THE RELATION BETWEEN SOCIOECONOMIC LEVEL AND PARTICIPATION IN
INSTRUMENTAL MUSIC AND RETENTION OF INSTRUMENTAL MUSIC TEACHERS

By

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Abstract

Prior research has demonstrated that participation of students in instrumental music coincides with student achievement. Research is limited, however, in nonmusical factors that influence both the participation of students in instrumental music and the retention of instrumental teachers at differing student socioeconomic status. The current study will address this gap in the literature by examining socioeconomic status and its effects on student participation and teacher retention from a sampling of schools inside of neighboring Midwestern school districts. The results of the study indicated that there was an indirect relationship of negligible strength between free and reduced lunch percentage and percentage of student population involved in instrumental music. The study also found correlations of negligible strength between free and reduced lunch percentages and instrumental music teachers’ years of experience and also free and reduced lunch percentages and number of instrumental music teachers hired inside of a 5-year period. From the results of the study, there was no significant relationship between socioeconomic status and student participation, teacher tenure, or teacher turnover in instrumental music.
Introduction

Background Issues and Concerns

“The Child’s Bill of Rights in Music” introduced by The National Association for Music Education in 1950 and revised in 1991 states that “the quality and quantity of children’s music instruction must not depend upon their geographical location, social status, racial or ethnic status, urban/suburban/rural residence, or parental or community wealth.” (Glenn 1992, p.4) Numerous studies have been done to describe the demographics of arts students over time. In most cases, the studies have reflected an advocacy need of students participating in the arts and the positive effects of that participation on the overall academic achievement. Studies hold that students of all socioeconomic levels benefit from the continual participation in an arts discipline.

Research that focuses on the nonmusical factors that contribute to the musical success or failure of students has been and continues to be of great interest to those involved in music education. There is a common belief among music educators, researchers, and psychologists that there are factors not measured by music aptitude tests that influence musical achievement. There have been many studies that have investigated the relationship between musical aptitude, intelligence, academic achievement, and the music achievement of students. Results indicate the musical aptitude, intelligence, and academic achievement test scores are valid predictors of success in instrumental music.

Socioeconomic status and its effect on the success of individual instrumentalists was examined by McCarthy (1980). The conclusions of this study indicated that a
significant relationship existed between socioeconomic status and both achievement and retention of students.

**Practice Under Investigation**

Although there has been considerable interest in and research on various factors influencing students’ music achievement, a review of the literature indicated a need for additional research specific to student participation in instrumental and socioeconomic levels. No research studies were found that used instrumental music teacher turnover in relation to student socioeconomic status. Additionally, no studies had examined the connection of instrumental music teacher longevity versus the percentage of students involved in instrumental music. The practice under investigation is the participation of students in instrumental music at varying socioeconomic levels and the effect of the level of participation on teacher retention.

**School Policy to be informed by Study**

The current project will add to the literature and promote awareness of the effects of socioeconomic status on the participation of students in instrumental ensembles and effects of teacher retention on student participation. This study will also inform policy makers and school officials on the effects of turnover and lack of experience of the instrumental teacher on the level of participation of students in the instrumental music program.

**Conceptual Underpinning**

The study arose out of theories provided by expert Ruby Payne (2005) documented in her book, *A Framework for Understanding Poverty*. Payne suggests there are certain hidden rules and understandings among three different classes: poverty,
middle class, and wealth. These hidden rules consist of various things that are important in students’ lives from possessions and money, to food and clothing, to time and education, and to family structure and world view. As per Ruby Payne, students of low socioeconomic status view education as an abstract, and place little value in access to educational materials, such as musical instruments. Per Payne’s framework, students of low socioeconomic status do value relationships with peers and instructors. Applying Payne’s framework to the instrumental music ensemble, students of poverty would run into many disadvantages. The formal register of communication involved in the structure of marching band and other music ensembles would create an environment rife with conflict for students not used to communicating and complying to the different levels of authority. In addition, the extra materials used in instrumental music such as textbooks and different individual pieces of music would be seen to have a lower value in the eyes of Payne’s impoverished student. These factors would indicate a lower incentive for students of poverty to play in a school ensemble. Those impoverished students that continue despite those factors may find discouragement as the individual music teachers vary from year to year in certain districts. Inside of Payne’s framework, a high value is placed on established relationships for students inside of the lower socioeconomic level. The lack of an established relationship with a teacher of lesser tenure would lead to a lower level of participation in schools with lower levels of socioeconomics.

Statement of the Problem

Students in school districts with high rates of poverty do not have access to a quality instrumental music experience or quality musical instruction, so they do not participate.
Research Questions

RQ1: Is there a correlation between socioeconomic levels and participation in instrumental music?

RQ2: Is there a correlation between student socioeconomic levels and years of experience of the current instrumental music teacher?

RQ3: Is there a correlation between the number of different music teachers in a five year span and percentage of students involved in the instrumental music program?

Null Hypotheses

Ho1: Socioeconomic level is not related to the number of students’ participation in an instrumental music program.

Ho2: Socioeconomic level is not related to years of teaching experience of the instrumental music teacher.

Ho3: Number of music teachers in a five year span is not related to the percentage of students involved in the instrumental music program.
Anticipated Benefits of the Study

The information gained from this study will help administrators realize and account for the amount of participation of students and access to instrumental music in their buildings. The results of this study will inform school officials about the effects of poverty on the number of students able to participate and benefit from a quality music experience. It will help school officials better understand the value of continuity of teacher in the instrumental music program.

Definition of Terms

DESE: Missouri Department of Secondary and Elementary Education

Summary

The current study will weigh the percentage of students in free and reduced lunch versus the percentage of school or school district population involved in the instrumental music program. The research will investigate the years of experience and amount of turnover of the instrumental music teachers for individual schools at varying student poverty levels. In addition, the research will provide awareness of the effects of teacher retention on the percentage of students participating in instrumental music.
A study performed by McCarthy (1980) measured student musical aptitude and attrition versus the results gained from both individual and group instruction in an elementary school setting. In the study, students were compared on the basis of demographics, academic reading achievement, and whether the student was taught individually or as part of a small group session. The study found that students were more likely to continue in the instrumental program if they were instructed individually (McCarthy, 1980). The study also concluded that academic reading achievement and socioeconomic status were able to account consistently for unique and nontrivial proportions of variance.

A Kinney (2010) study weighed the effect of nonmusical factors versus the enrollment and retention of band students in an urban environment. The study used independent variables of academic achievement, socioeconomic status, family structure, mobility, ethnicity, and gender. Data was collected via school records and only students in 6th and 8th grade were analyzed. The data was fit into two models using logistic regression analysis technique. Academic achievement and family structure were the only significant predictors that were found when the data was weighed against initial enrollment and retention of students (Kinney, 2010). The study was of two similar schools in the same school district. In this study, both schools were demographically similar in both size and socioeconomic level.

A mixed methods study of how instrumental music teachers in Chicago worked in an urban landscape (Fitzpatrick, 2011). The study utilized teacher responses to research questions focused on teacher’s contextual knowledge and job satisfaction working in an
urban environment. Results of the study found that teachers in urban environments modified their general pedagogical approach to meet the differing needs of the culture and socioeconomic status of the students they were teaching (Fitzpatrick, 2011). The job satisfaction of teachers navigating the urban Chicago environment was found to be very high, but the programs that they worked with were continually facing serious challenges.

In her work, Dr. Ruby Payne discusses the education of students through an analysis of different cultures existing in different levels of socioeconomics. In her discussion, Dr. Payne begins with basic assumptions about poverty and goes on to break down what she considers the norms of different poverty levels. Her discussion primarily focuses on the differences between the poverty, middle, and wealth classes. Payne (2005) contends that there are hidden rules inside of different classes that require different sensitivities. These rules color classrooms with conflicts of communication, values, and the establishment of relationships.

The very nature of a culture of poverty is taken on by Paul Gorski (2008). In his examination of the definition of a culture of poverty, Gorski (2008) takes a stance contrary to the findings of Ruby Payne (2005). Through the use of different outside empirical studies of poverty, Gorski (2008) maintains that there is no true culture of poverty. Gorski (2008) takes the stance that the “culture of poverty” addressed in schools today is a form of classism perpetuated by general, short-sighted stereo-typing that has somehow been accepted as mainstream. The article provides recommendations on how schools can detour the prevalent classism.

The culture of access and participation of people of poverty in the fine arts was examined by Jeanne Moore (1997). In the study, sample groups were drawn from those
living in disadvantaged areas and interviewed specifically to access to fine arts functions and education. The study uncovered that figures for participation in the arts were low. In addition, arts educators in the impoverished areas indicated a lack of support through policy and materials that contributed to a low experience and participation level of local consumers.

In a study of Ohio Proficiency Test results of instrumental music student and their non-instrumental classmates were compared over time to examine the effect of instrumental music participation and SES on academic achievement (Fitzpatrick, 2006). The study found that instrumental students outperformed non-instrumental students in every subject and at every grade level. It was also found a pattern of increased achievement by lower SES instrumental students, who surpassed their higher SES non-instrumental classmates by the ninth grade in all subjects.

A national demographic profile of high school band, choir, and orchestra students was constructed in a study conducted by Elpus and Abril (2011). The study was a cross-sectional study of a 2004 follow-up to the 2002 Education Longitudinal Study. In the results, it was found that significant associations were found between music ensemble participation and variables including education, standardized test scores, and GPA. The study also pointed to the influence of family background and socioeconomic status on the participation and access in musical ensembles (Elpus & Abril, 2011). This study was one of few that looked at low socioeconomic level outside of the urban environment by including poorer students in all settings.

In another analysis of the 1997 version of the Educational Longitudinal Study by Catterall, Chapleau, and Iwanaga (1999), developments of children and adolescents over
the period between 8th and 12th grades were studied. The study looked at the academic
effect of involvement of students in the arts over time and then the involvement and
effect of student participation in a single art discipline. The single art disciplines studied
were specifically instrumental music and theater arts. Results from the study indicated
that students who were involved in the arts found positive academic results that increased
over time for all students over all socioeconomic levels (Catterall, Chapleau, & Iwanaga,
1999). In its study of music alone, the study found that students highly-involved in
instrumental music showed significantly higher mathematic proficiency than their non-
instrumental counterparts. This observation held for all students at all socioeconomic
levels.
Research Methods

Research Design

The current study was cross-sectional. Data was collected using a one-time survey and statistics on student population and free and reduced lunch percentage from Missouri Department of Elementary and Secondary Education (DESE) website. The independent variable in this study is the free and reduced lunch percentage. The dependent variables were the years of instrumental teacher experience and the percentage of students involved in the instrument program.

Study Group Description

Band directors and administrators from 46 school districts in the Midwest were provided a one-time survey. Of the 46 school districts, a response was received from 20 schools. The school districts ranged in overall student population from 129 total students to over 3000 with the mean school size being 695 students.

Data Collection and Implementation

Respondents to the survey provided the number of students involved in the instrumental music program. The number of students was taken against the overall school population to define the percentage of students involved in instrumental music. The free and reduced percentages of the gathered responses was taken from the Missouri DESE website and used to define the socioeconomic status (SES) of each school populous.
Statistical Analysis Methods

After the information was collected, a Spearman-Rank Order correlation matrix was conducted and evaluated to test relative strength of the relationship, practicality, significance of relationship, and direction of relationship between the independent variable and each of the dependent variables.
Findings

The results demonstrated that there are indirect relationships between free and reduced lunch percentage versus percentage of students involved in instrumental music and free and reduced lunch percentage versus years of teacher tenure and turnover. However, the strength of correlations was found to negligible, r<.39, in all cases using a Spearman-Rank order correlation matrix.

Table 1: Descriptive Statistics

Table 1: Correlation Study: Free or Reduced Lunch Percentage vs Percentage of Students in Band

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>r</th>
<th>R²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Free or Reduced Lunch</td>
<td>20</td>
<td>39.23</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Band Students</td>
<td>20</td>
<td>21.37</td>
<td>-0.084</td>
<td>0.01</td>
<td>.51</td>
</tr>
</tbody>
</table>

Note significance = or < .25

After collecting the information from twenty northwest Missouri school districts, a correlation matrix was completed to test the null hypothesis to find if there is a relationship between free or reduced lunch and percentage of students involved in the school band program. The null hypothesis states there are no significant relationships between Missouri school district socio-economic status and band participation. The data collected for free or reduced lunch reveals the mean, or average, was 39.23%. The data collected for student band participation displays the mean, or average, was 21.37%; the r, or correlation coefficient, was -0.084; the R², or practicality, was 0.01%; and the p-value was .51. The correlation coefficient, -0.084, shows that the relative strength of the
relationship was negligible. Since the number is negative it shows that there the two
variables are indirectly related, meaning that the variables move in contrasting directions.
Therefore, when free or reduced lunch percentages increase, the percentage of students
participating in band decreases. For a relationship to be considered practical the
practicality level must be higher than 10%; the practicality reported in this finding is
0.01% indicating that this relationship is not practical. The p-value, calculated at 0.51, is
higher than the Alpha level set at 0.25; consequently, there is not a significant
relationship between free or reduced lunch and percentage of students involved in band.
After compiling these relationship indicators, the null hypothesis would be accepted.
There is not a significant relationship between socio-economic status, free or reduced
lunch, and participation in band.
After collecting the information from twenty Northwest Missouri school districts, a correlation matrix was completed to test the null hypothesis to find if there is a relationship between free or reduced lunch and years of teaching experience in the instrumental music program. The null hypothesis states there are no significant relationships between Missouri school district socio-economic status and teacher experience level. The data collected for free or reduced lunch reveals the mean, or average, was 39.23%. The data collected for years of teaching experience displays the mean, or average, was 4.35; the r, or correlation coefficient, was -0.145; the $R^2$, or practicality, was 2.1%; and the p-value was 0.54. The correlation coefficient, -0.145, shows that the relative strength of the relationship was negligible. Since the number is negative it shows that there is an inverse, or negative, relationship between the two variables, meaning that the variables move in different directions. Therefore, when free or reduced lunch percentages increase, the amount of years of teacher experience decreases. For a relationship to be considered practical the practicality level must be higher than 10%; the practicality reported in this finding is 2.1% indicating that this relationship is not practical. The p-value, calculated at 0.54, is higher than the Alpha level set at 0.25; consequently, there is not a significant relationship between free or reduced lunch and teacher years of experience. After compiling these relationship indicators, the null hypothesis would be accepted. There is not a significant relationship

| Table 2: Correlation Study: Free or Reduced Lunch vs Years of Teacher Experience |
|-----------------------------|------|------|-------|------|--------|
|                             | N    | Mean | R     | $R^2$ | p-value |
| Free or Reduced Lunch       | 20   | 50.80| -0.145| 2.1%  | 0.54   |
| Teacher tenure              | 20   | 4.35 | -0.145| 2.1%  | 0.54   |

Note significance = or < .25
between socio-economic status, free or reduced lunch, and years of experience of the instrumental music teacher.
Table 3: Correlation Study: Number of Music Teachers in a Five Year Span vs Student Participation

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Mean</th>
<th>R</th>
<th>R²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td># of teachers</td>
<td>20</td>
<td>1.40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Band Students</td>
<td>20</td>
<td>21.37</td>
<td>-0.184</td>
<td>3.4%</td>
<td>0.56</td>
</tr>
</tbody>
</table>

Note significance = or < .25

After collecting the information from twenty Northwest Missouri school districts, a correlation matrix was completed to test the null hypothesis to find if there is a relationship between free or reduced lunch and years of teaching experience in the instrumental music program. The null hypothesis states there are no significant relationships between number of teachers in a five year span and student participation in instrumental music. The data collected for band students reveals the mean, or average, was 21.37%. The data collected for number of teachers in a five year span displays the mean, or average, was 1.40; the r, or correlation coefficient, was -0.184; the R², or practicality, was 3.4%; and the p-value was 0.56. The correlation coefficient, -0.184, shows that the relative strength of the relationship was negligible. Since the number is negative it shows that there is an inverse, or negative, relationship between the two variables, meaning that the variables move in different directions. Therefore, when the number of instrumental music teachers increases, the amount of years of teacher experience decreases. For a relationship to be considered practical the practicality level must be higher than 10%; the practicality reported in this finding is 3.4% indicating that this relationship is not practical. The p-value, calculated at 0.56, is higher than the Alpha level set at 0.25; consequently, there is not a significant relationship between teacher turnover and student participation. After compiling these relationship indicators, the null hypothesis would be accepted. There is not a significant relationship between number of
different instrumental music teachers in five years, teacher turnover, and percentage of
students involved in instrumental music, student participation.
Conclusions and Recommendations

The results of this study indicated that socioeconomic levels had no significance on participation of students in instrumental music, length of instrumental music teacher tenure, or turnover of instrumental music teachers for individual school districts. In all cases, the correlations between socioeconomic status and each dependent variable found an indirect relationship that was of negligible strength. This correlation was unexpected because under the Payne framework the expected outcome would have been a lower student involvement because of a lack of access and value in education. In addition, the Payne framework would have set up a higher level of retention in school districts that provided the students an instrumental music teacher that was a consistent presence over time for the more impoverished students. This would have been reflected in a significant relationship between the teacher years of experience and free and reduced lunch percentage and a significant relationship between the number of different instrumental teachers in a five year period, teacher turnover, and the instrumental music participation percentages.

There were several limitations in the present study that should be addressed in future research. This sample was predominantly in one geographic region. Future research should examine the relations between socioeconomic status and participation in instrumental music in other regions as well to examine generalizability. Also, the number of students participating in instrumental music was collected from the teacher’s or administrator’s recollection of rosters versus an actual count. There could have been response bias that accounted for an inflated view of student participation in the school instrumental music program. In the future, a better collection of data and multiple
responders should be used to eliminate as much bias as possible. Future research should also examine the effects of teacher continuity on the percentage of students participating in the instrumental music program.
References


Appendix 1: Survey

1. You are invited to participate in a research project conducted through Northwest Missouri State University. The University requires that you check the below electronic agreement to participate in this project, should you be willing to participate. The following information is provided to help you make an informed decision whether or not to participate. The purpose of this study is to collect data on the effects of poverty on the quality of instruction and participation in instrumental music. The benefits associated with this study may ultimately help instructors, administrators, and the general public, better understand the effects of socioeconomics on teacher retention and student participation in instrumental music. Your participation is completely voluntary. You are free to withdraw from participation at any time or choose not to participate at all. By doing so, you will not be penalized. If you have questions about the study or desire information in the future regarding your participation in this study, you may contact Jeff Siasoco at 816-390-6239 for answers to questions about rights of research participants and the participant review process. By checking the box below you are indicating you are fully aware of the nature and extent of your participation in this survey and the possible risks arising from it. You are acknowledging that you are at least 18 years old, and you agree to participate in this survey by selecting "I agree." If you do not agree to these conditions or you are not 18, please select "I disagree." and exit the survey.

☐ I agree.
☐ I disagree.

*  

2. Please enter your school(s) and school district. (ie Benton High School, Saint Joseph School District).

*  

3. How long have you been the band director at your current job or how long has your current band director been with the school?

☐ 1st year
☐ 2-4 years
☐ 5 or more years
4. How many different band directors have been in your current position in the last five years?
   - 1, only you
   - 2
   - 3
   - 4
   - 5 or more

5. How many total students are involved in the band program at your school(s)?