THE EFFECTS OF MUSIC ON ELL STUDENTS’ COMMUNICATION ARTS SCORES

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ABSTRACT

This paper analyzes the effectiveness of teaching methods with English Language Learner students. The two methods of teaching were traditional teaching and teaching by incorporating music in the lesson. The traditional method included lecture and practice, and the musical lesson involved repeatedly watching videos with songs that explained the concept. The Level 5 proficiency students were taught grammar lessons over four weeks and administered pre and post assessments during the same class period to analyze their comprehension. After compiling the data, it was found that there was no significant difference in the two teaching methods, though both yielded positive results. With music incorporated into lessons, the students showed only a slight advantage in their assessment results. Further studies that analyze the two teaching methods over longer periods of time would yield more precise data on the effectiveness of incorporating music in teaching. Also, a larger sampling with more in-depth assessment data would provide more comprehensive results.
INTRODUCTION

Background, issues and concerns

There is concern that the ELL populations in the Missouri School Districts are growing at such a rapid rate that the ELL teachers are not able to adequately meet the needs of these students through traditional teaching methods. Often, these students are required to take the state mandated assessments and perform poorly, thereby affecting the overall performance scores for the school. In addition, ELL teachers often do not receive a specific curriculum or direction from the administration and are left to figure out how to best meet the needs of their students. Most ELL teachers use traditional methods of teaching for ELL students. This may involve lecture, practice, and assessment. However, this traditional form of teaching is used in the mainstream classroom as well. By incorporating music into lessons, which has often been linked to language learning, teachers may be able to reach ELL students and help to improve their overall academic performance. The purpose of this study is to determine if teaching methods influence ELL students’ performance in the area of communication arts.

Practice under investigation

In this study, the primary practice under investigation is teaching methodology. By incorporating music into lessons and performing assessments, there will be data to compare to traditional teaching methods where assessments will also be administered. The information from both methods of teaching will demonstrate how students react and perform, thereby allowing a determination to be made of the most effective teaching methods.
School policy to be informed by study

Within the school district, ELL students have traditionally lagged behind in testing scores. If this study provides evidence that music can be one way to improve the students’ learning, teachers and administrators will be made aware of these findings and encouraged to incorporate more music into additional subjects.

Conceptual Underpinning

Brain research has shown that music and language learning are related. According to Howard Gardner’s (1993) theory of multiple intelligences, musical intelligence is one of the first to appear in young learners. A study conducted by Paquette and Rieg (2008) found that integrating music into everyday classroom activities helps promote literacy development, especially in ELL students. Music can be the medium through which these students who are learning a language develop reading, writing, listening, and speaking skills. By integrating music into the teaching methodology, teachers can potentially help ELL students learn concepts faster with greater retention and comprehension than with traditional teaching methods. These skills will be reflected in the students’ overall academic achievement and therefore help school districts increase the results of standardized testing.

Statement of the Problem

ELL students score lower on standardized tests and affect the school district’s overall performance. Additionally, traditional methods of teaching have not given much leeway in closing the gap in Communication Arts for ELL students. These students require a different method of instructional input in order to improve on assessments.
Purpose of the Study

The purpose of this study is to determine if English Language Learners can improve their scores in Communication Arts by incorporating music into their learning.

Research Question

RQ#1: Is there a significant difference in student communication arts achievement between teaching methodologies incorporating music compared to traditional teaching methods?

Null Hypothesis

Ho: There is no significant difference in student communication arts achievement between teaching methodologies incorporating music compared to traditional teaching methods.

Anticipated Benefits of the Study

Because ELL teachers are often given little direction with curriculum, this study can help provide a basis for teaching ELL students at every proficiency level. Music is adaptable and can be incorporated into more than one area of learning. Administrators can see the benefits in overall scores on standardized testing when this select population of students improves, and they can also encourage the classroom teachers to incorporate music into their curriculum.

Definition of Terms

ELL-English Language Learner, student identified as needing services through the school district to improve upon their English skills in speaking, writing, listening, and reading

ESL-English as a Second Language, term previously used to describe students who spoke English as their second language

Curriculum-the course of study for a particular grade or subject

ELP-English language proficiency-according the WIDA framework. ELL students are tested and given a proficiency score from 1-6 with 1 being a being “entering” and 6 being “reaching”
Summary

ELL students have a deficiency of knowledge of English and therefore struggle to perform well in Communication Arts assessments. A study was conducted to see if there was a difference in ELL students’ achievements on assessments after receiving two different types of teaching methodologies. The first method was the traditional teaching and the second method incorporated music. If the t-test demonstrates that the students perform better when they received instruction incorporating music, teachers should consider using music as an effective tool to teach communication arts to ELL students. This method of teaching can also help to improve the overall assessment scores for the school district.
REVIEW OF LITERATURE

English language learners today encounter many challenges in school. According to Garcia (2011), a professor of Education and Trans-border Studies at Arizona State University, “The achievement gap between them [ELLs] and their English-speaking peers has not contracted, with ELL students underperforming by 30 percent to 50 percent compared to their English-speaking white peers at almost every grade on national and state assessments” (p. 47). Students who speak another language than English face the hardship of deciphering information and trying to keep up with their classmates. One distinct trial these ELLs face is standardized tests. These tests are challenging enough for native English speakers, but the ELLs are expected to perform while still learning the considerably more difficult academic languages of math, science, and social studies. “Since 2007, The U.S. Department of Education has required that ELLs who have been in the United States for one year take the same English language arts tests as those taken by native English speakers” (Menken, 2010, p. 122). These issues, if not addressed early on, can affect these students in the future. Joseph and Schisler (2009) claim, “Students who have not developed adequate reading decoding and fluency skills by middle school are ill-prepared to meet classroom demands” (as cited in Hines, 2010, p. 16). ELLs are at a disadvantage in the classroom.

Unfortunately, many school districts that provide ELL services to assist these students often do not provide the ELL teachers with a curriculum. Music can be a means that teachers can use to begin bridging the gap in learning. Lems (2005), an associate professor at National-Louis University who teaches English as a second language, readily admits that there has been limited research on the connection between music and second language learning. Paquette and Rieg (2008) claim, “Exciting musical opportunities and meaningful learning experiences can be
implemented to address the needs and to give support for diverse learners through the incorporation of music and song” (p. 227). Spanish-speaking music teacher Beth Butler discovered that, “Using music is exactly the way to teach a new language” (Prescott, 2005, p. 29). The following exploration of literature will examine the link between music and language, the benefits of incorporating music into teaching, and the best practices implemented by educators.

Many scientists have worked to provide a link between music and language learning. Howard Gardner (1993), known for his research on multiple intelligences, indicated that musical intelligence is one of the first intelligences to develop in young learners (as cited in Paquette & Rieg, 2008, p. 228). As the verbal-linguistic intelligence develops early, it would appear that these two intelligences might be occurring at the same time. Levitin and Menon (2003) state that, “Neuropsychologists have found that regions of the brain responsible for processing language likewise organize musical stimuli” (as cited in Speh & Ahramjian, 2010, p. 38). Other research on brain-based connections as stated by Maess, Koelsch, Gunter and Friederici (2001) say that, “the central features of music and language are housed near one another in the human brain, suggesting they may share features of a ‘grammar’ that orders musical elements and language elements similarly” (as cited in Lems, 2005, p. 14). The link between musical learning ability and language learning ability appears to be valid, thereby providing a plausible way to develop language skills in an English language learner through music.

By using music as a teaching method with ELLs, there are multiple benefits for the students. Speh and Ahramjian (2010) believe that, “Singing songs in the target language is a deceptively simple technique that yields results in every aspect of language proficiency” (p. 39). ELL students are required to become proficient in all areas of academics and conversational
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language according to the WIDA standards. Singing can be used as a tool to improve
comprehension and language production in these ELL students. Songs can help to improve a
student’s automaticity, or ability to produce language smoothly without pausing (Paquette &
Rieg, 2008). Lems (2005) noted that reading along with songs and listening to the rhythm of
songs gave ELLs a chance to improve pronunciation and expressiveness. Patton (2010) observed
that using Karaoke programs with students helped improve their confidence while doing reading
practice. After Grace Poli, a middle school media specialist, began an after school program for
ELLs that incorporated music, she discovered that half of the students transitioned to English-
only classes by the end of the year where they would typically be in ESL classes for 4-6 years
(Ullman, 2010). Not only has music shown that it helps students develop their language
speaking and comprehension skills, it also has provided students with emotional benefits like
increased self-esteem and successful advancement in classes.

In order to gain the benefits of incorporating music into language learning, it is important
to explore some of the practices already implemented by educators working with ELLs. Amber
Moss, a music teacher in a school district with a high number of ELL students, structured her
lessons to provide students with the chance to observe her singing, practice together in a group,
practice with partners, and then practice alone. (Moore, 2013) This method allows ELL students
to learn in a gradual release model where they have the most support at the beginning and the
least amount of support after practicing multiple times. Ullman (2010) suggests using songs as a
means to observe language. The students can find bad grammar in songs and correct it, hold
discussions about the meaning behind metaphorical language, and observe the use of
grammatical language like adjectives or contractions. Hines (2010) recommends allowing
students to select songs based on interest and familiarity to practice reading because “they
already have stored the words in the context of the song in the auditory memory as a result of listening to the song multiple times” (p. 17). Hines continues to explain that a teacher can print the lyrics in large font, read a stanza to the student, have the student read the stanza back, and then identify 10 high frequency words to practice (2010). Karaoke programs can provide students with a chance to practice language skills in a fun, low-stress environment. Laura Roth Patton (2010), a teacher/librarian, created a Karaoke class in her library. Prior to the class, Patton distributes copy of lyrics to the students to begin reading on their own. During class, she would project the words on a large screen while the music track played so the students could read and listen. Finally, students would perform stanzas of the song while the music and vocals played in the background to support them. These lessons are valuable because they encourage reading, listening and speaking in the target language. A simple way to incorporate music in language learning would be to change the words to familiar tunes. Prescott (2005) recommends using a song like “The Wheels on the Bus” to teach younger students how to sound out 3 phoneme words and invite students to blend them together. For example, the lyrics could sound like, “The sounds in the word are /c/ /a/ /t/; /c/ /a/ /t/; /c/ /a/ /t/. The sounds in the word are /c/ /a/ /t/; shout the word out loud!” Other familiar tunes can be used for older students to teach difficult grammatical concepts. Music can also be used in many ways to improve an ELL student’s writing skills. Students can compare and contrast new and old versions of songs, analyze parodies, write new lyrics to songs for different subjects, and describe their feelings about songs they hear. (Paquette & Rieg, 2008) Depending on the grade and learning proficiency level of the ELL students, these strategies can be implemented to help improve their language learning skills in a new way.
Because ELL students have continually fallen behind in academics, it has become necessary for educators to look for new methods of instruction to best meet the needs of this growing population. In addition, “During the last decade, the population of children entering U.S. schools unable to speak English grew by 40 percent…the number of ELLs is not expected to diminish and is projected to increase by some 20 percent in the next decade” (Garcia, 2011, p. 47). Research has begun to link language and music learning, and the benefits of using music to instruct ELLs have been numerous. ELLs develop language skills, authentic practice, and confidence. Many educators have gone outside of traditional teaching methods to incorporate music to help struggling students. Paquette and Rieg (2008) state that, “a musically literacy-rich environment will generate interest, encourage creativity, and set the state for a positive learning environment” (p. 231). With the continued disappointment of standardized scores for ELLs, it is time for such a change in education. ELLs should be excited about learning a language and be encouraged to do so in a positive environment where they can celebrate successes such as standing before their classmates and singing a song in a language not their own.
RESEARCH METHODS

Research Design

A quantitative study was conducted to see if there was a difference in achievement on for ELL students when the teaching methodology was different. The independent variable being tested was teaching method, while the dependent variable tested was Communication Arts scores for the assessments. The two different teaching methods were traditional teaching and teaching with music. If the difference is found significant in scores based on teaching method, teachers should consider incorporating music into Communication Arts lessons.

Study Group Description

Eighteen students from a level 5 proficiency level in a third grade ELL classroom were chosen to receive four sets of lessons. These students arrived one day a week and the lessons lasted for four weeks. Fifteen of the students spoke Spanish at home, two spoke Vietnamese, and one spoke Gujarati. The primary demographic of students receiving services at the center is Hispanic. The students arrived from 10 different schools from around the district. 95% of the students received free and reduced lunch services which includes breakfast at the school.

Data Collection and Instrumentation

Students were administered a pre and post-test on the same day that were identical. The tests consisted of multiple choice answers. Scores from each test were collected and compared to analyze any differences in achievement on days with traditional teaching methods versus teaching with music.

Statistical Analysis Methods

A t-test was conducted to find if there is a significant difference in Communication Arts assessment scores based on the teaching methodologies. The two teaching methods were
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traditional and musical. The mean, mean D, t-test, df, and p-value were concluded from this test.
The Alpha level was set at 0.25 to test the null hypothesis: There is no significant difference in student communication arts achievement between teaching methodologies incorporating music compared to traditional teaching methods.
A t-test was conducted to find out if there was a difference in student achievement based on teaching method. The following tables, charts and graphs show the organized results of the assessments given to the students the same day as the grammar lesson.

Figure 1

**t-Test Analysis Results for Teaching Methods and Post-test scores**

<table>
<thead>
<tr>
<th>Source</th>
<th>Mean</th>
<th>Mean D</th>
<th>t-test</th>
<th>df</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching with Music (n=32)</td>
<td>2.813</td>
<td>0.055</td>
<td>0.180</td>
<td>63</td>
<td>0.857</td>
</tr>
<tr>
<td>Traditional teaching (n=33)</td>
<td>2.758</td>
<td>0.055</td>
<td>0.180</td>
<td>63</td>
<td>0.857</td>
</tr>
</tbody>
</table>

Note: Significant when p<=0.25

As shown in Table 1, no significant difference (t-Test = 0.180; p-value = 0.857; Mean D = 0.055) in test scores was found between the two teaching methods of teaching communication arts with music and traditional teaching. The null hypothesis that there is no significant difference in student communication arts achievement between teaching methodologies incorporating music compared to traditional teaching methods was accepted. Students’ test scores from the lessons taught with music (n=32) scored a Mean = 2.813 while students from the scores from the lessons taught with traditional methods (n=33) scored an average of 2.758. When compared to the criterion p-value of 0.25, these findings are insignificant. These findings suggest that the two teaching methods are equally valid and may provide similar positive results for students.
While the t-test results indicated that there was no significant difference in the two teaching methodologies, the graph in Figure 2 indicates that both methodologies showed increases in student learning. By combining the total amount of correct answers on the pre and post-tests, the percentages were then organized to find which methods were most effective. The highest percentage occurred on the first week of the research with 79.167% correct, with an increase of 25% from the initial 54.167% on the pre-test. The smallest amount of increase occurred during Week 3, which was also a lesson which incorporated music. The pre-test percentage correct was 48.214% and the post-test percentage correct was 58.929% with a total increase of only 10.715%. There were no decreases in total percentages correct.
As shown in Figure 3, eleven out of eighteen students (61.11%) showed an increase from the pre-test to the post-test for the grammar lesson which incorporated music. Four students (22.22%) had the same pre and post-test scores. Three students (S6, S7, S10) decreased in their scores from the pre-test to the post-test (16.67%).

Figure 4
Figure 4 demonstrates the results of using a traditional lesson with the students. Three students were absent this week, which decreased the number of students to assess. Seven out of fifteen students showed an increase in their scores from the pre-test to the post-test (46.67%). Seven out of fifteen did not have a change in their pre-test or post test scores (46.67%). Only one student (S3) showed a decrease in score from the pre-test to the post-test (6.67%). Because a large number of students were able to achieve a perfect score, it may have indicated that this topic of adverbs was a familiar subject.

Figure 5

The figure 5 demonstrates the smallest sampling of this research project due to a large number of absences. This week, six out of fourteen students showed increases in their post-test scores (42.86%). Five students’ scores did not change from the pre-test to the post-test (35.71%). Three students (S2, S3, S9) decreased in their scores from the pre-test to the post-test (21.43%). The decrease in scores may have been the result of a large amount of sickness and a change in routine this week because of the low attendance.
Figure 6 shows the data collected from the last week of the study. Twelve out of eighteen students showed an increase in scores from the pre-test to the post-test scores (66.67%). This was the highest level of increase over the four weeks. Two students maintained the same score with the pre-test and the post-test (11.11%). Four students (S3, S5, S10, S13) showed a decrease in their scores from the pre-test to the post-test (22.22%). This was the largest percentage from all the weeks of a decrease in scores.
CONCLUSIONS AND RECOMMENDATIONS

The outcomes reported from this study indicate that there is no evidence of a significant difference or advantage in teaching ELL students with traditional methods versus teaching while incorporating music. The t-test conducted indicated a p-value of 0.857 which did not reject the null hypothesis that there is no significant difference in student communication arts achievement between teaching methodologies incorporating music compared to traditional teaching methods. However, several factors may have affected the results of this study and should be taken into consideration. Due to holidays, weather, and scheduling, the four weeks of this study were not consecutive. The overall study took approximately 2 months to complete. It should also be noted that the students came from about 15 different schools and some of their regular classroom teachers had already taught them about some of the grammar concepts used in this study. Their prior knowledge may have altered the test results during certain weeks and given them an advantage over students whose teachers had not covered the topic. Also, students were absent during the second and third weeks due to sickness, which may have distorted the results of those two weeks.

For a more comprehensive result to find if teaching by incorporating music is a more effective teaching method for ELL students, further research is required. A larger sampling over a longer period of time would show how students progress more effectively. Also, a study could be conducted to show how other subject areas such as social studies, science or math may be taught with music to increase ELL students’ comprehension.

Even if the results of this study did not show a significant difference by incorporating music, Howard Gardner’s theory of multiple intelligences indicates that all students learn differently. Professional development for teachers with ELL students may provide strategies that
can help these students to succeed in the classroom and on standardized tests. By encouraging teachers to use a variety of teaching methods, such as incorporating music, and giving them examples specifically for ELL students, perhaps these students will flourish and achieve at higher levels than anyone thought was possible.
REFERENCES


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