted for review via a password-protected intranet. Students take pride in their work, and as a result they revise many more times than they did before a peer review was a possibility. Duxbury (2000) believes that through the Internet parents can access course projects, student portfolios, peer reviews and even grades. Homework assignments which were left at school can be accessed through the internet, which is a great convenience to many parents.

Summary

The literature review of the achievement gaps in African American students, the Digital Divide which creates more gaps in urban education, and the use of culturally significant education can provide an explanation as to why students who are engaged in creating technological hip-hop operas need an opportunity to learn in an exciting manner. The literature and my pilot studies with urban students suggest that educational opera and drama may help students express and achieve success while dealing with some of the unique environmental issues urban students experience. Campbell used many of the ideas and methods which are similar to Opera Theatre's Words! Music!Opera! workshop. Some urban students' home lives are so difficult, that learning in school is not a high priority. Educators need to be aware of and be in tune to the type of students they have and what they can do to improve their situations at home and at school. Education is the key to overcoming many of life's obstacles. If students are taught that education can change their lives and the lives of their parents, then as educators we may provide a reason for a child to stay in school when others in their environment have chosen to quit. Parents, teachers, and students working together can provide a new way of learning that encompasses all of their hard work. This hard work will pay off in the end with skills that will provide a better future. For now, educators who are teaching urban students that they are having difficulty reaching with the current type of education could consider using technology and music related to the students' culture as a method of gaining their interest. Educational opera can be a method of creating an interdisciplinary collaboration

with the use of technology to aid in increasing the knowledge of students despite the financial difficulties within their environments.

Chapter 3

Methods

The purpose of this research project was to investigate a method of teaching students history and science through culturally relevant interdisciplinary technological operas. According to Cross (1995), educators must understand children as socio-cultural beings who bring knowledge to the classroom. They are members of cultural groups that influence how they think, perceive, act, and obtain value. Educators should attempt to understand that students value music and use this in the classroom. The culturally significant operas were designed to be a learning technique to allow students who have difficulty learning with traditional methods to have an opportunity to learn through rapping, dancing and jumping to hip-hop music and songs. The research questions were:

- How does the learning process differ between culturally relevant hip-hop operas and culturally non-relevant operas?
- What do children who create culturally relevant hip-hop operas learn about educational concepts including history and science compared to an opera utilizing music from outside the students' culture?
- How does creating a culturally relevant hip-hop opera impact students' desire to learn science and history concepts?

Research Methods

This research project used mixed methods. According to Isaac & Michael (p. 192, 1993) the research question states the expectations of the researcher. Therefore, my

quantitative research question was: Can students learn more, and desire to learn more, about science and history concepts through the use of culturally relevant music? The null hypothesis was: Students will not learn more, or desire to learn more, about science and history through culturally relevant music. The qualitative portion of the study was a case study.

Study Justification

The study arose as a consequence of student actions in which lower achieving students in previous years could rap all of the words of songs which represented their culture. The use of culturally significant melodies appeared to help students to learn through culturally centered educational raps. Music, opera, and technology combined can transform a basic history or science lesson into an exciting, interactive activity utilizing hip-hop music students enjoy hearing, and in the process encourage more students to participate. This study is systematic research into the dynamics and outcomes of these promising interactions. The qualitative section of this study utilized grounded theory, which allows for constantly comparing data with emerging categories. The quantitative section used a quasi-experimental design due to the requirement to teach pre-selected classes (thus, an experimental design was not practical).

Participants and Research Context

The study was conducted in an urban elementary school in a suburb of a major metropolitan city in the spring of 2006. Students were 99% African American, most qualifying for free or reduced lunch. The school had over 3 principals in 5 years; with a request from central administration to attempt to change declining test scores through the movement of building administration. I attended this school in the late sixties and early seventies, and I was transferred during my sixth grade year to reduce overcrowding and integrate other schools with more African Americans.

The behavior of the students at Urban Elementary during the study made for quite a challenging job. Within one week, I was struck by a 5'8" sixth grader who kept pretending to throw things at me to make me blink. It was important to give the message that I as the teacher refused to live in fear of the students in the classroom. Many students had learned unwanted language outside of school, as shown during a kindergarteners' lesson, when students were to state a letter of the alphabet and a word it represented in the microphone. One student told me "O stands for oct-a-pussy." We discussed the fact that the word was "octopus". I had a first grade class with six students fighting at once. One first grade student who had previously been sent to an alternative school for a week fought with four different students. The mother did come to the school to meet with the classroom teacher about his behavior. Another parent also came into my classroom at the end of the day and cursed me out because I did not allow her first grade child to hit another child back in class. I tried to discourage violence in my classroom, but it did not

help when parents encouraged it. These examples are many of the typical behaviors exhibited by students in most classes located at Urban Elementary School.

The experimental groups consisted of 3 sixth grades, 3 fifth grades, 2 fourth grades, 3 second grades and 2 third grade classes. Each class contained around 22 students. The third grade class which attended music twice a week was the control group (22 students total, but only 6 returned research permission forms). They learned a historical song utilizing the John Lennon song "Imagine". There were 24 students (out of 350 total students in the school) participating in the study due to low numbers of parental consent forms returned by the students. Students needed to learn how to perform the stages of a scientific process as a requirement for the school district. All members of the selected classes learned the songs, but only the students who brought back the signed permission slips had their data utilized and were interviewed.

The E. Des Lee Music and Art Collaborative provides over 92 schools within the metropolitan area with the opportunity to view art works, symphony concerts, Jazz at the Bistro concerts, Opera Theater presentations, as well as meet with professional jazz musicians, symphony players, and stage directors to expose them to the arts. As a member of the board of this organization, I included the use of these elements with all of the students in the school. This combination of music and art curriculum had created a unique learning opportunity, which these urban students appeared to enjoy. The opportunity to create culturally relevant operas, view professional jazz artists, and view art work of African influence at a large metropolitan city Art Museum appeared to have given our students a sense of pride in their own work and opera productions.

The project involved creating a culturally significant opera, which is an innovative learning technique to allow students who have difficulty learning in traditional methods the opportunity to learn through rapping, dancing and jumping to hip-hop music and songs. The opera development began with learning theatre games. Students then learned the original Motown versions of a song and then went over the Black History version I wrote the previous year (see Appendix) and then students wrote science and history lyrics to the melody of hip-hop or old-school karaoke songs. Students reviewed the current songs and I also reviewed them to ensure the lyrics were appropriate, and to determine the placement of the lyrics for the science and history songs. The students learned dance steps and theatre positions that allowed them to move on stage, and performed the opera for parents and other students. The students were interviewed before and after the opera performance to see if it was easier for urban students to learn required testing material through culturally relevant song and dance, than through less culturally relevant material or traditional learning methods.

The role of the students consisted in taking a pretest to determine their knowledge of science and history, writing the libretto/words of the opera and learning the songs to perform at a concert. Students also had a posttest after the opera presentation.

According to Gay and Airasian (2000), triangulation is an important and powerful approach used to establish the credibility of a qualitative research study, and it is a form of cross-validation that seeks regularities in the data by comparing different participants, settings, and methods to identify recurring results.

The use of a mixed methods study allowed me the opportunity to interview the students before the opera and change interview questions during the second and third

interview session based on the information obtained in the pretest and the beginning interviews. Initial interviews were required in order to obtain students' current knowledge of the science and history concepts and their attitudes toward the academic content to be included in the hip-hop operas.

How does this work relate to students mastering some of the basic content in the discipline? How does this work relate to students changing their attitudes toward these disciplines? Using Wertsch's (1998) theory how does this relate to their appropriation of the cultural tools of the discipline? Students who master information but do not have any claim culturally to the information are less likely to truly appropriate the information. Mastering involves understanding how to perform a certain function, for example how to multiply double digit numbers. When culturally significant appropriation is successful, students would make a project part of their everyday life experiences. There must be a coordination of both mastery and appropriation of information for students to enjoy the learning process.

In order to set the stage for my research, I need to describe the situation in my urban classroom. The typical week at Urban Elementary during my first year teaching at this school had been unusually difficult. I had a plastic container of water for my plants which a student threw across the room and splattered across the floor. The same class had a student kicking my CD/DVD player remote. There was an enormous amount of theft in the classroom which led me to believe even the DVD and remote could have been the next missing item. The next day someone wrote "bitch ass" on the glass of my door. I left it there while I continued to make numerous phone calls home to parents. I was hit with a rock during playground duty because students threw rocks at each other for fun,

since they lacked recess equipment. During the same playground duty ten boys were hitting one boy on the ground, and when I said stop they said they were playing. If nothing was broken or bloody teachers just ignored student misconduct and walked away. I couldn't believe the type of behavior that was tolerated. A first grade boy took a wooden board I used as drum pads and hit a first grade girl on the head because she hit him and chased him out of the classroom because "he was talking about me". Teachers in this school said I would get used to this, but I never did.

The positive side of Urban Elementary was being a member of the same culture as these students. I could put on some hip-hop music, and we could teach each other dances of the past and present. I had many members of my own family who were going through many of the same obstacles these children were facing, and I had an understanding of where they were coming from. I could touch and re-comb their hair and understand why it feels a certain way (coarse with added hair oil), and it doesn't feel strange to me. The fact that I attended this school and graduated from the same district meant I knew parents and grandparents from my childhood. I started my second year with disruptive students receiving lunch detention on the first day. I was a lot tougher and more organized, and the students appreciated my use of consistent discipline. I also coordinated the school's new discipline plan called "Stop and Think". In order to reduce discipline problems I began calling home during class and in the evening. The students' first hip-hop music writing performance song was one of their songs from the radio which spells the letters "B-A-B-Y M-A-M-A, I got love for all the baby's mamas" to "C-A-L-L your M-A-M-A, do I need to call your mama do I need to call your mama" because I called so much. Parents

stood and cheered at the winter concert, even many who had received one of my many phone calls home.

Self

My skills truly transformed over the past 14-years as a music teacher. In addition to music, I specialized in voice, dance, opera and gospel music. In a qualitative study Eisner (1991) viewed self as an important element. As the researcher and general music instructor, I was embedded within this study. As a vocal music major, I began to integrate technology in my classroom to help my music classes look and sound as good as the piano major's classrooms. Technology does not just include computers; it has a broad umbrella from CD players to MP3 players to drum machines. I used my skills in music, technology, and the joy of urban beats to create unique methods of reaching students through hip-hop operas. In other readings, self is regarded as the role played within the research process. Piantanida & Garman (1999) refer to stable records as typically taking the form of systematic documentation corresponding with verifiable facts. But in the arts based genre the recollection is a coherent account that may take more aesthetic forms such as stories or drama. The hip-hop operas were not only culturally relevant to my students in being set to African American beats, but meaningful to me personally.

Through integrating urban beats with the theory of opera development, our students had begun to appreciate to some degree viewing opera like Scott Joplin's "Tremonisha" and "Dream of the Pacific," about the story of Lewis and Clark. All of


the opera tickets and presentations had been made possible by the E. Des Lee Music Collaborative, which also paid for 5 years of summer week long opera courses called “Words! Music! Opera!” This was a nationally known program that concentrated on showing teachers how to help students create and enjoy viewing opera. Most kids do not appreciate opera because they do not understand the concept, and Words! Music! Opera! had helped to ease that problem.

Procedure

This study utilized mixed methods of inquiry, with the data collection occurring concurrently. The quantitative side was a quasi-experiment. According to Isaac & Michaels (1995), a quasi-experiment is used when the researcher cannot control and/or manipulate all of the relevant variables. It can be action research such as this study, in which only partial control of random assignment or conditions are available.

Prior to the study, and in order to help with the behavior problems while introducing students to the lyric development project, students were encouraged to create their first concept writing web with Fantasia Barrino’s song “Baby’s Mama” (See Table 1) Students had to write the reasons a teacher had to call home. This was performed at the winter concert and the parents were waving their hands in the audience in agreement with a positive song.

Table 1: Call your Mama versus Baby Mama Songs

<p>Call Your Mama</p>	<p>FANTASIA BARRINO LYRICS http://www.azlyrics.com/lyrics/fantasiabarrino/babymama.html</p>
 <p>C-a-l-l your m-a-m-a, Do we need to call your mama do we need to call your mama? C-a-l-l your m-a-m-a, do we need to call your mama do we need to call your mama C-a-l-l your m-a-m-a, Do we need to call your mama do we need to call your mama?</p> <p>Talking back to the teacher or disturbing the class. Walking out of class without permission. Not following the rules, Being disrespectful, joning on each other Talking while the teacher is talking. This will make us call your mama</p> <p>C-a-l-l your m-a-m-a, Do we need to call your mama do we need to call your mama? C-a-l-l your m-a-m-a, Do we need to call your mama do we need to call your mama?</p> <p>Being disruptive or disrespectful, Being disobedient hitting others or stealing others things Destroying property, had a fight, dressing inappropriately, Not following directions. This will make us call your mama</p> <p>C-a-l-l your m-a-m-a, Do we need to call your mama do we need to call your mama?</p>	<p>Baby Mama" <i>[Chorus]</i> B-A-B-Y M-A-M-A This goes out to all my baby mamas This goes out to all my baby mamas B-A-B-Y M-A-M-A This goes out to all my baby mamas I got love for all my baby mamas</p> <p>It's about time we had our own song Don't know what took so long Cuz now-a-days it like a badge of honor To be a baby mama I see ya payin' ya bills I see ya workin' ya job I see ya goin' to school And girl I know it's hard And even though ya fed up With makin' beds up Girl, keep ya head up All my</p> <p><i>[Chorus]</i> B-A-B-Y M-A-M-A This goes out to all my baby mamas This goes out to all my baby mamas B-A-B-Y M-A-M-A This goes out to all my baby mamas I got love for all my baby mamas</p> <p>I see you get that support check in the mail Ya open it and your like "What the Hell" You say "This ain't even half of daycare" Sayin to yourself "This here ain't fair" And all my girls who don't get no help Who gotta do everything by yourself Remember: What don't kill you can only make you stronger My baby mama...</p> <p><i>[Chorus]</i> B-A-B-Y M-A-M-A This goes out to all my baby mamas This goes out to all my baby mamas B-A-B-Y M-A-M-A This goes out to all my baby mamas</p>

<p>C-a-l-l your m-a-m-a, Do we need to call your mama do we need to call your mama?</p> <p>Being suspended, not acting right towards the teacher</p> <p>Bad language toward teachers or students</p> <p>Bringing games to school</p> <p>Inappropriate play or talking</p> <p>Going on inappropriate sites</p> <p>This will make us call your mama</p> <p>This will make us call your mama</p>	<p>I got love for all my baby mamas</p> <p>Cuz we the backbone (of the hood) I always knew that (that we could) We can go anywhere, we can do anything</p> <p>I know we can make it if we dream And I think it should be a holiday For single mothers tryin' to make a way But until then Here is your song Show love to my....</p>
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Concept web designs were an easier method of writing the lyrics to, for example, the “Call Yo’ Mama” song, because more students were able to participate or work at their own pace. This work was based on an earlier effort to show students how their writings could be placed in a song. It was also an attempt to provide discipline in the music room and have students explain why teachers may need to call home. Students learned how to find additional information on the same subject areas as the district’s writing prompts and write the additional verses on their own writing webs. It was important for the students to provide most of the research on the opera while developing lyric writing skills.

At the beginning of the study in May, students had a pre test on content that the classroom teachers and the principal wanted the students to learn through operas; the test items were in part also based on the district writing prompts. These questions were relatively simple recall questions about science and history subjects presented by the staff (See Appendix A). Students were taught songs with historical African beats and then they were taught non-culturally significant music. The culturally significant music was

put to movement, and used rap and hip-hop karaoke songs from familiar tunes. The non-culturally significant (music not associated with African rhythms), music was a John Lennon karaoke song that the students were previously unfamiliar with. In another lyric development process utilizing concept webs (described in more detail below), students contributed to the composition of a song about some of the historical content to the same melody as either the culturally significant (experimental) or non-culturally significant (control) music, which was then incorporated into an opera performance. The students then received a post-test on the same content as the pre-test. Students were also asked to compare which style they enjoyed and why. This information was used in a statistical analysis and the results were analyzed with computer software. Patterns, which describe and explain differences between subgroups, were sought using t-tests. The researcher took notes on the students' work at the end of each school day because the class schedules did not allow time in between classes for reflection. The entire learning process included in the analysis began May 1, 2006 through the end of the school year, and additional data was collected in some telephone interviews in July 2006.

The process of creating the opera was based on M. Campbell's article. According to Campbell (1995) a well-designed interdisciplinary project in music consists of six basic steps. These are detailed in the left-hand column of Table 2, and on the right-hand column the specific procedures used in this study are detailed:

Table 2: Opera process comparisons

Campbell's(1995) suggestions	Opera process
<p>1) Selecting a topic. Student opera topics are based on what the classroom teacher requested to be taught during the pre-topic selection interviews with the teachers. (See Table 2)</p> <p>2) Providing rationale for studying a particular topic. Teachers know what information their students may have had difficulty learning in the past, but they know students must learn for this year's standardized test.</p> <p>3) Planning and getting started is done within the music rooms.</p>	<p>1) Topics were developed from the school district's writing prompts provided by the principal.</p> <p>2) African-American students within the school district had test scores lower than the states average. Students were able to memorize and rap words of long songs with negative connotations.</p> <p>3) Planning was done according to the districts, universities, and the researcher's approval timetables.</p>

Campbell's(1995) suggestions (Continued)	Opera process (continued)
<p>4) Carrying out the project.</p> <p>5) Closing the project. This is done during the performance of the opera</p> <p>6) Evaluating the project.</p> <p>* Campbell (1995) feels field trips offer students exposure to new areas of knowledge and can enhance the scope of any project.</p>	<p>4) The project was carried out utilizing experimental and control groups. Dances were done prior to the study. The opera singers incorporated movement in a group, small dance ensembles, and a dance solo.</p> <p>5) The opera was performed and video taped for future study.</p> <p>6) The study was evaluated by comparing the scores of the pre test, posttest, Excel graphs, SPSS ANOVA's, and the interviews.</p> <p>* Students attended Opera Theatre's "The Marriage of Figaro" and "Hansel and Gretel" in order to see a real opera production.</p>

The students and teachers decided to write an opera on the story of Harriett Tubman. This opera incorporated: the reasons Harriett decided to run away, her journey, Susan B. Anthony, who helped her along the way, an “angel” character who discussed the North Star, an angel who told of the use of moss to point north, and a celebration of freedom (Research did not prove that Susan B. Anthony helped Harriett Tubman directly, but Ms. Anthony was an Abolitionist who was against slavery).

Songs chosen for the history opera were Marvin Gaye’s “I Heard It Through the Grapevine,” which symbolized how other slaves heard of the Underground Railroad, Al Green’s “Let’s Stay Together,” to tell of how the slaves had to stay with each other in order to not be captured, and John Lennon’s “Imagine”. The song lyrics for these three songs were written by students, and assembled into a coherent whole by me. The control group wrote the lyrics to the final song in the opera, utilizing the melody of John Lennon’s song of how we will imagine we can all live together and be free. In addition to the main opera about history, two science songs with lyrics *not* written by students were learned by all students along the way: a rap of the stars in the solar system with an instrument lesson was used to help teach the order of the planets.

Interviews of twenty students took place in the music classroom before and after school. Two students’ interviews occurred before the opera writing process. Other students were interviewed during the creative process (see Table 3), which focused on if students understood the process while it happened and their feeling during the process. The final interviews and a posttest (see Table 3) occurred after the performance. These interviews were a repeat of the verbal questions on science and history knowledge, and also included questions on what they learned and enjoyed about the process of creating an

opera, whether viewing any artwork of that time period help them understand the costumes, and/or what they liked or disliked about the process. Two students received telephone interviews. Students were asked their feelings about the learning process and the content studied, as well as questions aimed at revealing their level of mastery and appropriation of the material. Both methods were used in order to increase the validity of the study. The qualitative section of the study brought in the personal values of the African-American culture and the ability to relate to the culture of the urban students. The use of emerging themes was used during the open-ended interviews of the qualitative section. These interviews were color coded by hand for emerging themes. The combination of both qualitative and quantitative data helped create a multifaceted presentation of the culturally significant operas.

Table 3: Student test/interview table

Pre intervention	Intervention	Post intervention
Pre test	Interview during the	Post test
Interviews before opera	creation of the opera	Interview after opera performance

The interviews were video recorded and coded to locate common themes about the learning process. Interviews were coded into six main sections: purple for Opera lyrics, green for science knowledge, red represented science interest, blue for history knowledge, yellow represented history interest, and light blue which were unable to be categorized responses. Questions pertaining to culture, active learning, learning through

culturally significant music was asked quantitatively and qualitatively. The results were triangulated to determine if the common themes used during the beginning of the inquiry process were the same as at those at the end of the process. Student coded information was grouped together in emerging themes. The Statistical Package for the Social Science (SPSS) program was used to analyze the pre and post data, searching for questions with statistically significant differences in their pre and posttest, and between the experimental and control groups. The pre and posttest responses were also compared in SPSS to determine if significant changes in measured mastery and appropriation had occurred.

Delimitations and Limitations

The lack of students who brought back signed consent and assent forms were a limitation in this study. Many parents and/or students were unwilling to take the time to complete the assent and consent forms. Out of over 200 students in 3rd through 5th grades, only fifty-three students turned in the forms. Out of only 24 from the opera group who completed both the pre and the posttest, while only six of the control group completed both tests. This is understandable since many students from Urban Elementary School transfer back and forth to other schools, but these limited numbers strongly limited the quantitative analysis.

Another limitation resulted from the IRB/ORR approval process, which due to several delays was not complete until May. Although the original plans called for more extended opera creation and practice, as had been implemented in previous years, there were only five solid weeks of data collection before the end of the school year.

One of the main challenges of the study was to encourage students to engage in their best behavior to learn both culturally relevant songs and non-culturally relevant songs. The behavior of the students was a hindrance to the study. Hitting and fighting occurred every day in the halls, playground, and in the lunchroom at Urban Elementary. Cooperation of many of the students was difficult due to several factors including: the changes in music teachers, changes in principals, high levels of poverty (97% of students receive free and/or reduced lunch), and a neighborhood located with a high level of gang activity. The lack of discipline throughout the school created a challenging teaching experience for many educators within the building.

A delimitation was that most of the students came from lower socio-economic backgrounds living in an urban environment. This opera project was a quasi-experiment because I didn't have control over class assignments; the study used the students within the classes who volunteered to bring in the parent permission slip, although the entire class still received the treatment. One class learned the hip-hop songs and another learned a less culturally relevant version in order to see if it was the type of music which makes the difference in the learning process. In addition there was an after-school keyboard opera development program in which I was able to have more in-depth interviews about the opera with a smaller number of students.

Questions on the Doppler Effect, metaphors, and the science questions were only studied for changes in the pretest and posttest scores of all students combined (i.e., both the control and experimental groups for the history content analyses). This is because all classes received the same lessons on these topics.

Summary

The mixed method approach to research was used to strengthen the understanding of how using culturally significant hip-hop music to create opera helps students learn science and history. The use of technology was interwoven throughout the project to help students learn more quickly and with less pressure. The use of music also helped because of its familiarity and acceptance by these students. The process of using both research methods was time consuming, but the goal was to explore whether this interdisciplinary method involving music enhances the regular teacher's ability to teach content. The participants from this troubled elementary school did make the process more difficult, and the results more limited. The use of self made me focus on how this process could have helped a student like me who came from this school but from a different decade. The combination of art, music and physical education are all a part of my current music program.

In sum, this research looked at whether and how music class could be culturally significant and fun for the learner while focusing on science and history content.

Chapter 4

The Learning Process of Creating Operas

In this chapter, I present qualitative case studies of the experimental and control group classes, to answer the question: How does the learning process differ between the culturally relevant operas (experimental/opera group) and the non-relevant operas (control group)?

Overview of Opera Preparation and Development

The opera preparation began with learning theatre games. According to Crawford (2004), before students engage in theater games they need to learn the procedures that are involved. They need to practice circling up in a careful, quick way. They need to practice taking turns, being an audience, and moving their bodies in space without bumping into others. They must work on stopping the activity at the signal for quiet and restraining their urge to blurt out and side talk while others are talking.

The students selected karaoke songs from the music teacher's CD collection and changed the words to positive meanings. The scientific process was used to predict and test the three most popular songs to be used in the opera. The freeze frame games were used to create theatre blocking for the stage. Singing techniques and drama lessons were used from the Words! Music! Opera! Class (Brooks, Rinehart, & Wilcox, 1991).

Before the research project began, students in the experimental group learned the lyrics to Al Green's "Let's Stay Together" and Marvin Gaye's "I Heard it Through the

Grapevine.” The students also reviewed the Rolls Royce song “Car Wash”. They did not write the lyrics to the latter song, which turned into the “Scientific Process.” In the next chapter, I will show the results of the difference between what students learned in songs they wrote the lyrics for, versus a teacher written educational song. The students also viewed a PowerPoint presentation on which instrument produced the longest sound. Students played a tambourine then they played a triangle. They wrote their answers on an individual chalkboard. I walked around and tallied up their answers the first day.

The next day, in between practicing for the opera, we watched the 10 minute update of the graphs for each class to see what each class voted on as the longest sounding instrument, and discussed the scientific process. They also watched the “I Heard it Through the Grapevine” DVD of Marvin Gaye’s performance of the song. “Let’s Stay Together” was selected accidentally after I played an old school song for the talent show, and students recognized the song from home. Students then learned “Let’s Stay Together”. This song was culturally relevant because the students learned it from songs their parents and/or grandparents listened to. We discussed the fact that the words of “Let’s Stay Together” could be a theme for the Underground Railroad participants, and could be used to illustrate how enslaved people seeking to escape stayed close to each other when they were running towards freedom.

Opera Preparation

Students played a game called Freeze Frame in which students posed into positions of playing football, eating dinner, and performing a dance. All the classes

learned how to play the theatre game freeze frame. I modeled for the class how to freeze in different sport positions. I modeled to the students where to position pretend sports equipment. For instance, a pretend hockey stick should be on the ground and a pretend racquet should be frozen in the air as if for a tennis game or a badminton game. Students were divided into four groups each containing three to four students. Each group was given a sport to play. Then the students were asked to close their eyes while the performing group moved into position. The class was encouraged to raise their hands rather than yell out the answers. The games went well in most classes. Only one sixth grade class did not want to participate.

Students were given popcorn buckets that were previously used as drums, and sticks to learn rhythms. In order to students to understand the how props are used in an opera I decided to use these as props in a drama lesson. Each student had to use their bucket without stating what they were doing and the other students had to guess. Students did activities ranging from eating popcorn and cooking outside on the grill to painting, begging for food or money, and wearing a Shriner's hat. The students provided excellent examples of using their imaginations. Only a few students took the game too far and pretended to do such things as to go to the restroom or to do drugs. After that class, I discussed what not to do during the game. Students asked to do the game again.

Staging/Set Design

I took pictures for the opera on a grand street in a wealthy portion of town in order to find a home that would resemble a mansion like the home of Susan B. Anthony.

From the pictures, the art teacher made a house out of moving boxes for the opera. I took pictures of a holly tree and pine trees in order to have posters of a tree for the forests. These photographs were taken in February and so other trees did not have leaves. These pictures were downloaded by myself from the computer, printed on photo paper, placed in a plastic cover and taped on a stick so the students could carry them as props. I also created “Wanted” posters of Harriett Tubman with rewards for \$12,000 and \$44,000, and placed them on sticks. Some posters were damaged during rehearsal so the photographs were placed on a bulletin board on the stage. Students read cards with the different jobs of an opera production, including usher, costume designer and sound engineer in order to provide them with background on creating an opera. They were also given the information needed to be an intelligent audience for a real opera, including behavior expectations.

Opera Development in the Experimental Groups

Unfortunately, the research project was not approved until the week of May 1 and the timetable was limited to five weeks of actual data collection. The instruction and data collection schedule was aligned with the timetable of Table 4 below.

Table 4: Opera Schedule

Date	Opera Group 3rd & 6th	Opera Group 4th and 5th	Control Group
Week 1 May 1, 2006	<ul style="list-style-type: none"> • Pre test 	<ul style="list-style-type: none"> • Pre test • Begin writing “I Heard It Through the Grapevine” 	<ul style="list-style-type: none"> • Pre test
Week 2	<ul style="list-style-type: none"> • Continue to write “I Heard It” 	<ul style="list-style-type: none"> • Combine lyrics • And begin singing new 	<ul style="list-style-type: none"> • Beginning Interviews • Begin “Imagine”

May 8th	<ul style="list-style-type: none"> Practice skit Add CD sounds Do reading and writing web of “Let’s Stay Together” Singing 	<p>lyrics</p> <ul style="list-style-type: none"> Do reading and writing web of “Let’s Stay Together” Practice the skit with stage positions 	
Week 3 May 15th	<ul style="list-style-type: none"> Continue to do interviews Sing “I Heard it” Practice skit Add w/ CD and keyboard sound Blues Metaphor lesson 	<ul style="list-style-type: none"> Do reading and continue writing web of “Let’s Stay Together” and begin singing. 	<ul style="list-style-type: none"> “Imagine” Blues Metaphor lesson
Week 4 May 22	<ul style="list-style-type: none"> Sing “I Heard it Through the Grapevine” The Planet Rap with instruments Sing “Let’s Stay Together” Attended Hansel and Gretel (3rd & 6th graders) 	<ul style="list-style-type: none"> Practice skit Add w/ CD and keyboard sounds and drums Attended the real opera Marriage of Figaro (4th & 5th graders) 	<ul style="list-style-type: none"> “Imagine” The Planet Rap with instruments Attended Hansel and Gretel (3rd & 6th graders)
Week 5 May 29	<ul style="list-style-type: none"> Practice skit Add w/ CD and keyboard sounds and drums Doppler Effect keyboard lesson Post test 	<ul style="list-style-type: none"> Sing all songs Sing “Imagine” Post Test Doppler Effect keyboard lesson Post test 	<ul style="list-style-type: none"> “Imagine” Post test & interviews Doppler Effect keyboard lesson
June 2	<ul style="list-style-type: none"> Perform 	<ul style="list-style-type: none"> Perform 	<ul style="list-style-type: none"> Perform
June 5	<ul style="list-style-type: none"> Interviews 	<ul style="list-style-type: none"> Interviews 	<ul style="list-style-type: none"> Interviews

The first week of data collection began with passing out the consent and assent letters to the students. Classes began taking the pre-tests. I read each question out loud so that all the students would understand the questions to keep the pace of the class going. After the pretests were completed, I read a passage about Harriett Tubman from a social studies book. The students were also given a concept lyric writing web (see Appendix B) and the original words of “I Heard it Through the Grapevine” which were downloaded from the Internet. These classes incorporated technology in the classroom,

when students learned the original words of “I Heard it Through the Grapevine” while singing with a karaoke machine, a CD and the television.

Below are some of the suggestions written by students on their concept-writing web for new lyrics to the tune of “I Heard It Through the Grapevine”:

1. I heard it through the grapevine; Harriett Tubman went back 19 times.
2. Followed the Big Dipper so she would not get lost.
3. It took me by surprise I must say when I found out you escaped
4. Oh I bet you're wondering how I knew that the railroad would take us through
5. Oh I bet you're wondering how I knew your plan to free me and you
6. It took me by surprise I must say how she helped us yesterday
7. Oh, I bet your wondering how Harriett Tubman got free and she saved you and me.
8. History means so much to me
9. She ran for a long time
10. Oh I bet your wondering how she know about a plan to save you
11. I know a woman ain't suppose to cry so these tears I keep inside, loosing a slave means a life to me so I will help them all be free.
12. Please let these slaves be free
13. The big dipper helped them go north
14. Harriett Tubman lead the Underground Railroad
15. She helped 300 slaves to be free
16. I bet your wondering how Harriett Tubman got free and she saved you and me.
17. Harriett Tubman escaped drug a slave house in Maryland
18. She risked her life making 19 trips
19. Harriett Tubman help people make their dreams come true
20. When she escaped from slavery she went back to set other slave free
21. It took me by surprise I must say how you saved 300 slaves that way
22. I heard it through the grapevine, Harriett Tubman went back 19 times
23. I heard it through the grapevine, Harriett Tubman never lost a passenger anytime
24. People say believe half of what you see but Harriett Tubman set my ancestors free

Students used a sheet with the original words as a guide in their writing. In order to expedite the writing process, I wrote some suggestions on the blackboard including: Maryland, 300 slaves, Harriett Tubman, and Underground Railroad from the social

studies textbook I had read aloud. Many of the student suggestions shown above successfully took ideas from the textbook and blackboard, and transformed them into lyrics that fit the meter of the original Marvin Gaye song. I put the phrases from the students' content lyric writing webs into a complete song which we sang every day before the opera performance. Table 7 shows the lyrics they practiced and performed, next to the original lyrics they'd also learned:

Table 5: I Heard it Through the Grapevine in original and modified version about Harriett Tubman

Students words	Original song lyrics http://www.demos.com/lyrics/default.htm
<p>Oh, I bet your wondering how I knew, that the railroad would take me through Harriett Tubman escaped from Maryland But she decided to take a stand It took me by surprise I must say, how you saved 300 slaves that way</p>	<p>Oh, I bet you're wonderin' how I knew, 'bout your plans to make me blue With some other guy ya knew before Between the two of us guys you know I love you more It took me by surprise I must say When I found out yesterday</p>
<p>I heard it through the grapevine; Harriett Tubman went back 19 times oh I heard it through the grapevine; she never lost a passenger anytime Honey, honey...heard it through the grapevine of the Underground Railroad, baby.</p>	<p>Don't you know I heard it through the grapevine, not much longer would you be mine? I heard it though the grapevine, Oh I'm just about to lose my mind. Honey, Honey, heard through the grapevine not much longer would be me my baby</p>
<p>I know a woman ain't suppose to cry, so these tears I keep inside Losing a slave means a life to me, so I will help them to all be free Following the big dipper so she would not get lost</p>	<p>I know a woman ain't supposed to cry, But these tears I can't hold inside Losin' you would end my life you see 'cause you mean that much to me You could told me yourself, that you loved someone else. That you loved someone</p>

<p>The North side of the tree grows the most</p> <p>I heard it through the grapevine; Harriett Tubman went back 19 times oh I heard it through the grapevine; she never lost a passenger anytime Honey, honey...heard it through the grapevine of the Underground Railroad, baby.</p> <p>People say believe half of what you see, but Harriett Tubman set my ancestors free She had help along the way, from other people who wanted us to be free today It took me by surprise I must say how she helped us yesterday</p> <p>I heard it through the grapevine; Harriett Tubman went back 19 times oh I heard it through the grapevine; she never lost a passenger anytime Honey, honey...heard it through the grapevine of the Underground Railroad, baby.</p>	<p>else instead.</p> <p>I heard it through the grapevine, not much longer would you be mine. I heard it though the grapevine, Oh I'm just about to lose my mind. Honey, Honey, heard through the grapevine, not much longer would be me my baby.</p> <p>People say believe half of what you see, Son and none of what you hear. But I can't help but be confused If is true please tell me dear. Do you plan to let me go For the other guy you loved before Don't you know...?</p> <p>I heard it through the grapevine, not much longer would you be mine. I heard it though the grapevine, Oh I'm just about to lose my mind. Honey, Honey, heard through the grapevine, not much longer would be me my baby.</p>
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During week two, the students heard stories of how Susan B. Anthony's home was a station on the Underground Railroad, and how the slaves needed to stay together. I read them an internet web page on how quilts were used as signals for the stations along the railroad. Next, the students used their content writing web to write lyrics to the tune of Al Green's "Let's Stay Together." In order for students to be aware of York and Sacagawea from Lewis and Clark, we used the York writing web (See Appendix C), to identify members of color on the Lewis and Clark Expedition and discussed what ideas could have been used for the Underground Railroad. The pictures from the internet of York in a stamp, and a coin of Sacagawea, allowed students to associate with the members of color on the Lewis and Clark Expedition when they could see that their faces

were similar to their own. Students had a sheet of the original words to “Let’s Stay Together” to guide in their writing.

Below are some of the suggestions written by students on their concept-writing web for new lyrics to the tune of “Let’s Stay Together.”

1. Let’s stay together so you can run away with me.
2. We could be together so we could run up north and be free.
3. Why do people break up and turn around and sell us.
4. Let’s stay together so we won’t be sad.
5. When we run up north we will be free.
6. Let’s stay together running on the road don’t let them catch us in the cold.
7. I went on the road with you.
8. Cause freedom is the way it’s supposed to be.
9. We’ll run away forever.
10. I went to the Underground road with you
11. Running with you makes me free and joyful.
12. Let’s stay together so the slave owners never catch us
13. I have a lot now because of you Harriett.
14. I’m so in love with you be on the Underground Railroad too.
15. Let’s stay together hiding forever
16. Let’s stay together trying to stay alive forever
17. Whether thick or thin just begin.
18. Susan B. Anthony helped black you see so she is alright with me
19. The Underground Railroad wants us to be free and so do you
20. I’m so proud of you so you can take us through
21. Why do you slave owners hate us, because we are black and together.
22. Let’s stay together partying forever.
23. Let’s stay together we’re not going to talk to strangers, gonna be own our way to a good place to stay
24. I’m Harriett Tubman and I’m gonna take you through, the Underground Railroad that’s where I’m gonna take you

As with “I Heard It Through the Grapevine,” I once again combined the best lyrics in order to create a song. Both songs were practiced daily. This song’s lyrics were complete in week two and their lyrics are shown in Table 8:

Table 6: Let’s Stay Together in modified and original version

Let’s Stay Together based on Students’ Lyrics	Al Green’s Let’s Stay Together http://www.stlyrics.com/lyrics/online/letssstaytogether.htm
<p>I’m Harriett Tubman And if you take my hand Up to Canada you’ll see Cause running away up north will make things new Let the Underground Railroad do that for you</p> <p>Since baby, since living in slavery Hard times is all I see I just want to be free Let the North Star be what we’re running to Moss on the tree points north, too</p> <p>Let’s stay together Caught by slave-owners never Even when times are good or bad, happy or sad.</p> <p>There are others that will help us to Put a quilt out on the porch for you The station’s coding Susan B. Anthony helped black people you see So she’s alright with me</p> <p>Let’s stay together Hiding from the dogs and weather Whether times are good or bad, happy or sad.</p> <p>Take me to station to learn my destination Whether times are good or bad, happy or sad.</p> <p>Let’s stay together so we can be on the</p>	<p>I’m, I’m so in love with you Whatever you want to do Is alright with me 'Cause you make me feel, so brand new And I want to spend my life with you</p> <p>Me sayin' since, baby, since we've been together Ooo, loving you forever Is what I need Let me, be the one you come running to I'll never be untrue Ooo baby</p> <p>Let's, let's stay together Loving you whether, whether Times are good or bad, happy or sad Oooo oooo ooo ooo, yeah Whether times are good or bad, happy or sad</p> <p>Why somebody, why people break up Oh, and turn around and make up I just can't seeeeeeeee You'd never do that to me (Would you baby) 'Cause being around you is all I see It's why I want us to</p> <p>Let's, let's stay together Loving you whether, whether Times are good or bad, happy or sad</p> <p>Let's, let's stay together</p>

railroad together, together If times are good or bad, happy or sad	Loving you whether, whether Times are good or bad, happy or sad.
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During week three, the experimental/opera classes continued singing the new words of “Let’s Stay Together” during class. They knew the tune from working on the karaoke machine and it was easy for them to place the words to music. A few of the disruptive students began tearing off pieces of the new words in a plastic cover to throw at each other, and this was difficult to handle. I wrote a referral to the principal, but I do not believe anything was done.

The plan was for the students to write the lines of the opera once the songs were completed. But because of time constraints I wrote the skit for the opera after the Opera Brush-Up class from Opera Theatre. The second graders were responsible for performing the first seven lines; experimental third graders worked on the next seven lines and the sixth graders had the last seven lines. Students practiced the sound effects with a CD which provided water sounds for crossing the river and a punching sound for when Harriett was struck in the head by the slave owner. A keyboard created the sound to represent the sound for Harriett having a spell. These were shown in bold. The narrative was printed in italics. Here is the completed skit:

Harriett Tubman Opera

*Opera begins with a verse and chorus of I Heard It through the Grapevine.
Opening scene: Harriett is walking on her way to the store complaining about the life of a slave;*

Harriett: The life of a slave is not the life for me, can’t go where I want, when I want. I also have to do what the slave owners say. Maybe one day I will run away be free.

Harriett walks into the store.

The slave owner: Why are you here?

Without giving her time to explain the slave owner hit Harriet with a metal pan (sound: number 12 punch) and hits Harriett on the head causing her to faint.

Play sound effect: siren sound number 40.

Harriet awakens and heads for the slave owner's house, but decides to run away. She goes around and finds other slaves who want to run and they head for freedom up north.

Harriett: I know how to get there. I have even learned of others who are willing to help. Let's go.

Harriett and friends run for freedom.

Walk in the snow number 15.

Scenery: (posters of trees with green moss and a creek are put in place)

John (Harriett's slave friend): They say you have fainting spells some time

Harriett: Yes and if it happens just hide until I wake up.

Sound 35 and sound 31 water sounds

Mary Lou: Do you hear that?

John: Sounds like horses

Harriett: Yes it's the slave owners. Let's run through this water to lose the scent. Now hide.

Sound 39 water and sound 17

Some men carry posters. Posters read the saying "Wanted dead or alive reward \$12,000 and later even \$40,000."

Mary Lou: I think we got away.

Play sound effect: siren sound number 40.

John: Harriett's having a spell; just hide here like before until she wakes up.

Five 1st and/or kindergarten kids will jump in with wings

Benjamin Banneker: I am the angel of Benjamin Banneker. I am an astronomer, assembled the first watch in the United States and will draw the plans of

Washington DC. in the future. Remember to follow the Big Dipper because the last star points north.

Harriett awakens and they begin to move north

Harriett and friends knock on a door with a special code. It was the home of Susan B. Anthony... These homes were known as stations. (Sets posters for a home are put in the air)

Harriett: Are you a friend?

Susan B. Anthony: Yes, come in. Go downstairs and hide. I will bring food and water.

John and Mary: Thanks, Ma'am

Play sound effect: siren sound number 40 *Five 1st and/or kindergarten kids will jump in with wings*

John: Harriett is having another spell...good thing we are in one of the stations along the Underground Railroad.

The angel Sacagawea will appear only to Harriett: No one else can see her.

Sacagawea: I am the angel Sacagawea, and I helped Lewis and Clark find their way west. Remember to look at the moss on a tree. It will only grow on the north side

The Underground Railroad arrives north and the slaves live in Canada free.

The planet rap lesson was learned during week four, and consisted of the text “My Very Educated Mother Just Served Us Nine Pizzas.” The planet rap interactive percussion learning lesson was an exciting lesson, which was used during other instructional performances. Students had played this percussion lesson several times without adding words. They would request this lesson because students had a chance to play many different instruments in one lesson. Students were told the word My stands for Mercury, the word Very stands for Venus, the word Educated stands for Earth, the word Mother stands for Mars, the word Just stands for Jupiter, the word Us stands for

Uranus, the word Nine stands for Neptune, and the word Pizza stands for Pluto. At the time of this performance Pluto was still considered a planet. The students played instrument rhythms and repeated the rap. The instrument lesson consisted of: four popcorn buckets with sticks, four Agogo bells, four tambourines and four tom-tom drums with soft mallets. Students rotated to each different instrument and played different rhythm patterns after rapping the planet rap. I played the bass drum to keep a steady rhythm.

Also during the fourth week, 4th and 5th graders attended Opera Theatre's "Marriage of Figaro" and it was a disaster. Students had listened to five minutes of opera sound track for two weeks, reviewed the roles of positions used in creating an opera and discussed the different types of music so they would be prepared. The CD of opera excerpts was provided by the Opera Theatre of a large metropolitan city. This did not help the Urban Elementary students. Many of them chatted during the performance and a teacher was sick and had a substitute. Her class was out of control. One student stated that if he could not walk around and eat potato chips in the theater during the performance he would scream as loud as he could. He screamed at least four times and the head of the opera even spoke to me after the show. This student was suspended for the rest of the year. "Marriage of Figaro" was a three hour show, and my students were not up to the task. The following day of week four, 3rd and 6th graders went to see "Hansel and Gretel." This was a two and a half hour show. Staff members and students discussed how to behave in the performance, and all of the teachers attended. They were well behaved and were even interviewed by the local television network.

Week five was the posttest. Before I passed out the posttest, students sang through “Scientific Process”, the planet rap, “I Heard it Through the Grapevine”, and “Let’s Stay Together.” As I had done during the pre test, I read through each question in order for each student to stay on track. Students received 10 minutes of free recess during music for working on the test.

Interviews were also conducted beginning in the fifth week of the research project. Only two of them occurred before the opera production began. I had some interesting answers, which caused me to work a little harder to explain who some of the characters of the play were. I asked if they knew who Sacagawea was and I received answers from “he was” instead of she was, to “the angel in the play”. In order for the story to progress in four weeks, I had to introduce Benjamin Banneker and Sacagawea using a technique I learned from the Opera Touch Up workshop that taught me to create these characters as angels. Now, I know I needed a better explanation of how characters should have been introduced to the students who were living during the same time period as the Underground Railroad. There also more need of discussion of how other characters could be used in the analogy of Harriett Tubman’s dreamland to freedom.

Control Group Opera Development

The third grade control group class had a similar sequence to the experimental group (see Table 4), but they worked on Underground Railroad-related lyrics to the tune of John Lennon’s Imagine instead of the Rhythm & Blues songs that the experimental group used.

In week two, the students in the control group learned John Lennon's "Imagine" and the Beatles' "Let It Be". In the beginning the students complained about how the song was from a white man. They asked, "Who are the Beatles?" "Why do we have to listen to this kind of music?" "Why did they shoot John Lennon?" They complained more than the experimental group about the type of music they had to sing. They also did not have the opportunity to learn about cultural figures like Sacagawea and York, which produced a lot of conversation on the roles of non-whites on the expedition, in the experimental groups. The control group began listening to "Let It Be" and "Imagine" during class, and four students who had to repeat the lesson in lunch detention told me they really enjoyed "Imagine". They suggested this song would be used for the end of the opera because it states that we can imagine living in harmony and peace regardless of the nationality of the people. Then the control group worked on their lyrics on a content writing web utilizing the original words as a guide sheet to the song "Imagine". Again members of the control group asked, "What is the other group working on?" "Will we be able to sing songs by people we know?" They were willing to continue to use the John Lennon song when I explained again how an experiment worked and they were the most important class in the school.

As with the experimental group, the best lyrics proposed by the students were placed into a song to be performed by the control and opera groups. Here are some examples:

- 1). Imagine there's no slavery, it's easy if you try.
- 2) No slave owners below us, above us only sky.
- 3) Imagine all the slaves running away today
- 4) Imagine there's no slave owners.
- 5) Imagine no hanging of people
- 6) Nothing to talk or fight for

- 7) You may say I'm a lover
- 8) Imagine there's no land
- 9) All the people together as one
- 10) White people and Black people getting along
- 11) Blacks running free
- 12) Imagine all the slaves running away today
- 13) Harriet was dreaming about the Underground Railroad
- 14) No slave owners so they won't work us to death
- 15) Imagine there's one country.
- 16) The Underground Railroad helped us to be free
- 17) There was a dreamer living for today and we will all run away, ooh, ooh, ooh
- 18) Imagine all the people living in peace today.

Other classes only worked on the song "Imagine" during the last week. Here are the lyrics to "Imagine" by the control group:

Table 7: Imagine Lyrics by the Control Group versus John Lennon

Lyrics to Imagine based on control group's words	John Lennon's Words http://www.oldielyrics.com/lyrics/john_lennon/imagine.html
Imagine there's no slavery It's easy if you can Black and white together Joining the freedom band Imagine all the slaves Running away today	Imagine there's no heaven It's easy if you try No hell below us Above us only sky Imagine all the people Living for today...
Imagine the Underground Railroad Freedom for those you dare Stations along this pathway Lead to a brighter day Imagine all the people Helping slaves to be free	Imagine there's no countries It isn't hard to do Nothing to kill or die for And no religion too Imagine all the people Living life in peace...
You may say Harriett Tubman's a dreamer But she was not the only one I hope some day you will join her And the world could live as one.	You may say I'm a dreamer But I'm not the only one I hope someday you'll join us And the world will be as one
Imagine all 300 slaves Ms. Tubman brought to freedom	Imagine no possessions I wonder if you can

<p>Called her Grandma Moses For only the great could do this Imagine the Underground Railroad Brought freedom for you and me</p> <p>You may say Harriett's a dreamer But she was not the only one Susan B. Anthony joined her So the world will be as one</p>	<p>No need for greed or hunger A brotherhood of man Imagine all the people Sharing all the world...</p> <p>You may say I'm a dreamer But I'm not the only one I hope someday you'll join us And the world will live as one</p>
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During week three, the control group students continued singing the new words of “Imagine” in class. The control group did not work on the opera presentation or the play, or the songs “I Heard It Through the Grapevine” and “Let’s Stay Together”. But the third graders did learn the scientific process song and the rap of the planets, just the same as the other classes, so they did not serve as a control group for that part of the intervention. Both the experimental and control groups incorporated technology through the use of a karaoke machine, CD’s, CD player, and a television. This process required them to increase their reading speed as faster songs and raps were also sung in this method.

Before I passed out the posttest, students sang through “Imagine”, “Scientific Process”, and the planet rap. As I had done during the pre test, I read through each question in order for each student to stay on track. Students received 10 minutes of free recess during music for working on the test.

Rehearsals and the Opera Performance

Rehearsals for the opera lasted for three weeks and were held after school. Students who were practicing for the talent show after school practiced the opera on the stage with each grade level coming on during their designated time. We worked hard on

stage positions and used the field trip to view Opera Theatre's opera experience as an example for students to perform their opera.

Students were given a part according to grade level, so everyone knew which lines they were to perform. Harriet Tubman's costume was created from African fabric from my mother who is a seamstress. The angel costume was created using a white church robe and wings from the Dollar Store. Susan B. Anthony's character wore one of my old church hats, and John, the slave's wore one of my son's hats. Other students were assigned to the DJ Machine/CD player (Compact disk player with two sections for CD's to switch back and forth from either CD), keyboards, and the prop director. The second grade Harriett Tubman practiced how to walk across the stage and memorized her lines. The third graders worked on an Alicia Keys song called "Unbreakable" to sing between acts one and two. The fourth graders worked on a dance to perform after act three. The fifth graders worked on several solos for after act four. The principal would not let them sing because he did not like the words. Some of the lyrics were from Mariah Carey's "Shake it Off. I gotta shake you off , cause the loving ain't the same ,and you keep on playing games , like you know I'm here to stay , I gotta shake it off ." Another song which was eliminated was "*In My Mind*" by Heather Headley with words like "in my mind, you will always be my baby, in my mind I will always be your girl." These were all to be performed by the fifth graders. The sixth graders worked on a dance for after act five. Each grade level was responsible for seven lines and/or sounds created by keyboards or a CD sound track. All classes other than the control group learned the two songs "I Heard It Through the Grapevine" and "Let's Stay Together" and learned the song "Imagine" on the last week of rehearsal. The talent show students were staying

after school so I required them to be the students who had to be on stage for the opera. I told them, "If I am providing my time after school for you, you can do this for me."

The day of the performance included the kind of behavior issues that often caused problems at Urban Elementary. During the final rehearsal, student AF6 pulled out a student's ponytail, and chased a boy around the room. This same student yelled at another opera student because she looked at her funny. Also, the students waved at their parents when they came in to the performance, even though they had been instructed not to do so. However, I was pleased that most students remembered their lines. My daughter video taped the performance, and thought it was educational and meaningful, but I thought the performers could have slowed down the tempo of their speaking lines in order for the words to be understood. She also felt the students in the audience were talkative and disrespectful, and made it difficult to hear the opera lines. My daughter had videotaped my performances for over four years and provided me with critical feedback for future analysis.

The principal let the classroom teachers clean their rooms while classroom aides brought students to the performance, which may have contributed to behavior problems. The opera began with the principal asking for quiet. I discussed how the performance would move back and forth between the opera and the talent show pieces. Students began singing "I Heard it Through the Grapevine." The experimental students knew the words very well, because this was the first song we worked on, so both groups were able to perform the song as one large group. The singing was loud and strong. The audience clapped. The act one announcer began to speak. A student in the audience yelled "what" into the videotape. The students laughed when Harriett was hit on the head with a pan.

The sounds from the sound track of water and hitting Harriett had a great affect on the audience. The 3rd grade Harriet Student DF3 had to take the place of the 2nd grader 2A who was sick. She laughed when she missed a line. The song “Let’s Stay Together” began. The opera group sang well. I heard talking in the audience and my daughter saying “Shhh” in the microphone of the video camera. The opera group sang louder on the chorus. I even heard members of the audience singing with them. Student 3BF sang loud in the microphone. I thought this song went well. The opera group was nervous as they moved on to the talent show song. The sound system could have been turned up louder. The students began losing confidence in their performance when they could not hear themselves and the audience lost interest in the talent show song. “Stop hitting me” came from the audience during the song. “Quit hitting me” came across again on the video. The audience clapped anyway.

The signs of the second act of the opera which were developed on the computer and placed between two drumsticks were displayed by students walking them across the stage. They were bold and colorful with the image of Harriett Tubman on each end of the banner. I could hardly hear some of the second act speakers as they began. The 4th grade narrator voice was clear and her words could be understood on the microphone. The audience got quiet and seemed to listen when the voices were clear. The “wanted” posters really looked great on stage. The color photo was enlarged and matched the banner and the students’ concept lyric writing web. The talent show songs and dances placed between acts used contemporary urban music which most of the students knew from the radio and these songs seemed to quiet down the audience a little. Some audience members sang with the music.

The next act began with the Act three banners walking across the stage. The stage props of the general store prop and the holly tree were clearly displayed with bold colors. Students in the audience began to talk louder. I could not hear the opera students. The narrator began to speak louder and the audience seemed to try to listen. The angel Benjamin Banneker was clear on her speech and her church robe and wings appeared to display the desired effect of an angel. The next talent show song did not have the strongest singing voices, but a fifth grader created the most beautiful hip-hop ballet dance to make the audience overlook the singing and focus on the dance. More talking came from the audience near the end of the song. The audience clapped and there was a small yell of approval.

The next act was the sixth grade performers. I could hear the narrator and the angel Sacagawea looked angelic in the church robe and wings. She spoke fast and was hard to hear.

At the end of the play, I had the control group come on stage and join the other students to sing the song “Imagine” using the lyrics the control group had written. The range of the song was low, and the opera performing students had not sung with confidence in rehearsal. So I used the “call and response” method so the students would sound better and so the audience would understand the lyrics of the song. The control group knew the words to “Imagine” better than the experimental groups knew them; the control group appeared to perform their song without the lyrics printed out on paper, while the experimental opera performers referred to the words for “Imagine” on their paper printouts. This is not surprising, since the experimental students had not practiced “Imagine” much, and for a performance I usually teach a song for at least eight weeks in

order for students to sing at the confidence level to be heard in a large gymnasium. A fellow teacher stated, “Your performance of “Imagine” was very soulful”. All the students seemed to be engaged. The program ended with a gospel song and seventy-five students on stage singing with the opera and some of the control group members. They sang and performed with gospel choir moves. The audience seemed to enjoy the familiar song and the singers and rappers sang out and projected their voices well.

One of my former students from another school who now attends Urban Elementary came and asked if I liked the performance. I said I was pleased, but he stated, “The students did not know their lines and did not sing well.” And though I know he may have seen better performances, he was not aware of the time constraints we faced creating this opera. The show ended with other talent show performances; however we ran out of time and had to perform the other talent show songs at the Honors assembly.

Summary

This chapter described the process of technological hip-hop opera creation in some detail, and explicated differences between opera creation using culturally relevant and culturally non-relevant songs.

The opera preparation process had differences in the control and the experimental group attributable to the level of cultural relevance of the music. The experimental group students complained less in the class about the type of music they had to listen to. The control group had never heard of the music they were using (“Imagine”), whereas the experimental group knew the music from “I Heard It Through the Grapevine” and “Let’s

Stay Together” from older family members. The experimental students’ use of culturally relevant songs made the process easier for these students to learn the new lyrics, because of their familiarity with the songs. Nonetheless, students in the control groups were willing and able to engage with the culturally non-relevant music. With both culturally relevant and culturally non-relevant music, students were able to learn some science content, as is examined in more detail in the next chapter.

Chapter 5

Results and Analysis of Data on Learning and Desire to Learn

The embedded, culturally relevant learning of students participating in the Desire to Learn Science and History through a Technological Hip-Hop Opera research project was examined by analyzing students' level of understanding from the following data sources: 1) pre-opera interviews, 2) a pre-test, 3) inter-opera development interviews, 4) a post-test, and 5) post opera performance interviews. The data gathered provided a comprehensive look at how students learn, and how they felt toward opera, and the learning techniques in order to answer the following questions: What do children who create culturally relevant hip-hop operas learn about history and science content compared to an opera utilizing music from outside the students' culture? How does creating a culturally relevant hip-hop opera impact students' desire to learn science and history?

The quantitative comparisons between pre-test and post-test scores on the learning measures (Questions 1-19, see Appendix C) were made in the following fashion. Each question response was scored by the researcher as a "zero" if the response was incorrect (including no response), and a "1" if the response was correct. In all cases, the mean score for the experimental (N=22) and control groups (N=5) were calculated for each survey question, and most are reported below. The mean correct is equivalent to a decimal percentage, because a perfect mean would be a "1.0". As stated in the Methods, the low numbers of students in experimental and control groups (due to problems with obtaining parental permission and with students completing both the pre- and post-test)

limited the statistical power of the present analysis. Some statistically significant results were obtained, however.

Harriett Tubman and Susan B. Anthony

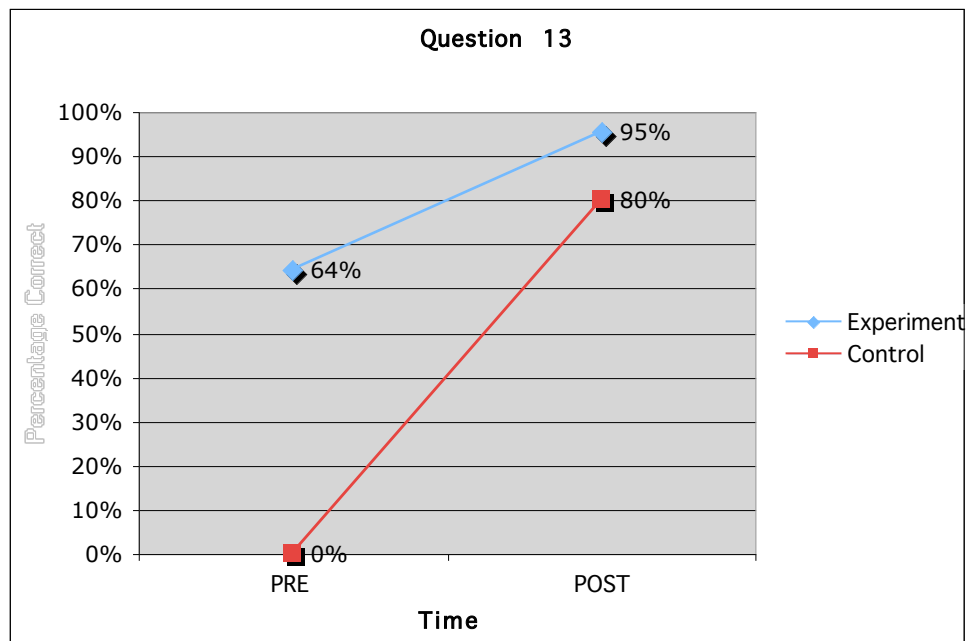
Questions 13 through 15 represented Harriet Tubman and her relationship with Susan B. Anthony. As shown in Table 8 and Figure 3, Question 13 showed a .31 point increase on the group means from pre-test to post-test by the experimental group and a .80 score increase in the control group. Both the experimental and control groups had statistically significant improvements in mean scores on their post-tests, which supports the notion that they both mastered some content on Harriett Tubman through their development of opera songs, either culturally significant (“I Heard It Through the Grapevine”/“Let’s Stay Together”) or not (“Imagine”). Question 13 produced the largest increase from the control group for the entire pre test to post test, but the control group’s amount of improvement from pre- to post-test was not significantly higher than the experimental group’s improvement.

From the interviews, eight students out of twenty-five students interviewed recalled that Harriett Tubman was a black slave. There were over 14 statements of Harriett Tubman helping slaves to become free. One student stated, “She ran with other slaves who wanted to be free, and she helped other slaves and did not want to do what the slave owners told them to. And she always was thinking about what she wanted to do that the slave-owners would not let her.” This was another line straight from the opera. Another student stated the opera lyrics, “She helped a lot of people and helped a lot of

people to be free, and she followed the North Star.” Out of six control group interviews, two students stated, “She was a black slave.”

In terms of the qualitative data, students expressed their knowledge about subjects that incorporated the technology, and opera writing techniques for both the culturally significant and less significant songs. This gives some evidence that the use of music combined with lyric writing produced a higher level of knowledge on the subject of Harriett Tubman, because both the experimental and control groups improved.

Figure 3: Pre and post test of Question 13



Only three of the interviewed students remembered the idea that Susan B. Anthony helped Harriett Tubman (as stated previously, there is no direct historical evidence that Susan B. Anthony helped Harriett Tubman, but it is known Anthony supported Abolitionism and the Underground Railroad). But two students recalled

specifics about Anthony. One said, “She was one of the people who hung a quilt on their house to tell the slaves they could come in.” This was a statement from the opera. The other student stated, “She helped Harriet Tubman when Harriett was helping others to be free.” Within the quantitative data, question 14, on who Susan B. Anthony was, showed a significant increase from .23 to .56 in the experimental group (see Table 8 and Figure 4), which was significant at the .016 level with the T-Test scores -2.886. The average scores provided the largest increase in the experimental group among the Harriett Tubman questions with a difference of .33, but there was no increase in the control group. There was a slight increase in the control and experimental group on what the ladies had in common on question 15 (see Table 8 and Figure 5).

Table 8: Mean correct for questions 13 through 15

	Pretest Q13	Posttest Q13	Pretest Q14	Posttest Q14	Pretest Q15	Posttest Q15
Experimental	.64	.95*	.23	.56	.33	.46
Control	0	.80*	0	0	0	.50

*: Difference in group mean from pre- to post-test statistically significant ($p < .05$)

Figure 4: Pre and post test of question 14

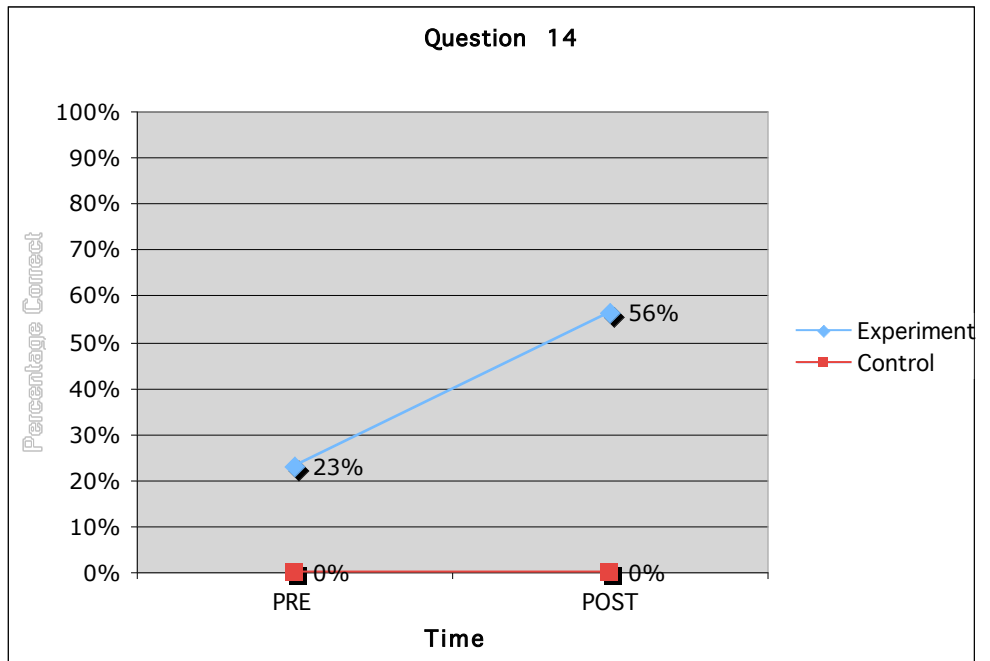
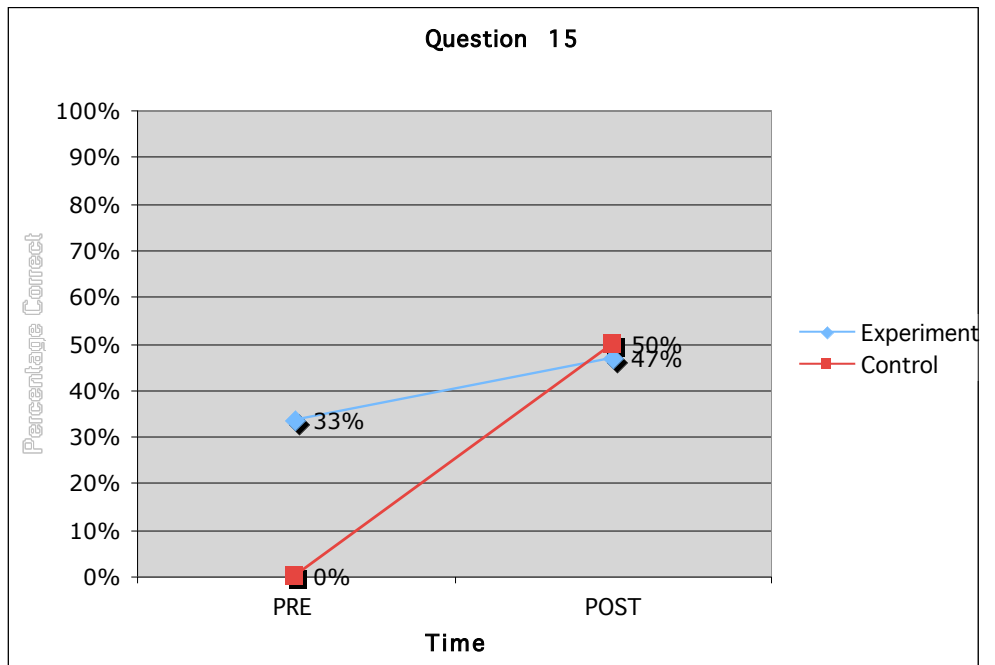


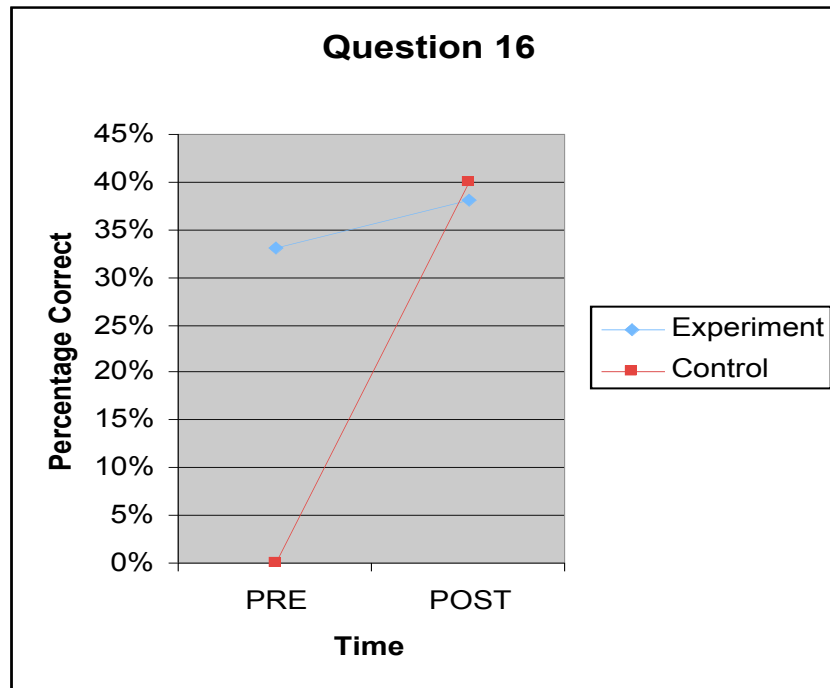
Figure 5: Pre and Post of question 15



The Underground Railroad questions are 16 and 17. They did not yield any statistically significant results in the quantitative analysis. Their means are represented in Table 9 and Figure 6. In the interviews, six students could discuss how Harriett Tubman was on the Underground Railroad. One student stated, “Harriett went on the Underground Railroad and followed the North Star.” These were opera lyrics. Another student responded, “Harriett Tubman freed over 300 slaves and designed the Underground Railroad.” Both of these students also correctly answered the Harriett Tubman question 13.

Table 9: Mean correct on Questions 16 and 17

	Pretest Q16	Posttest Q16	Pretest Q17	Posttest Q17
Experimental	.33	.38	.07	.09
Control	0	.40	0	0

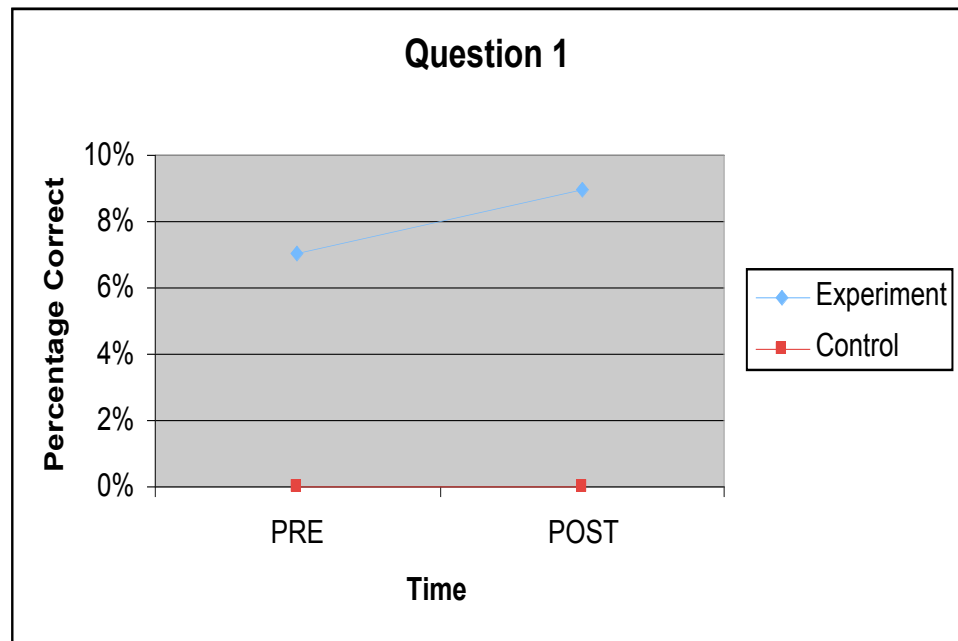
Figure 6: Pre and Post-test results for question 16

Lewis and Clark Expedition

Several of the Lewis and Clark questions (numbers 1 through 4) showed a great deal of change in scores from pre-test to post-test among the experimental group. The control group did not show any signs of improvement, which is not surprising since they did not discuss Lewis and Clark in class or view the York/Sacagawea writing web. The experimental group, in contrast, had a discussion about Lewis and Clark and why Sacagawea was in the opera skit, who the people were on the web, and whether they made a coin or a stamp of her. As a result of the fact that thematic links were made between these historical figures from different times and places, some students were confused about how Harriett Tubman and Sacagawea saved different groups of people.

On Question 1, there was no statistically significant change in the mean scores on the pre and posttest of the experimental group (see Figure 7 and Table 10).

Figure 7: Pre and Post of question 1



Question 2 asked about any non white people on the expedition. As described in the previous chapter, students in the experimental group used a writing web to learn about this (see Appendix C). The interviews produced six students who responded to the phrase “Sacagawea helped Lewis and Clark.” Another interviewed experimental student stated, “Sacagawea was on a coin.” Students in the experimental group learned about how Sacagawea helped Lewis and Clark from the pre test to the posttest. The percentage of pre test experimental students answering correctly was 11%, and this number increased 42% to 53% correct after the intervention on Question 2 ($t=-3.8$, $p<.01$; see Figure 8 and Table 10). The difference in improvements between the experimental and

control groups was statistically significant ($p < .01$), which was not surprising since the control group did not study Sacagawea or Lewis and Clark.

Figure 8: Pre and Post of Question 2

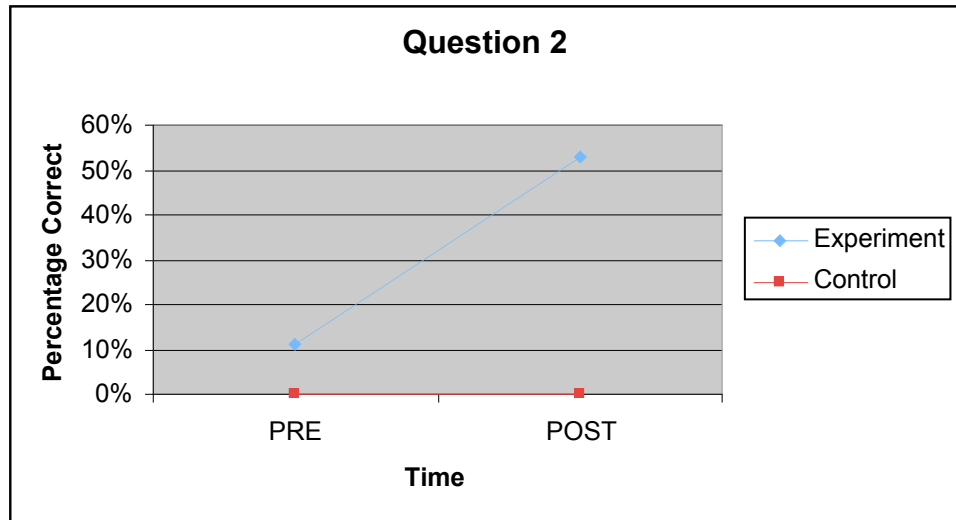


Table 10: Means of Questions 1 and 2

	Pretest	Posttest	Pretest	Posttest
	Q1	Q1	Q2	Q2
Experimental	.41	.41	.11	.53
Control	.20	0	0	0

Question 3 asked the name of the black slave, York, on the Lewis and Clark Expedition. The opera group means increased from a pre test of .07 to a .43 on the posttest, which was statistically significant on a t-test ($p < .05$). The control group stayed the same at 0. Only one interviewed student was able to recall that “He was a black man.” Question 4 asked for the name of the Indian woman on the Lewis and Clark expedition, and as Figure 9 displays, the students’ scores increased from pre test scores of

.18 to post test scores of .79 on the posttest (t-test statistically significant, $p < .01$, $t = -3.317$). From the interviews, seven students remembered Sacagawea helped Lewis and Clark, one remembered her baby was named Pomp (from a previous class), and one remembered she was on a coin (from the writing web). Another student stated she enjoyed playing Sacagawea in the opera.

Figure 9: Pre and Post Mean Correct on Question 3

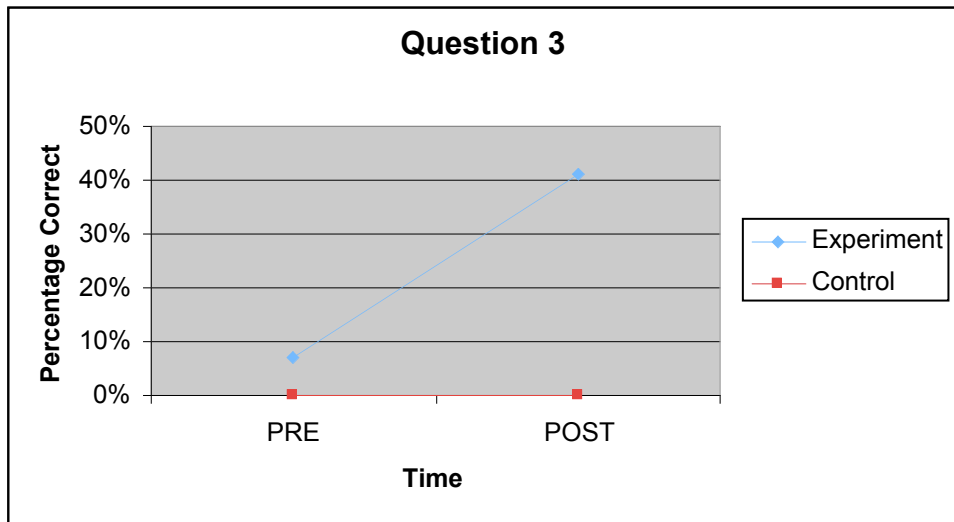


Figure 10: Pre and Post of question 4

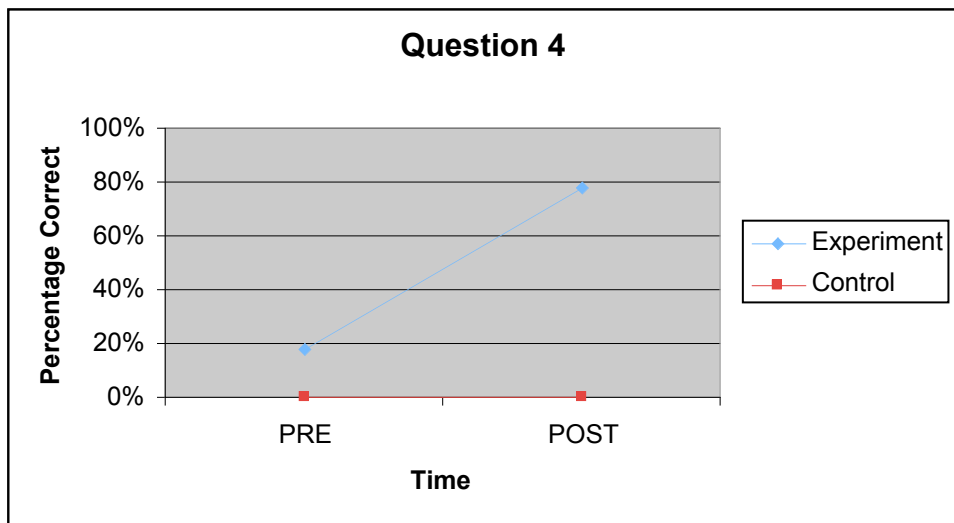
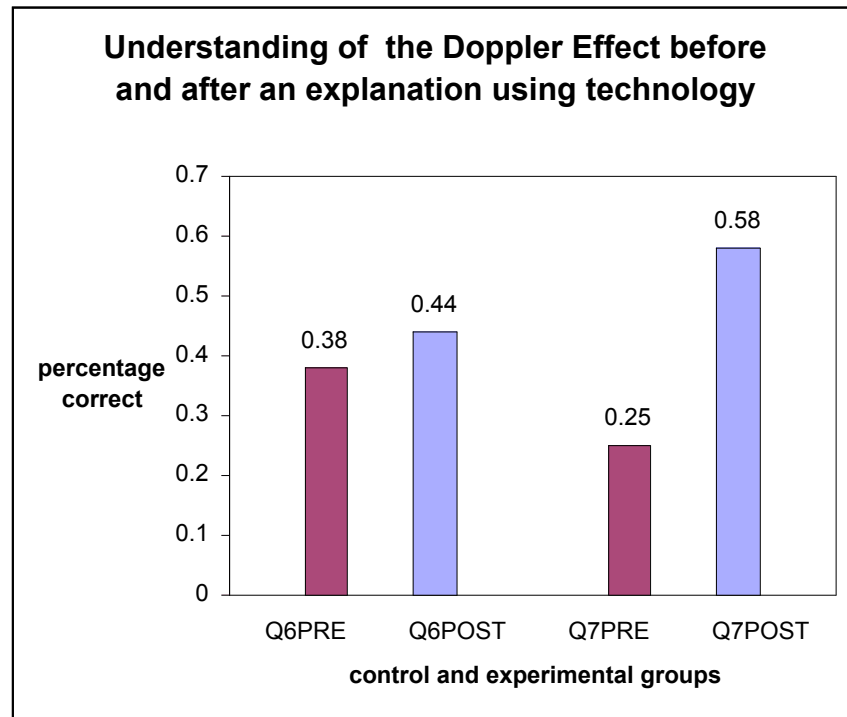


Table 11: Mean correct for questions three and four

	Pretest Q3	Posttest Q3	Pretest Q4	Posttest Q4
Experimental	.07	.41	.18	.79
Control	0	.80	0	0

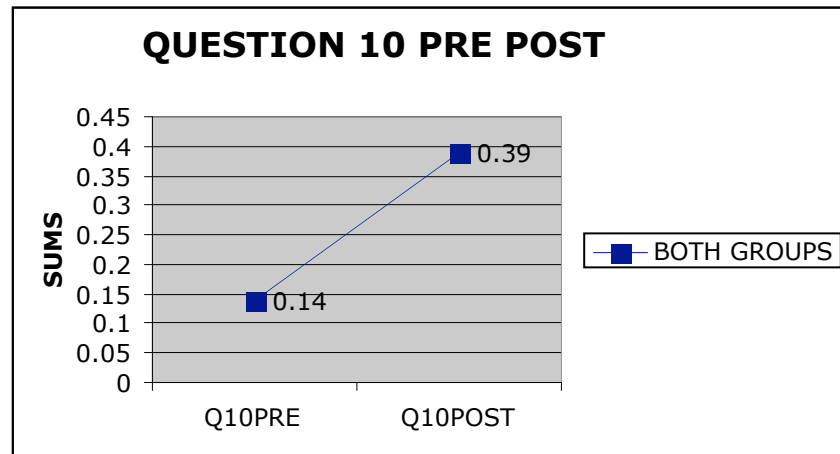
Science: The Planets, and the Scientific Process

Question 6 was the first Doppler Effect question and Question 7 was the second Doppler Effect question. This topic was selected due to the Urban School District's writing prompts (see appendix E). These questions incorporated technology to demonstrate how sound travels. Students in all classes received the same instruction for these topics, so there was no control group for comparison. But the technological explanation with the use of the microphone and siren sound of the keyboard led to a significant increase in scores from pretest scores of .36 to posttest scores of .44 on question 6 and pretest scores of .25 gaining up to .56 in the posttest with the use of technology. Students who were not familiar with how sound travels from an ambulance from their porch up then down the street made dramatic changes in their scores with the use of sight and sound. It seems they could imagine themselves hearing and seeing the source of the sound and this made a difference in the posttest.

Figure 11: Understanding the Doppler Effect

Music and instruments were incorporated in instruction about the order of the planets, the topic of question 10. Before the pretest, students did not use music or instruments to learn about this topic. The posttest was administered after students rapped and played instruments with the words “My Very Educated Mother Just Served Us Nine Pizzas”, a mnemonic device for remembering the order of the nine planets. This was before Pluto was declared a non-planet. Student scores increased from a pretest mean of .14 to the posttest mean of .39, as shown in Figure 12.

Figure 12: Question 10



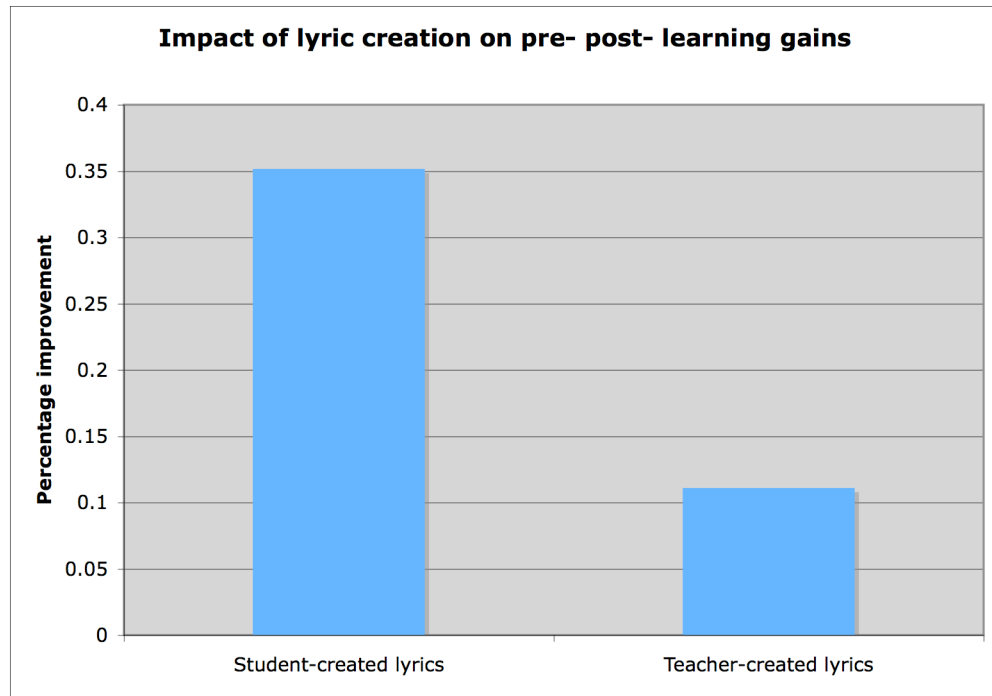
All students sang a song about the scientific process, and completed a lesson on the sounds of instruments using the scientific process. This lesson was displayed on a PowerPoint presentation, and each classroom's results were depicted on graphs with a 20" computer monitor. I wrote the lyrics to this song. Students in all classes combined only scored a mean of 0.11 on the pretest and 0.07 on the post test.

Comparing Learning with Student-Created vs. Teacher-Created Lyrics

Students in both the experimental and control group wrote song lyrics for the opera relating to Harriett Tubman and the Underground Railroad, but students did *not* write lyrics about the scientific process and the order of the planets, instead memorizing opera songs that the teacher prepared for them. Given the learning gains for students under conditions of writing lyrics for both culturally relevant music and culturally non-relevant music, and the mixed results for music which the students did *not* write the

lyrics, a follow-up analysis was performed, Mean improvement scores for Questions 13 and 18, about Harriett Tubman and the Underground Railroad, were combined to create a dataset of mean improvement for student-created lyrics. Mean improvement scores for Questions 10 and 18, about the planets and the scientific process, were combined to create a dataset of mean improvement with teacher-created lyrics. The mean improvement for student-created lyrics was .35, and for teacher-created lyrics was .11 (see Figure 13). The t-test on these data was statistically significant ($p < .01$, $t = 1.99$)

Students writing and singing the music lesson thus seemed to produce greater increases in learning, no matter the level of cultural relevance expected. The teacher lyrics did not seem to have the same impact on the students' memory as the physical writing and singing combined. This result is bolstered by the fact that these students had also worked on this subject in their regular class (outside the music classes), and fewer classes discussed the Harriett Tubman facts.

Figure 13: Teacher vs. student created lyrics

Desire to Learn

The final section of the written questionnaire and interviews was meant to address the research question, how does creating a culturally relevant hip-hop opera impact students' desire to learn science and history? Applying Wertsch's (1998) theory of the difference between the appropriation of the cultural tools of a discipline versus students mastering information use, I found little evidence that students have any claim culturally to the information; they seem unlikely to truly appropriate the information outside of school.

The final section of the student questionnaires related to students' desire to learn history and science both in and out of school. These questions related to Wertsch's

(1998) distinction between appropriating, or making one's own, the tools of a discipline, and merely mastering them to some degree. If students had strongly appropriated history and science as a result of culturally relevant hip-hop operas, it was expected that they might express a greater desire to learn history and science both in and out of school. Unfortunately, there were not enough pre- post-survey responses on these questions to perform even a limited analysis comparing the control group to the experimental group. This is because too many of the students did not fill out the last few items on the written survey.

The responses from several students in their interviews, however, provide some data about ongoing interest and appropriation. Student FM3, who answered question 13 and 14 on Harriett Tubman correctly, also gave a 10 on the scale of 1 through 10, on the question about enjoying learning about history in school. When I interviewed him as to why he liked to learn history he responded, "Because it can teach us about the black people who helped other black people to be free and not have to listen to the white people. So they can all be free." The opera stated how Harriett Tubman wanted to be free so she would not have to listen to the slave owner. She could live free. The next interview question asked if he enjoyed learning history from music, books, and television. His statement was, "When you go to a museum or watch TV, it can be different. If it is a movie you have, you can watch it over and over again. If it is a book, you can keep it or turn it back in to the library." This student enjoyed the opera process, and when he was asked what rating he would give our opera, he responded, "A 10 because we tried our best, and Ms. Isaac-Johnson always tried to get us on track and helped us with our lines. I liked when Harriett [was] walking in the store, but not when

the students were talking.” He provided the answer of 10 out of 1 through 10 on his desire to learn history in school. He was one of the students who participated in the opera production.

Student CF4, who gave a 10 on the desire to learn about Lewis and Clark, the Underground Railroad and on the planets, also was in the opera production. Her learning score increased from the pre-test to the post-test on the role of Sacagawea in the Lewis and Clark Expedition, on Harriett Tubman, and on the order of the planets. When she was asked why she liked the Underground Railroad she responded, "I like learning about Black History.” This 4th grader did well on the pre and posttest, beginning with increasing test scores on Question 2 (York). She answered correctly on the pre and post test for questions 3 (non-whites on the Lewis and Clark Expedition), question 4 (Sacagawea), question 10 & 11(planets), and question 13 (who is Harriett Tubman). She displayed an increase in scores on question 7 (metaphor), question 14 & 15 (Harriett Tubman), and question 16 (Underground Railroad).

A 6th grader, student AF6, was described earlier; she assaulted a student by forcibly removing her weave hair, chased others during rehearsal, and yelled at other opera students for looking at her. Despite this behavior, her test scores were almost as high as her 4th grade sister, Student CF4. Her scores increased on question 2 (non whites on Lewis & Clark), question 4 (Sacagawea), question 7 (metaphors), question 11 & 12 (planets), question 13 (Harriett Tubman) and question 15 (Underground Railroad). Both of these girls had been difficult over the two years, but they stayed after school for keyboard classes and every talent show rehearsal. The opera information was still present in the mind of student AF6 when she was interviewed via telephone two months after the

performance and she could still recall the object of the research project. When asked what she remembered about Harriett Tubman she replied, “She freed 300 hundred slaves and came up with the Underground Railroad.” When asked whether she remembered Sacagawea, she answered, “She helped Lewis and Clark.” I asked her, what rating she would give our opera and she stated, “I would give it a 9 because one person messed up.” When asked about what she enjoyed the most about being in the opera performance, she stated, “I enjoyed the opportunity to be in it.” When asked what she liked the least, she stated “I did not like when Harriett Tubman was hit upside the head by a pan by a slave owner.” Finally, I asked her on a scale of 1 through 10, with 10 being the highest score and 1 being the lowest score how much do you enjoy everything we discussed? She replied, “I would give the scientific process an 8. What about on Lewis and Clark? “I would give that one a 9.” What about on the subject of the planets? “I would give that one a 7.” , What would you give the subject of the Underground Railroad? “I would give that one a 10.”

As an educator in a lower socio-economic institution it is often difficult to know which students were siblings due to different last names, even as a music teacher who teaches all of the children. Reviewing this concept, Cuban (2001), claims the special needs of urban schools and the low-income communities in which these schools are often located would require sustained attention to the links between the economic, social, housing, and political structures of the neighborhood and the quality of schooling. Although students AF6 and CF4 have different last names there were many similarities between them. The sixth grader, student AF6, was difficult. She confided in me about sexual abuse from a family member, and I was able to understand better why she behaved

the way she did in class. The 4th grade sister answered 10 on a scale of 1 through 10 on her desire to learn history in school. She gave the desire to learn science in school a 10 stating, “I like learning science in school because it is fun, you can have fun, and learn.” The school is the sisters’ link to this urban neighborhood, and they came after school for as much as they could to possibly be in a safer environment than their home. The after school keyboard classes and the opera also utilized culturally relevant music, and they both reported through interviews and on the pre test that they enjoyed learning in school.

Student EF2, a second grader who was to be Harriett Tubman in the opera but was sick on the day of the performance, had greater increases in test scores from the pre test to the posttest than third graders, or even some 6th graders. Increases in scores occurred on question 2 (non-whites on L & C), question 4 (Sacagawea), question 8 (metaphors), questions 11 & 12 (planets), question 14 (Susan B. Anthony), and question 16 (Underground Railroad). Time ran out in this second grader’s, so she did not have the opportunity to complete the last four questions on her desire to learn history or science in school. She was also interviewed over the telephone two months after the opera. She was asked what she remembered about Harriet Tubman. She stated, “She set free 300 hundred slaves.” This student was confused as to who put something on the porch for a signal, but the fact that an eight year old recalled the signal on a porch was a positive sign. When asked on a scale of 1 through 10, 10 being the highest and 1 being the lowest, how much she enjoyed learning about science, Lewis and Clark, and the Underground Railroad in school, she gave a 10 to all of them. When asked why in this manner she replied, “Because it is history and we need to know about our history, I like learning about science because it helps you.” When she was asked what she enjoyed

about opera practice even though she was sick the day of the performance, she stated, “I liked being Harriett Tubman.” These performances will be remembered for a while by these students, and hopefully with so many will remember that Harriett Tubman freed over 300 slaves; this will also stay in their permanent history book by the mind.

The third grade Student EF3, who is the sister of student EF2, did perform in the opera and had similar increases on question 4 (Sacagawea), question 11 & 12 (planets), and question 14 & 15 (Underground Railroad). Their sixth grade brother, who stayed after school but did not perform in the opera also, had substantial score increases. Increases occurred on question 4 (Sacagawea) and question 10 (planets). All three siblings answered both the pre test and post test correctly on question 13 (Harriet Tubman), and the brother answered the pre test and post test correctly on question 14, 15, 16, and 17. He answered 10 on the scale of 1 to 10 to enjoying learning each question including sound, planets, Lewis and Clark, the Underground Railroad, and the desire to learn history in school. I thought he was guessing, but based on pre test answers it seems he really likes to learn. He was teased constantly and accused of being “gay” because he chooses to study and not fight when provoked by some of the students at Urban Elementary. The family lived across the street from the school. I know of at least four siblings of this family. I am not sure if there is a father in the home, but the mom and grandmother attend all school concerts, field trips, and parent teacher conferences and are very supportive of the school. I have had to call home to talk to the mom after school due to the behavior of the second grader, but I had no idea of the level of the intelligence within her entire family. This has broken all my stereotypical views of urban families,

and I am pleased that this family is having students succeed in this extremely violent environment.

Students were interviewed about what they enjoyed learning in school, in books, in movies or at museums. They were instructed to pick a number between 1 and 10 with 1 being the lowest and 10 being the highest. The averages of these numbers revealed the highest score was obtained about learning about the Underground Railroad with an average of 8.6 (See Table 12). Surprisingly, students really enjoy learning about the history of Lewis and Clark or the Underground Railroad within an interactive school learning environment versus books, museums or movies. Perhaps the use of music in teaching history has contributed to this increase in the desire to learn history while at school. The average response for desire to learn history and science in school was also higher than the average on desire to learn from books, museums or movies (See Table 13). This could be because students enjoyed the interaction with teachers and music, and learning through music had made a difference. The students who were interviewed enjoyed learning more at school than even movies or museums, which may be because the instruction made a difference. But if the instruction had resulted in students appropriating an interest in history and science, they would probably have shown higher scores on learning these topics outside of school.

Table 12: Mean score on interviews on desire to learn in school (scale 1-10)

Underground Railroad	Lewis & Clark	How Sound travels	Planets
8.6	8.1	3.8	5.5

Table 13: Mean on overall desire to learn history and science (scale of 1-10)

History in school	History from movies, museums or books	Science in school	Science from movies, museums or books
6.2	6.6	4.7	5.7

In this chapter, I have presented an analysis of the outcome data on learning and desire to learn history and science through culturally relevant hip-hop operas. The analysis of survey responses showed significant learning about history topics learned through production of the hip-hop opera. Students' active engagement in writing the texts for their songs appeared to be more important to learning than the cultural relevance of the song's tune, because the African-American students at this school just as readily learned from writing new lyrics about history to the tune of an unfamiliar John Lennon song as familiar R&B songs. On the other hand, participating in writing history lyrics appeared to have a greater impact on learning outcomes than just memorizing musical texts written by their teacher.

Chapter 6

Conclusion

In this chapter, I summarize the findings of this study, and make recommendations for further research.

The first research question was: how does the learning process differ between culturally relevant hip-hop operas and culturally non-relevant operas? The qualitative case study showed that students expressed more enjoyment along the way when learning with music they knew, and there was less complaining about the differences in the type of music from the experimental group.

The second research question was: What do children who create culturally relevant hip-hop operas learn about history and science content compared to an opera utilizing music from outside the students' culture? The pre-test and post-test instruments proved to be a valuable source of information, with increases in test scores from the pre and post test from 0% up to 90% on many of the 19 questions. The statistically significant increases occurred in the pretest from the posttest on the Lewis and Clark and the Harriett Tubman questions, which were most integral to the hip-hop opera's dramatic story, and which the students helped most to craft. Even with the time constraints of the instructional intervention, music had an impact on whether students learned. Both the control group and the experimental group increased what they learned from the pre test to the post test on planets with the use of the interactive instrument rap lesson, but I cannot state that the experiment provided strong evidence on this point, perhaps due to time

constraints. The results showed clearly that students learned more about science and history when they were able to write the lyrics versus if the teacher wrote the lyrics.

The third research question was: How does creating a culturally relevant hip-hop opera impact students' desire to learn science and history? The qualitative case study revealed more enthusiasm and less complaining about the culturally relevant music during the development and practice phases of the instruction, but the outcome measures used in this study were too limited to reveal any differences between the experimental and control groups on ongoing desire to learn history. Interview results from some experimental students did reveal some increases in ongoing desire to learn about history and science through music in school, but their interest in learning these topics outside of school was not expanded. The fact that students did not greatly increase their overall interest in science and history is not surprising, given how brief the intervention was.

Recommendations for Further Studies

More studies need to be performed in the area of opera development and performance in the field of history and science in order to better understand how this form of instruction can improve learning and the desire to learn in the urban schools. Some suggestions, based on problems and limitations with the administration or results of this study, are the following:

- More variation within the sample including different socio-economic groups and different ethnicities

- Greater attention to subgroups within the sample, including a break down by gender and by age.
- A longer time period for the study.
- The size of the control and experimental group needs to be equivalent for statistical analysis to reveal differences between the groups, and the number of respondents on surveys would ideally have been larger. It is important to encourage urban parents to agree for their children to participate in such studies, if we hope to improve urban education.
- It proved difficult to design the control group lessons to be equivalent in time and topic to the experimental group's lessons, so that the impact of culturally relevant music could be teased out. In future research, a design could be implemented in which Group 1 (perhaps consisting of multiple classes, as in the present study) served first as a control group, learning about topic A through non-culturally relevant lyric development, then as an experimental group learning about topic B through culturally relevant lyric development. Group 2 would flip the order and content, first serving as an experimental group learning about topic A through culturally relevant lyric development, and then serving as a control group learning about topic B through non-culturally relevant music (see Table 14).

Table 14: Proposal for future quasi-experimental design for importance of cultural relevance of lyrics

	Phase One	Phase Two
Group 1 (perhaps multiple classes)	Control, learning about Topic A	Experimental, learning about Topic B
Group 2 (matched in size and age with Group 1)	Experimental, learning about Topic A	Control, learning about Topic B

- Since the qualitative results pointed to potential differences in students' engagement in the instruction *during* class, survey items with student ratings on enjoyment of specific classes could supplement the current items about their ongoing future interests. This would give a fuller picture of how appropriation might develop.
- Since student involvement in proposing lyrics to the history and science songs appeared from this study to be relevant, more research time for the students could be provided with planned time in the computer room or with regular classroom teacher assistance (i.e., not just working on the project during time set aside for music class).

Conclusion

Equity among suburban and urban schools is needed in order for all schools to be equipped with the necessary technological tools needed for all students to receive a fair education and ensure that no student is left behind. Equity has many facets, including lack of nutrition or access to organizations which provide these services. The “digital divide” keeps the poorest school children from testing on the same level on standardized

tests as students who have equivalent technology within their homes and schools when they do not have the opportunities to learn or practice with technology in their homes.

Textbooks should provide an equitable level of culturally relevant photographs and historical facts for each ethnicity in order for the “no child left behind” act to speak for every child, and to not just represent the culture of the rich. Music of a student’s culture, as explored in this study, can be a small step in providing equity in urban schools.

Providing rich and active learning opportunities during music class, such as the technological operas described in these studies, clearly has the potential to improve urban students’ learning and their desire to learn in the content areas of history and science.

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APPENDIX A
STUDENT QUESTIONNAIRES

Interview/Test Questions for “Creating Desire to Learn History and Science via Culturally Relevant Technological Operas in an Urban School”

The following questions were asked in a written pre-test and post-test. 20 selected students will be interviewed before or after school about their responses, and asked in the interview to elaborate verbally on their responses, and their thinking

1. What president authorized the Lewis and Clark expedition?
 - a. George Washington
 - b. Thomas Jefferson
 - c. Bill Clinton
 - d. Abraham Lincoln
2. Can you name any non-white people on the Lewis and Clark Expedition? If so, please tell me what you know about them.
3. What was the name of the Black slave who was on the Lewis and Clark expedition?
4. Who was the Indian woman on the Lewis and Clark trip and why was she important?
5. How does the size of an instrument affect its sound?
6. You are sitting in a car at a stoplight. A police car is traveling toward your car with its siren on. The policeman hears his siren go off once every two seconds. As the siren is traveling toward you, how often would you

hear the siren going off?

- ___ A. once every two seconds
- ___ B. more than once every two seconds
- ___ C. less than once every two seconds.

7. The police car in the previous question passes your car at the stoplight and gets further and further away from you. As before, the policeman hears his siren go off once every two seconds. As the siren is traveling away from you, how often would you hear the siren going off?

- ___ A. once every two seconds
- ___ B. more than once every two seconds
- ___ C. less than once every two seconds.

8. The metaphor bond means:

- a. The spy 007
- b. To stick together
- c. To not get along

9. The metaphor airhead means:

- a. The candy you receive with 5 music bucks
- b. A head filled with air
- c. A person who doesn't think things through

10. Name the order of the planets.

11. Which planet is the hottest planet and why?

- a. Mars

- b. Venus
- c. Pluto
- d. Mercury

12. Which planet is the coldest and why?

- a. Mars
- b. Venus
- c. Pluto
- d. Mercury

13. Who is Harriett Tubman? What is she remembered for doing?

14. Who is Susan B. Anthony? What is she remembered for doing?

15. Name at least two things Susan B. Anthony and Harriett Tubman had in common.

16. What is the Underground Railroad?

17. What states were affected by the Underground Railroad and why?

18. Write the correct order number for the scientific process.

_____ evaluate the data

_____ develop the hypothesis

_____ identify the problem

_____ Test the hypothesis

19. Which geometric figure has 4 equal sides?

___ Triangle

___ Square

___ Circle

___ Rectangle

20. On a scale of 1 to 10, with 1 being the lowest, and 10 being the highest, can you say how likely you would be interested in a television show about

- a. how sound travels?
- B. The planets?
- C. The Lewis & Clark Expedition?
- D. The Underground Railroad?

21. Please explain your ratings for the previous question.

22. On a scale of 1 to 10, with 1 being the lowest, and 10 being the highest, how much do you usually like

- A. learning history in school?
- B. Learning history from television, books, or museums?

23. Please explain your ratings for the previous question.

24. On a scale of 1 to 10, with 1 being the lowest, and 10 being the highest, how much do you usually like

- A. learning science in school?
- B. Learning science from television, books, or museums?

25. Please explain your ratings for the previous question.

First Interview Questions

First opera interview questions

1. State your name and grade
2. What do you know about Harriett Tubman?
3. Have you heard of Susan B. Anthony?
4. Have you heard of York?
5. Have you heard of Sacagawea?
6. What do you know about any person you answered yes to?
7. What do you like about music class?
8. Have you ever heard of the song “I Heard it Through the Grapevine?”
9. Where have you heard it?
10. What songs would like to write an opera to or what is your favorite song on the radio?
11. Did you learn anything about history or science in music?
12. What is the scientific process?

Student opera post-interview question (not asked pre-opera)

1. On a scale of 1 to 10, with 1 being the lowest, and 10 being the highest, how much did you like doing the hip-hop opera on

A. The Scientific Process?

B. Lewis and Clark?

C. Forces and Motion?

D. The Universe?

E. The Underground Railroad?

2. Why did you give the ratings you did for the hip-hop operas?

3. What did you learn about the parts of an opera?

4. What did you enjoy the most about the opera production?

What did you enjoy the least?

5. What did you learn about science from the opera?

6. What did you learn about history from the opera?

Did viewing the opera presentation from Opera Theatre's Opera on the Go help you understand anything about the opera you wouldn't otherwise understand

APPENDIX B
CONTENT WRITING WEB ON
HARRIETT TUBMAN

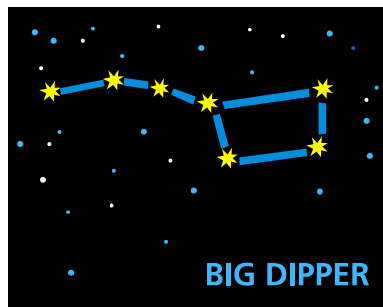
Harriett Tubman Content Writing Web

Name _____ Teacher's name _____

Harriett Tubman

List some parts of Ms. Tubman's life

On the lines below



Why was the Big Dipper important to Harriett Tubman?

APPENDIX C

CONTENT WRITING WEB

ON YORK/SACAGAWEA

York Content Writing Web

Name _____ Teacher's name _____

**Members of Color on the Lewis and Clark Expedition
Why were they important?
What ideas could have been used by Harriett Tubman?
On the Underground Railroad?**







APPENDIX D
STUDENT INTERVIEW RESPONSES

Opera lyrics

Science knowledge

Science interest

History knowledge

History interest

Totally out of this world responses

Opera opinions/class work

State your name and grade

1, STUDENT AF5

What do you know about Harriett Tubman? I know she was with the Underground Railroad and she set the slaves free.

Have you heard of Susan B. Anthony? Yeah ... you put her in the that song you made up and she was in the opera and the Underground Railroad

Have you heard of York? Yes I heard about him in third grade. He was a black man

Have you heard of Sacagawea? She helped on the Lewis and Clark expedition and had a baby...named Pomp

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 6

Planets 8

Lewis and Clark 4

Underground Railroad 9

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school...8 9

From books, movies or magazines 9 10

2. State your name and grade: Student AM3 control group 3rd grade

What do you know about Harriett Tubman? That she was a black slave

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? Yes...tell me (no)

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 9

Plants 6

Lewis and Clark expedition 10

Underground Railroad 10

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school... 10

From books, movies or museums 8

On a scale of 1 through 10 1 is the lowest and 10 is the highest how
much do you like learning about science in school... 8

From books, movies or museum 3

3. State your name and grade Student BF5 5th

What do you know about Harriett Tubman? That she saved over 300
slaves

Have you heard of Susan B. Anthony? Yes that she was one of the
people who hung a quilt on their house to tell the slaves they could come
in

Have you heard of York? No

Have you heard of Sacagawea? Yes that she is on a coin

What do you know about any person you answered yes to?

What do you like about music class? We get to do fun stuff and learn
instruments

What is the scientific process? I don't know

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how
likely would you be interested in a television show about

How sound travels 6

Plants 5

Lewis and Clark 8

Underground Railroad 10

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 9

From books, movies or magazines 10

Why because you teach you what you need to know

4. State your name and grade Student AF2 2nd grade

What do you know about Harriett Tubman? That she was a slave

Have you heard of Susan B. Anthony? (Nothing)

Have you heard of York? No

Have you heard of Sacagawea? Yes she helped the slaves

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 5

Plants 7

Lewis and Clark 10

Underground Railroad 10

Why cause why (I don't know)

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...4

From books, movies or museums 5

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 3

From books, movies or museum

5. State your name and grade Student BM3 control group 3rd grader

What do you know about Harriett Tubman? She was a girl

Have you heard of Susan B. Anthony? Nothing

Have you heard of York? No

Have you heard of Sacagawea? No

What do you know about any person you answered yes to?

What do you like about music class? Listening to music

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how

likely would you be interested in a television show about

How sound travels 5

Planets 2

Lewis and Clark 10

Underground Railroad 10

Why Lewis and Clark? Cause I went to that school.

The Underground Railroad? Cause Harriett Tubman set the slaves free

On a scale of 1 through 10 1 is the lowest and 10 is the highest how

much do you like learning about history in school...10

From books, movies or magazines 9

On a scale of 1 through 10 1 is the lowest and 10 is the highest how

much do you like learning about science in school...10

From books, movies or magazines 8

Why because it helps you like if you want to do a science project in school

6. State your name and grade Student CF4 4th grader opera participant

What do you know about Harriett Tubman? She freed over 300 slaves and she was a slave herself

Have you heard of York? No

Have you heard of Sacagawea? She was the Indian woman who helped Lewis and Clark on the expedition

What songs would like to write an opera to or what is your favorite song on the radio? Lean with it rock with it

What is the scientific process? I know you need to evaluate the data

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 7

Planets 6

Lewis and Clark 10

Underground Railroad 10

Why...Lewis cause I like learning about things that happened back then

7. State your name and grade Student CF2 2nd May 11, 2006

What do you know about Harriett Tubman? I don't know

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? Yes I forgot

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 1

Planets 10

Lewis and Clark 10

Underground Railroad 1

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...1

From books, movies or museums 1

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 1

From books, movies or magazines 10

What do you like about music class? I like playing instruments.

Favorite song...the Garfield Rap

8. State your name and grade Student CM5 1st interview 5th grade

What do you know about Harriett Tubman? She is a slave

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? She helped Lewis and Clark

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 1

Planets 5

Lewis and Clark 10

Underground Railroad 9

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...1

From books, movies or museums 1

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like

I don't know learning about science in school... 10

What did you like about music? Playing instrument

Do you like learning history from books, movies or museums? 10

9. State your name and grade Student DF3 3rd grade

What do you know about Harriett Tubman? She escaped from slavery

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? Yes she helped Lewis and Clark

What do you know about any person you answered yes to?

What do you like about music class? The songs

What songs would like to write an opera to or what is your favorite song on the radio? Easy gone love

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 5

Planets 10

Lewis and Clark 10

I don't know

Underground Railroad 10 to me it is interesting

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...9

From books, movies or museum 8

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 1

From books, movies or magazines 5

10. State your name and grade Student BF4 4th

What do you know about Harriett Tubman? That she was a slave

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? No

What do you know about any person you answered yes to?

What songs would like to write an opera to or what is your favorite song on the radio? I don't know

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 1

Planets 5

Lewis and Clark 10

Because I want to know a little more about them

Underground Railroad 10

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...5

From books, movies or museum 10

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 5

From books, movies or museum 10

What do you like about music class? When we rotate with the drums

From books, movies or magazines

11. State your name and 3rd grade Student EF3

What do you know about Harriett Tubman? That she was a slave

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? She helped Lewis and Clark

What do you know about any person you answered yes to?

What do you like about music class? The songs

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how

likely would you be interested in a television show about

How sound travels 1

Planets 5

Lewis and Clark 10

Underground Railroad 10

Because it helped the slave be free

On a scale of 1 through 10 1 is the lowest and 10 is the highest how

much do you like learning about history in school...7

From books, movies or magazines 8

On a scale of 1 through 10 1 is the lowest and 10 is the highest how

much do you like learning about science in school... 1

From books, movies or magazines 8

12. State your name and grade Student DF5 5th

What do you know about Harriett Tubman? She helped the slaves

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? She helped Lewis and Clark

What do you know about any person you answered yes to?

What do you like about music class? The instruments

What songs would like to write an opera to or what is your favorite song on the radio? I don't know

Did you learn anything about history or science in music?

What is the scientific process? A song

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 1

Planets 5

Lewis and Clark 10 I don't know

Underground Railroad 7

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...10

Why? Because I like learning about our history

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 5

From books, movies or museums 10

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...

From books, movies or magazines

13. State your name and grade Student CF2 2nd grade

What do you know about Harriett Tubman? She was a slave

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? Yes she helped Thurgood Marshall

What do you know about any person you answered yes to?

What do you like about music class? Singing and playing the drums

What songs would like to write an opera to or what is your favorite song on the radio? Like you

Did you learn anything about history or science in music?

What is the scientific process? A song

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 1

Planets 5

Lewis and Clark 10 because that was the name of my old school

Underground Railroad 10

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...5

From books, movies or museums 5

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 1

From books, movies or museums 1

14. State your name and grade Student AF6 ML 6th 1st interview opera participant

What do you know about Harriett Tubman? That she was on the Underground Railroad with other people

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? Yes she was with Pocahontas

What do you know about any person you answered yes to?

What do you like about music class? The instruments and piano

What songs would like to write an opera to or what is your favorite song on the radio? Lean with it rock

Did you learn anything about history or science in music?

What is the scientific process? Hypotheses, conclusions, aspect, results, procedure

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 5

Planets 2

Lewis and Clark 3

Underground Railroad 6 because I have never been to it and only heard about it

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...10

From books, movies or museums 5

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 1

From books, movies or magazines 1

15. State your name and grade Student BF6 6th grader opera participant

What do you know about Harriett Tubman? She helped most of the people get out of slavery

Have you heard of Susan B. Anthony? No

Have you heard of York? No

Have you heard of Sacagawea? Yes she was an angel and Harriett Tubman saved the people

What do you know about any person you answered yes to?

What do you like about music class? Singing

What songs would like to write an opera to or what is your favorite song on the radio? Lean with it

What is the scientific process? Results conclusions and observation

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels 1

Planets 1

Lewis and Clark 1

Underground Railroad 2

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...5

From books, movies or magazines 3

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 4

Because you can do different kinds of things and make things

From books, movies or magazines 2

After the opera interview

16. State your name and grade. Student CF6 6th opera participant

What do you know about Harriett Tubman? She freed 300 slaves

Have you heard of Susan B. Anthony? She helped slaves hide

What is the scientific process? Uh-

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how

likely would you be interested in a television show about

How scientific process 1

Plants

Lewis and Clark 2

Underground Railroad/Harriett Tubman 10

Why...it shows how our ancestors got freed and how she freed them and she created her own system to help the slaves

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...1

From books, movies or magazines 10

Why because it gives us a chance to get out of school to learn more

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 5

From books, movies or magazines 1

What did you enjoy the most about the opera production? I enjoyed the most being Sacagawea

what did you enjoy the least? I did not like the singing man. They could not sing that was so tacky right there

What did you learn about science from the opera?

What song would I pick to do an opera on? Snap your fingers

We got to sing and learn different songs did not like the yelling

17.1 State your name and grade Student CM5 5th grade 2nd interview

What did you enjoy the most about the opera production? I enjoyed their voices and how they sound

What did you enjoy the least? Nothing

Did you go the real opera and what did you like? It was funny. When they are arguing and singing nothing I did not like

What do you know about Harriett Tubman? She was a slave

What do you like about music class? Playing with the instruments I did not like the singing

What songs would like to write an opera to or what is your favorite song on the radio? Pop like it drops

18.2 State your name and grade Student CF4 4th grader 2nd interview
opera participant

What do you remember about the real opera? They had all kinds of designs on the bed

What do you know about Harriett Tubman? She freed over 300 slaves and designed the Underground Railroad

Have you heard of Susan B. Anthony? She helped HT escaped from the slave owners

What do you like about music class? Singing...watching TV

What songs would like to write an opera to or what is your favorite song on the radio? Lean with it rock with it

Why the Underground Railroad... I like learning about Black History

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...10

From books, movies or magazines 10

Why. Because I like to play games with it

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... because it is fun ...you can have fun and learn

From books, movies or magazines

19.3 State your name and grade EF3 2nd 3rd grader opera participant

What do you know about Harriett Tubman? She helped a lot of people and helped a lot of people to be free and she followed the North Star

Have you heard of Susan B. Anthony? She helped Harriett Tubman and she joined her

How much did you enjoy our opera? 10

What did you learn about the real opera? I learned about singing and the different types of movements

What did you like the least about our opera? Singing

What do you like about music class? We learned about music and notes and wrote questions

What songs would like to write an opera to or what is your favorite song on the radio? Kirk Franklin

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

How sound travels

Plants

Lewis and Clark 10

Underground Railroad 10

Because Harriett went on the Underground Railroad and followed the North Star.

What do you remember about Opera on the Go? They did imagination with the magic door and guess what other people were doing

What did you learn from that? We learned about singing and plays

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...

From books, movies or magazines

Why. Because I like learning about our history 10

Because it helps to celebrate our black history

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about science in school... 10 because we get

to learn about new things

From books, movies or magazines

20.4 State your name and grade. Student CF6 6th grader opera participant 2nd interview

What rating would you give the opera we created in school did not like it 1 liked it a 10? 1

What did you like? Singing the least? The changing costumes and we have to keep switching from 2nd to 3rd graders

What do you know about Harriett Tubman? She freed 300 slaves and never gave up; she was smart and could not see because she had fallen.

What do you like about music class? Singing with the karaoke machine the least singing with a piece of paper

What songs would like to write an opera to or what is your favorite song on the radio? Slap your face

What is the scientific process? Putting it together, writing results, conclusion, graphs and hypotheses

21.5 State your name and grade. Opera participant 2nd interview, Student BF6 6th grader,

What rating would you give our opera? 4? It was too much switching around but it was fun

What did you enjoy the most about the opera production? I liked when Harriett Tubman fell

what did you enjoy the least? The singing of I'm Harriett Tubman (to Lets stay)

What did you learn from the real opera? Never take a picture when they are singing we talked words and they sung all of the words

What do you like about music class? Karaoke machine and instruments

What did you like the least? I liked it all

What songs would like to write an opera to or what is your favorite song on the radio? Snap your fingers

What is the scientific process? Results, procedure, conclusion, background information, hypotheses

22 State your name: Student FM3 3rd grader opera participant

What do you know about Harriett Tubman? She ran with other slaves who wanted to be free and she helped other slaves and did not want to do what the slave owners told them to. And she always was thinking about what she wanted to do that the slave-owners would not let her
Have you heard of Susan B. Anthony? She helped Harriet Tubman when Harriett was helping others to be free.

What songs would like to write an opera to or what is your favorite song on the radio? Mary J Bilge

Did you learn anything about history or science in music?

What is the scientific process? Nothing

On a scale of 1 through 10 1 is the lowest and 10 is the highest...how likely would you be interested in a television show about

Scientific process 10

Planets

Lewis and Clark 10

Because I might learn stuff about what they did and because I was not born yet I could learn about what they did

Underground Railroad 10 to see what it looked like

What rating would you give our opera? I gave it a 10 because we tried our best. And Ms. Isaac-Johnson always tried getting us on track and helping us with our lines. I did not like when Harriett walking in the store. I did not like talking

What did you like the most? The instruments

On a scale of 1 through 10 1 is the lowest and 10 is the highest how much do you like learning about history in school...10

Because it can teach us about the black people who help other black people so they can be free and not have to listen to the white people so they can all be free

From books, movies or magazines 10

When you go to a museum or watching TV it can be different. If it is a movie you have you can watch it over and over again. If it is a book you can keep it or turn it back in to the library

Why. Because I like learning about our history

On a scale of 1 through 10 1 is the lowest and 10 is the highest how

much do you like learning about science in school... 1

23. State your name and grade EF2

What do you remember about Harriett Tubman? She set free 300 slaves

Out of s scale of 1 to 10 with 10 being the highest how much do you like

learning science in school? 10 Learning about Lewis and Clark? 10

Learning about the Underground Railroad? 10

What do you like best about being in the opera? "I liked being Harriett Tubman."

What do you like the least? "When we were dancing and had to say our part."

What do you like learning about Harriett Tubman? Because it is history and we need to learn about our history.

Why do you like learning about science? I like learning about science because it helps you in school.

24. State your name and grade Student AF6.

What do you remember about Harriett Tubman? She started the

Underground Railroad.

What do you remember about Sacagawea? She helped Lewis and Clark.

Out of a scale of 1 to 10 with 10 being the highest how much do you like learning science in school? An 8. Learning about Lewis and Clark? 9. Learning about the planets? 7. Learning about the Underground Railroad? 10

What score would you give the opera we did? "I give it 10." Why? "I gave it a 9 because one person messed up".

What did you enjoy the most about the opera process? "That I got a chance to be in it."

What did you enjoy the least about the opera process? "That Harriett Tubman got hit upside the head with a pan."

APPENDIX E

URBAN ELEMENTARY

SCHOOL DISTRICT'S WRITING PROMPTS

URBAN ELEMENTARY SCHOOL DISTRICTS

WRITING PROMPTS

September	Becoming Most Excellent
October	Graphs and Tables
November	Organizing Constructing & Analyzing Data
December/January	Geometry
February	Patterns and Relationships
March	Figurative Language (Metaphors)
April	Using Non-Fiction
May	Scientific Process

APPENDIX F

CONSENT AND ASSENT LETTERS

**College of Education**

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 E-mail: polman@umsl.edu

Informed Consent for Participation in Research Activities

Creating Desire to Learn History and Science via Culturally Relevant Technological Operas in an Urban School

Participant _____ HSC Approval Number _____

Principal Investigator _____ PI's Phone Number _____

1. Your child is invited to participate in a research study conducted by Dianna Isaac-Johnson and Professor Joseph Polman. The purpose of this research is to discover if students can learn science and history through the use of hip-hop music.
2. a) Your child's participation will involve taking a test on music, science, and history for the pre-test. They will learn old school and hip-hop songs in class. Then they have a writing web lesson designed to help them change the original lyrics to education themes. Your child will learn and perform songs and will be video taped concert.

Your child will learn songs within their assigned music class. There will be a pre-test and a post test after the February performance. Then they will take a post-test and some will be interviewed on camera. These videos will be seen by the educational community.

✍ Those with signed consent forms who can stay after school will be interviewed in the music room before the writing of the opera and again after the performance

✍ Students will write the lyrics of our songs with the use of the sample webs attached. The interview schedule is also attached.

Approximately 150 may be involved in this research at the University of Missouri-St. Louis.

b) The amount of time your child will participate in the project will be three months in order to prepare the songs for performance and interviewed. They will receive a candy bag of treats for their participation.

3. There are no known risks associated with this research.
4. The possible benefits to you from this research may be the ability improve your child's history test scores or just to enjoy a method of learning about African-American history.
5. Your child's participation is voluntary and they may choose not to participate in this research study or you may withdraw your consent at any time. They will NOT be penalized in any way should they choose not to participate or withdraw.
6. We will do everything we can to protect your child's privacy. As part of this effort, your child's identity will not be revealed in any publication that may result from this study. In rare instances, a researcher's study must undergo an



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Assent to Participate in Research Activities, for Students

Creating Desire to Learn History and Science via Culturally Relevant Technological Operas in an Urban School

- 1. My name is Dianna Isaac-Johnson and I am the music teacher at Urban Elementary School and a doctoral student at the University of Missouri-St. Louis.
2. I am asking you to take part in a research study because we are trying to learn more about teaching students how to enjoy learning about history and science with the use of technology and hip-hop operas.
3. If you agree to be in this study I will ask you questions about science and history, then we will change the words to a hip-hop song to science and history words. I will take notes and record the classes.
4. There are no risks involved to students in this project.
5. You can benefit from this process by learning the skills involved in reading musical symbols. You will learn to research history and science on the internet and perform this in hip-hop operas. The study will also focus on learning African-American culture through music.
6. Please talk this over with your parents before you decide whether to participate. I also will ask your parents to give their permission for you to take part in this study. Even if your parents say "yes," you still can decide not to do this.
7. If you don't want to be in this study, you don't have to participate. Remember, being in this study is up to you, and no one will be upset if you don't want to participate or if you change your mind later and want to stop.
8. You can ask any questions that you have about the study. If you have a question later that you didn't think of now, you can call me at (314) 291-xxxx or ask me next time. You may call me at any time to ask questions about your disease or treatment.
9. Signing your name at the bottom means that you agree to be in this study. You and your parents will be given a copy of this form after you have signed it.

Participant's Signature Date Participant's Printed Name

Parent or Guardian's Signature Date Parent or Guardian's Printed Name

Participant's Age Grade in School

