

Perceptions of Participation in Kids Orchestra of Baton Rouge: A survey of children,
Parents/Guardians, Classroom Teachers, and Teaching Artists
with grade score analysis of participants
2015 – 2016/2016 – 2017 School years

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Abstract

Previous research has shown that students who participate in musical training may experience academic, cognitive, social, and behavioral benefits. The purpose of the current project was to examine children's and parent's/guardian's perceived benefits of participating in an after-school orchestra and choral program for elementary school children in an urban setting in the southeastern United States. Children (ages 6 – 11 years of age, $n = 139$) and parents/guardians ($n = 117$) completed a survey questionnaire. Classroom teachers and teaching artists also completed the survey. The questionnaire gathered demographic data as well as asking about perception of the program, teachers, and overall experience. Overall, 105 of children said participating in the program made them feel happy. Child participants in grades 2 – 5 most often stated that their reason for being a part of the program was to learn an instrument and their favorite thing about being in the program was it made them happy and playing an instrument. Parent responses to why their student participated included love of music and learning an instrument. Comments about by teachers were most frequently “fun” or “nice.” The majority of students agreed that participating in the program makes them feel like they are good at something, like I'm a musician, I understand music better I am part of a team, I am more confident, I have more friends, I can face challenges and succeed, I am nicer to people, and I am more understanding of other people. Changes observed by parents since their child began participating in the program include: happiness, attends to music, plays/sings more and are more confident. Top areas of change noticed by parents/guardians in students since participation included self-confidence, attitude toward school, peer interaction, focus, and reading.

At the end of each questionnaire, participants were asked about drawbacks that they would wish to change. The most frequent comment by child respondents in what they wished

was different was snack, ability to play a different instrument, and more time in the program. Seventy-five parent/guardian comments regarding drawbacks were “none” or “nothing” while other parents/guardians commented on things such as schedule difficulties and not enough time or energy for homework completion.

Student grades for the 2015-16 and 2016-17 school year were compared for students participating in Kids’ Orchestra and those who did not participated. Findings indicated grades for students who participated in Kids’ Orchestra were 5 – 6% higher for the two years than their counterparts who did not participate. Several of the differences by quarter comparison and subject graded were found to be significant. Statistical analysis of graded items or subjects indicated further significant differences with a 10-20% difference in mean grades. Those students participating in Kids’ Orchestra during these two school years scored significantly higher than their grade level counterparts who did not participate in Kids’ Orchestra.

Context

Research into perceived benefits, on a large scale, of children and parents associated with the Kids Orchestra of Baton Rouge after-school music program has not been extensively explored. Therefore, this study aimed to investigate children's and parent's perceived benefits of participation in an after-school music program. With that in mind, the following research questions guided this project:

- (1) What do comparison of Kids' Orchestra participants and non-Kid's Orchestra participants' grade scores indicate about possible impact of the program on academic grades?
- (2) What do students and parents give as reasons for and feelings about participation in the program?
- (3) According to students and parents, what are benefits of participation?
- (4) What about the program would students and parents like to be different?

Findings of the surveys are presented below by surveyed group (parents, teachers, and children). Findings of the grade score analysis are presented by grade and subject. The first set of findings will analyze and explore grade scores of students who participated in Kids' Orchestra during the 2015-16 and 2016-17 school years. Then, perceptions of students in the Foundations program (kindergarten and 1st grade students), survey questionnaires completed by 2nd through 5th grade students, and finally, findings of survey questionnaires completed by parents, classroom teachers and teaching artists will be given. The concluding statements and discussion will address all of these populations.

Preliminary Grade Score Analysis 2015 – 17

Student grades for years 2015 - 16 and 2016 - 17 were provided by East Baton Rouge district administration to Kids' Orchestra. In the EBR district many grades are scored on a 4-point scale (conduct, language/spelling, math, reading, science, social studies, and work habits) whereas some are scored on a 3-point scale (art, music, PE).

Report card grades of students in grades K - 5 in conduct, language/spelling, math, physical education, reading, science, social studies, work habits, music, and art were recorded and coded for subsequent analysis. Grades were calculated using the given point scales (i.e. 4.00 = A, 3.00 = B) and comparison done after within common scale calculations were performed.

These mean grade scores were compared for those students who participated in Kids' Orchestra and students who did not participate in the program. Grade comparisons were calculated by grade, within participant/non-participant groups, across and between categories/subjects, and by percentage. Preliminary analysis of grades is shown below by year (2015-16 or 2016-17).

Preliminary Grade Analysis (2015-2016)

The first comparison examined overall grades for students in the program compared to students not participating. Grades considered in this comparison were the following: conduct, language/spelling, math, physical education, reading, science, social studies, work habits, music work habits, and art. Grades for art, music and physical education were on a 3-point scale, whereas the other grades were on a 4-point scale.

Table 1. Mean grade score comparison for students who participated in Kids' Orchestra with students who did not participate in the program. (indicates significant difference)*

2015-16 Grades	1st 6wks	2nd 6wks	4th 6wks	5th 6wks	Mean Scores
KO	2.74	2.73	2.74	2.73	2.74
non-KO 1	2.53	2.50	2.46	2.50	2.50
non-KO 2	2.52	2.52	2.50	2.52	2.51
non-KO 3	2.51	2.53	2.50	2.53	2.52
non-KO 4	2.46	2.48	2.46	2.50	2.47
AVG non-KO	2.50	2.50	2.48	2.51	2.50
Diff KO/non-KO	*0.24	0.23	*0.27	*0.22	*0.24
%Diff	6%	6%	7%	5%	6%

As can be seen in the table above, grades of students who participated in Kids' Orchestra during the 2015-16 school year were above the district average every quarter. Participants in Kids' Orchestra scored 5 – 7% higher than the district average in their respective grade. These mean grade scores can be seen in the figure below as well. An independent-samples t-test was conducted to compare mean scores of Kids' Orchestra and non-Kids' Orchestra students. There was a significant difference ($t(3) = 34.31, p < .00001$) when comparing mean grades of KO and non-KO students overall. Further, significant differences were found for differences of the mean for quarter one ($t(3) = 15.12, p < .00001$), quarter 3 ($t(3) = 22.52, p < .00001$), and quarter 4 ($t(3) = 29, p < .00001$).

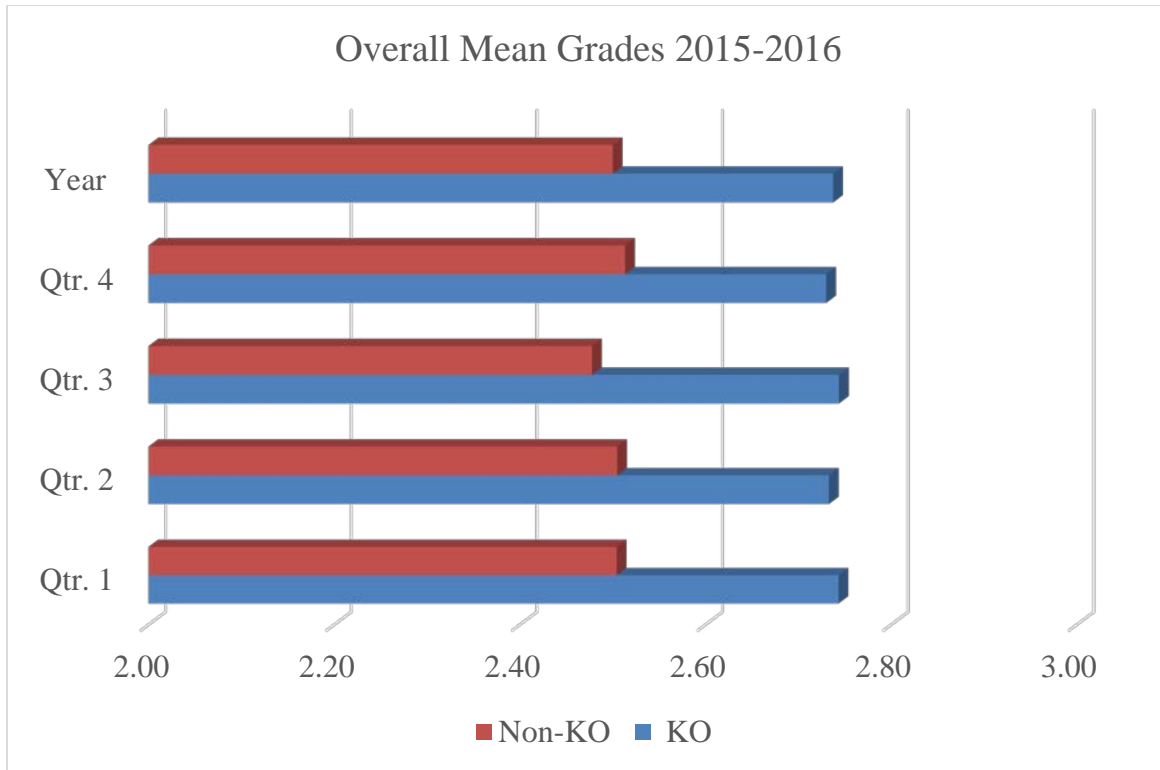


Figure 1. Overall Mean Grades for Kids' Orchestra and Non-Kids' Orchestra Students.

Table 2. 2015-2016 Mean difference/change from one quarter to another

	Qtrs. 1-2	Qtrs. 1 -	Qtrs. 1 - 4	Qtrs. 2 - 3	Qtrs. 2 - 4	Qtrs. 3 - 4
KO	0.01	0.00	0.01	-0.01	0.00	0.01
Non-KO1	0.03	0.06	0.03	0.03	0.00	-0.03
Non-KO2	0.00	0.02	-0.01	0.02	0.00	-0.03
Non-KO3	0.01	0.02	-0.02	0.03	-0.01	-0.03
Non-KO4	0.02	0.01	-0.04	0.02	-0.02	-0.04
Avg. Non-KO		0.03	-0.01	0.03	-0.01	-0.04
Diff KO/Non-KO		-0.03	0.02	-0.04	0.01	0.05

Mean differences in grades by course were also examined. Mean grade scores of students participating in Kids' Orchestra and students who did not participate were compared by course or topic (Table 3). Students who participated in Kids' Orchestra scored at least ten percent higher

than the district average in several categories/grades (conduct, language/spelling, math, reading, science, social studies, and work habits) during at least three of four quarters during the 2015-16 school year. Mean percentage differences are represented in the figure below as well.

Table 3. Difference in Mean Scores of KO/Non-KO Participants' Grades by Course/Topic

	Qtr1	Qtr2	Qtr3	Qtr4	Significant difference
ART	0.11	0.13	0.04	0.04	*
MUSIC	-0.23	-0.19	-0.28	-0.38	
CONDUCT	0.73	0.78	0.78	0.75	*
LANG/SPELL	0.64	0.82	0.79	0.83	*
MATH	0.72	0.76	0.75	0.73	*
READING	0.57	0.52	0.57	0.60	*
SCIENCE	0.63	0.63	0.81	0.73	*
SOC STUD	0.41	0.37	0.58	0.49	*
SPANISH	-0.07	0.09	0.25	0.25	
WORK HABITS	0.49	0.48	0.57	0.25	*
WRITING	0.35	0.01	0.14	0.08	

An independent-samples t-test was conducted to compare mean scores of Kids' Orchestra and non-Kids' Orchestra students for each subject/graded area listed above. There was a significant difference ($t(3) = 3.31, p = .008$) when comparing mean grades of KO and non-KO students in art. Further, significant differences were found for differences of the mean for conduct ($t(3) = 4.50, p = .002$), language/spelling ($t(3) = 4.31, p = .003$), math ($t(3) = 2.31, p = .03$), reading ($t(3) = 3.00, p = .011$), science ($t(3) = 5.33, p = .001$), social studies ($t(3) = 14.89, p < .00001$), and work habits ($t(3) = 6.29, p = .0004$).

Table 4. Percent Difference of Mean Scores in KO/Non-KO Participants' Grades by Course/Topic (shaded cell denotes +10% or greater difference)

	Qtr1	Qtr2	Qtr3	Qtr4
ART	3.66%	4.21%	1.39%	1.25%
MUSIC	-7.77%	6.19%	-2.23%	2.59%
CONDUCT	18.19%	19.59%	19.50%	18.83%
LANG/SPELL	15.90%	20.39%	19.70%	20.65%
MATH	18.11%	18.92%	18.74%	18.23%
READING	14.23%	13.01%	14.15%	15.05%
SCIENCE	15.82%	15.78%	20.33%	18.26%
SOC STUD	10.18%	9.35%	14.48%	12.15%
SPANISH	-2.49%	3.15%	8.43%	8.32%
WORK HABITS	12.17%	11.91%	14.22%	6.16%
WRITING	8.87%	0.33%	3.49%	2.10%

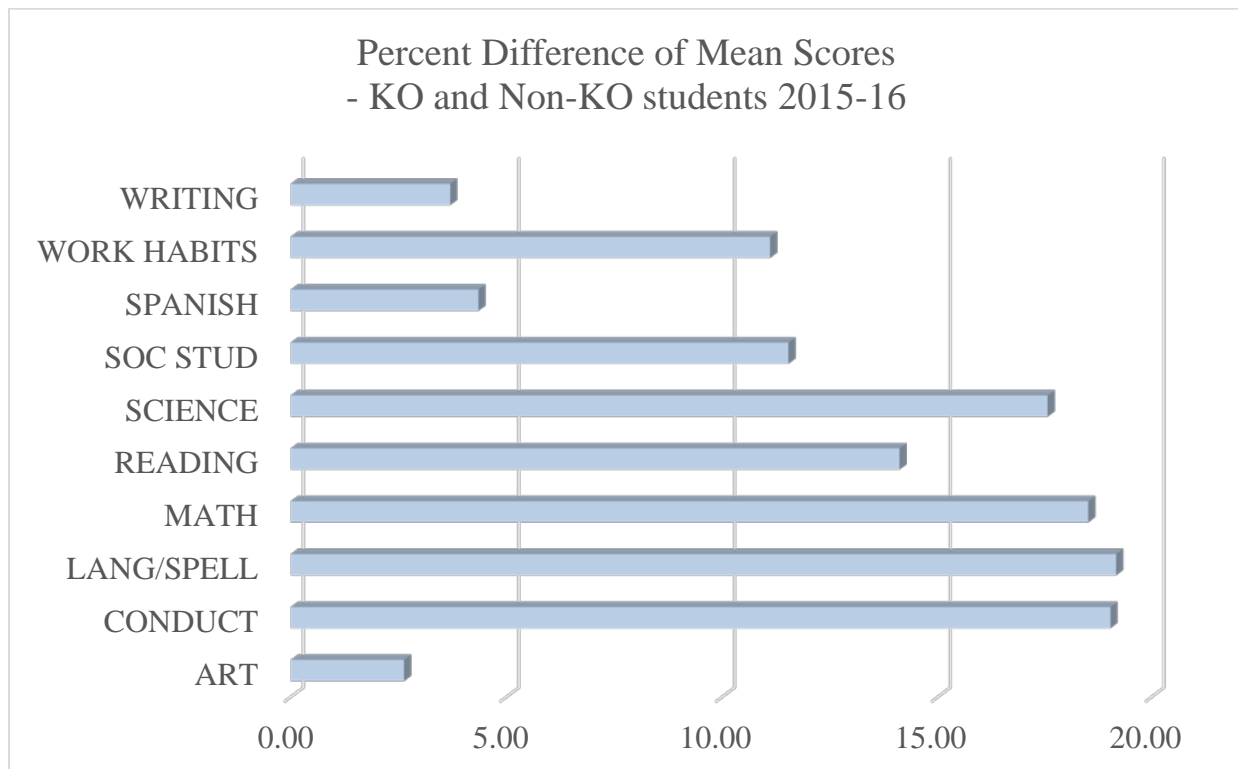


Figure 2. Percent Difference of Mean Scores

Preliminary Grade Analysis (2016-2017)

The first comparison examined overall grades for students in the program compared to students not participating. Grades considered in this comparison were the following: conduct, language/spelling, math, physical education, reading, science, social studies, work habits, music work habits, and art. Grades for art, music and physical education were on a 3-point scale, whereas the other grades were on a 4-point scale.

*Table 5. Mean grade comparison for students who participated in Kids' Orchestra with students who did not participate in the program (significant difference denoted with *).*

Grades	Qtr. 1	Qtr. 2	Qtr. 3	Qtr. 4	Year
KO	2.79	2.67	2.62	2.75	2.71
non-KO 1	2.56	2.50	2.44	2.54	2.51
non-KO 2	2.60	2.52	2.47	2.56	2.54
AVG Non-KO	2.58	2.51	2.45	2.55	2.52
Diff KO/Non-KO	*0.21	*0.16	*0.17	0.20	*0.18

As can be seen in the table above, grades of students who participated in Kids' Orchestra during the 2015-16 school year were above the district average every quarter. Participants in Kids' Orchestra scored 4 – 5% higher than the district average in their respective grade. These mean grade scores can be seen in the figure below as well.

Independent-samples t-tests were conducted to compare mean scores of Kids' Orchestra and non-Kids' Orchestra students overall. There was a significant difference ($t(3) = 12.33, p = .003$) when comparing mean grades of KO and non-KO students. Further, significant differences were found for differences of the mean during quarter 1 ($t(3) = 14.33, p = .002$), quarter 2 ($t(3) = 16.00, p = .002$), and quarter 3 ($t(3) = 11.00, p = .004$).

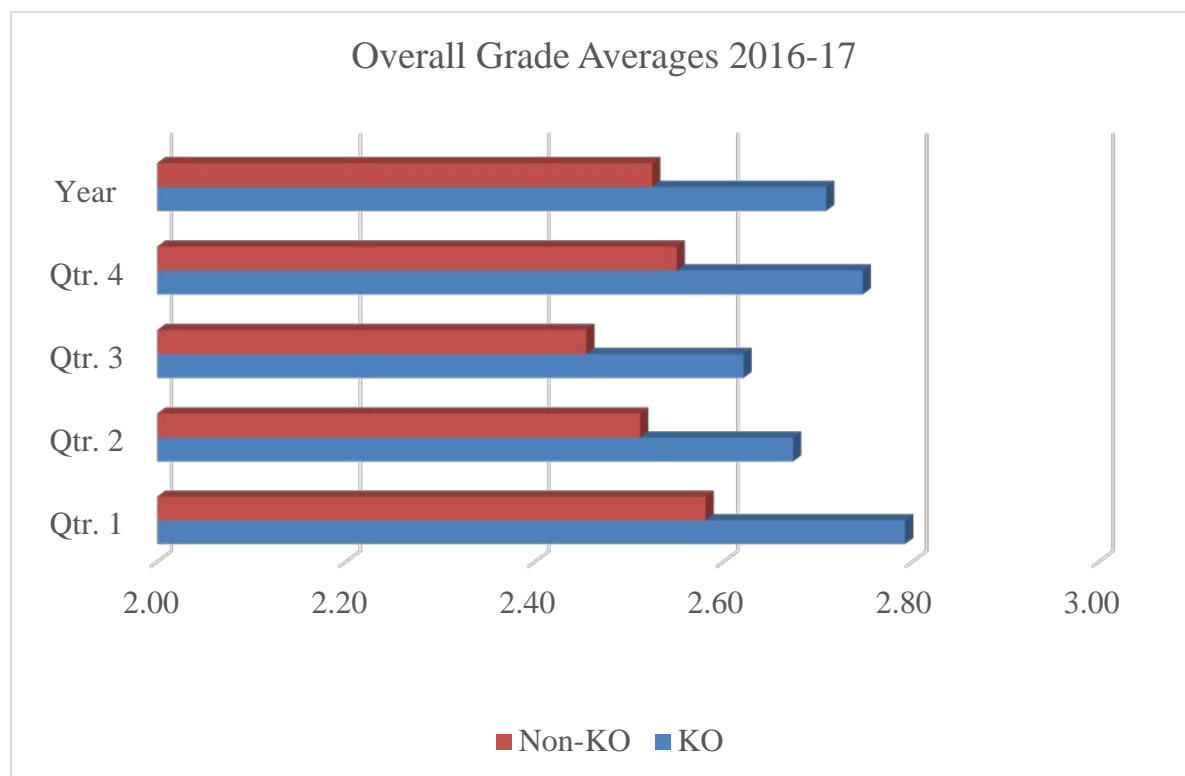


Figure 3. Overall Grade Averages 2016-17

Table 6. 2016-2017 Mean difference/change from one quarter to another

	Qtrs. 1-2	Qtrs. 1 - 3	Qtrs. 1 - 4	Qtrs. 2 - 3	Qtrs. 2 - 4	Qtrs. 3 - 4
16 - 17 KO	0.12	0.17	0.04	0.05	-0.07	-0.13
Non-KO 1	0.06	0.12	0.02	0.07	-0.04	-0.10
Non-KO 2	0.08	0.13	0.04	0.05	-0.04	-0.09
AVG Non-KO	0.07	0.13	0.03	0.06	-0.04	-0.10
Diff KO/Non-KO	0.05	0.04	0.01	0.00	-0.04	-0.03
KO%	3	4	1	1	2	3
non-KO%	2	3	1	1	1	-2
%Diff	1	1	0	0	1	-1

Mean differences in grades by course were also examined. Grades of students participating in Kids' Orchestra and students who did not participate were compared by course or

topic. Students who participated in Kids' Orchestra scored at least ten percent higher than the district average in several categories/grades for at least three of four quarters (conduct, music, art, science, social studies, writing, Spanish, and work habits).

Table 7. Difference in Mean Scores of KO/Non-KO Participants' Grades by Course/Topic

	Qtr1	Qtr2	Qtr3	Qtr4	Significant difference
ART	0.34	0.39	0.38	0.21	*
MUSIC	0.47	0.48	0.46	0.36	*
CONDUCT	0.78	0.67	0.81	0.81	*
LANG/SPELL	0.31	0.37	0.31	0.33	*
MATH	0.22	0.11	0.19	0.20	
READING	-0.05	-0.11	-0.12	0.01	
SCIENCE	0.82	0.71	0.86	0.69	*
SOC STUD	0.50	0.50	0.29	0.50	
SPANISH	0.06	0.73	0.76	0.46	
WORK HABITS	0.51	0.64	0.58	0.67	*
WRITING	0.48	0.24	0.51	0.60	*

Mean differences in grades by course were also examined. Mean grade scores of students participating in Kids' Orchestra and students who did not participate were compared by course or topic. Students who participated in Kids' Orchestra scored at least ten percent higher than the district average in several categories/grades (art, music, conduct, science, social studies, writing, Spanish, and work habits) for at least three of four quarters during the 2016-17 school year. Mean percent differences are represented in the figure below as well.

An independent-samples t-test was conducted to compare mean scores of Kids' Orchestra and non-Kids' Orchestra students for each subject/graded area listed above. There was a significant difference ($t(3) = 7.17, p = .0002$) when comparing mean grades of KO and non-KO students in art. Further, significant differences were found for differences of the mean for music ($t(3) = 14.03, p < .00001$), conduct ($t(3) = 15.07, p < .00001$), language/spelling ($t(3) = 9.19, p$

= .000005), reading ($t(3) = 3.00, p = .011$), science ($t(3) = 8.76, p = .00006$), social studies ($t(3) = 5.97, p = .0005$), writing ($t(3) = 3.80, p = .0045$), and work habits ($t(3) = 8.71, p = .00006$).

Table 8. Percent Difference in Mean Scores of KO/Non-KO Participants' Grades by Course/Topic (shaded cell denotes +10% or greater difference)

	Qtr1	Qtr2	Qtr3	Qtr4
ART	11.49	13.07	12.55	7.00
MUSIC	15.72	16.03	15.47	12.07
CONDUCT	19.56	16.79	20.37	20.25
LANG/SPELL	7.66	9.26	7.77	8.28
MATH	5.61	2.84	4.73	5.10
READING	-1.21	-2.86	-3.06	0.18
SCIENCE	20.46	17.67	21.49	17.33
SOC STUD	12.49	12.42	7.29	12.47
SPANISH	2.07	24.45	25.19	15.31
WORK HABITS	12.81	16.12	14.39	16.65
WRITING	12.10	5.95	12.85	15.03

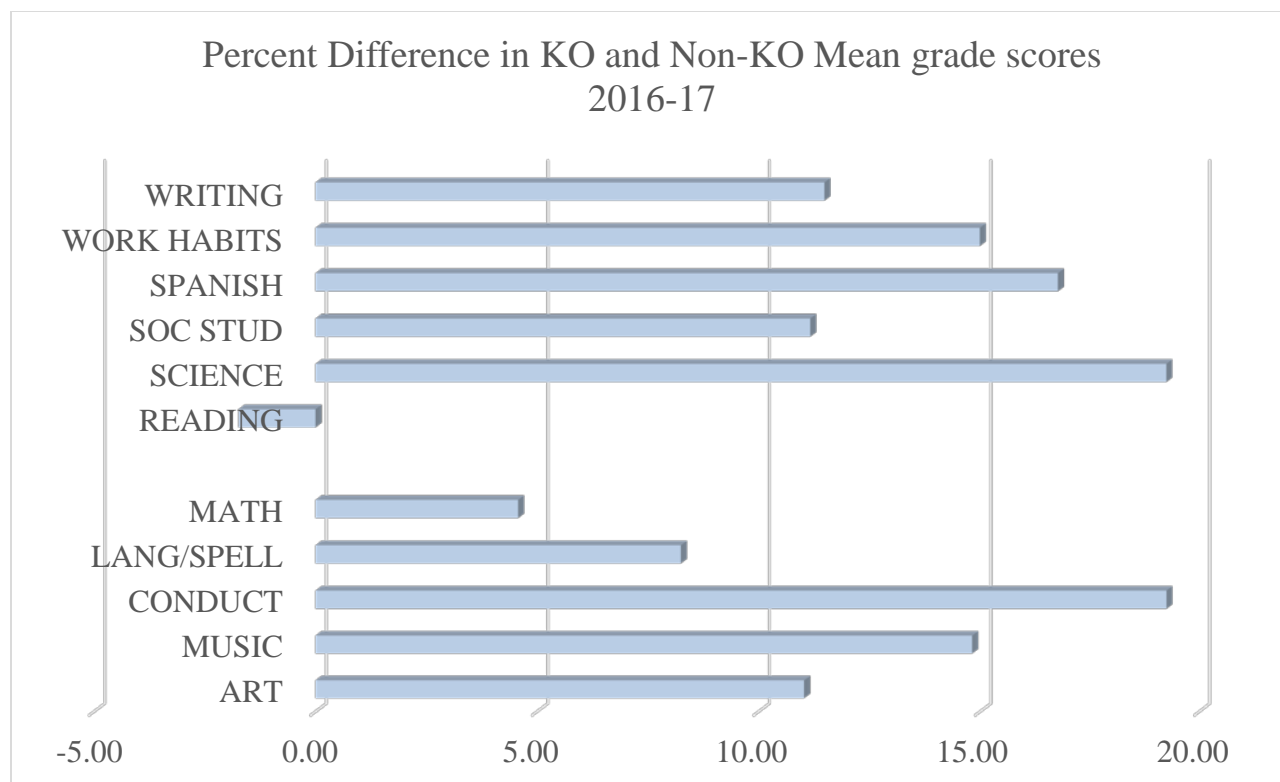


Figure 5. Percent Difference in Kids' Orchestra and Non-Kids' Orchestra mean grade scores.

Conclusion – Grade Score Data

Student grades for the 2015-16 and 2016-17 school year were compared for students participating in Kids' Orchestra and those who did not participate. Some interesting findings emerged from these comparisons. Overall, grades for students who participated in Kids' Orchestra were 5 – 6% higher for the two years than their counterparts who did not participate. Several of the differences by quarter comparison and subject graded were found to be significant.

Difference in scores from one quarter to another were also compared. There was some difference in these scores between students who participated and those who did not participate. However, statistical analysis revealed several significant differences. Further analysis is needed to fully examine these differences.

The largest differences in scores were found when comparing student grades in certain courses or topics. Several of these areas emerged as indicating a 10-20% difference in mean

grades. Those students participating in Kids' Orchestra during these two school years scored significantly higher than their grade level counterparts who did not participate in Kids' Orchestra. For example, in 2015-16, mean grades for Kids' Orchestra students in language, math, conduct, and science were 15% or more greater than those who did not participate. In 2016-17, mean grades for Kids' Orchestra students in music, conduct, science, work habits were 15% or more greater than those who did not participate. Kids' Orchestra participants scored higher in all other graded areas or courses for at least one quarter during these two school years. These differences may indicate that students who participate in Kids' Orchestra score higher overall, per teacher-assigned grades, in almost every graded area.

Future analysis will be conducted to further analyze these grade scores. Grades will be compared by grade, sex, race, SES, parent/guardian education level, school attended, school grade, and more. Future analysis will also include further statistical analysis to assess assumptions in the data and transferability of findings.

Grade Score Analysis by Demographic Variables

Upon completion of the analysis above, we were interested to further explore the grade scores of those students participating in Kids' Orchestra to discover any specific differences when data was disaggregated by demographic variables. Therefore, student grade scores were disaggregated by several variables (SES, race, and scholarship percentage) for a randomly selected sample of Kids' Orchestra participants ($n = 190$). Students in the randomly selected group were from grades K – 5, represented various races (Black, Asian and White), played a variety of instruments, received a variety of scholarship percentages for tuition, and represented students from a variety of school sites. Random selection and data gathering was performed by staff of Kids' Orchestra and said to be a representative sample of the program overall.

For purposes of disaggregation, student grades were first examined generally by average each quarter graded. This selected group scored an average of 2.92 points for the year. They performed best, overall, during the first quarter of the year (2.98/4 points (75%)), followed by quarters 2nd and 4th (2.92/4 points (73%)), with the lowest overall mean score during the third quarter of the year (2.84/4 points (71%)).

Student scores were further examined by race. The randomly selected group included students from three racial groups (white ($n = 2$), Asian ($n = 2$), and Black ($n = 186$)). Students who identified as white scored highest overall, with average yearly scores of 3.99/4 (99%). Students who identified as Asian scored second highest overall, with average yearly scores of 3.82/4 (95%). Finally, students who identified as Black/African American scored lowest overall, with average yearly scores of 2.89/4 (72%).

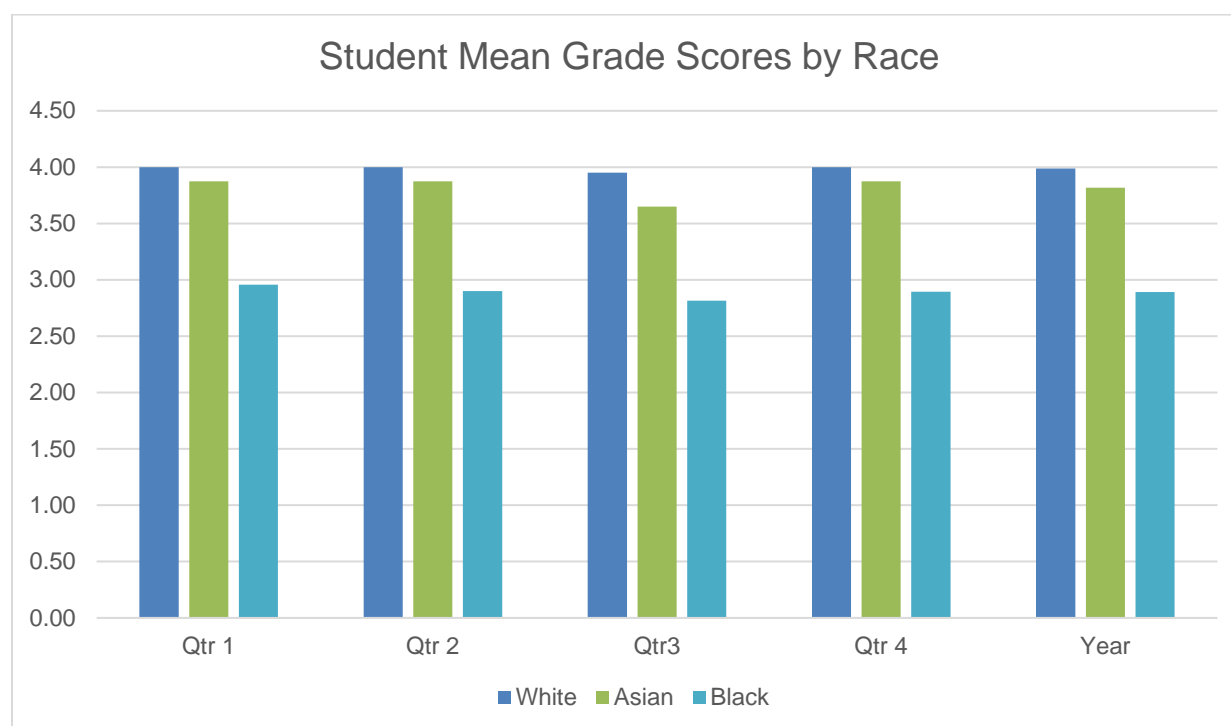


Figure 6. Student Mean Grade Scores by Race

Next, scores by socio-economic level was examined. The figure below illustrates results of that comparison. For purposes of this investigation, levels of socio-economic status were based on federal levels in three groups (low (\$0 - \$34,999 in family yearly income), middle (\$35,000 - \$54,999 in family yearly income), and high (\$55,000 and above in family yearly income). The program offered scholarships to all families based on calculations regarding SES level and determined the expected family contribution accordingly. The table below shows the breakdown of expected family contribution toward tuition and the scholarship percentage those families received.

Family Contribution (per year)	Scholarship Percentage	SES Level
\$600	57.14%	high
\$400	71.43%	high
\$200	85.71%	medium
\$150	89.29%	medium
\$100	92.86%	low
\$50	96.43%	low
\$20	98.57%	low

The three SES levels were compared as to student grade scores (see chart below). Students in the sample group represented all three groups (low ($n = 170$ students), middle ($n = 17$ students) and high ($n = 2$ students)). Overall, students in the low SES level group scored highest (3.52/4) with low SES level students second highest (2.92/4) and middle SES level students scoring lowest (2.79/4). It is interesting to note that low SES level students were higher in average scores during the first quarter of school than the middle SES level students.

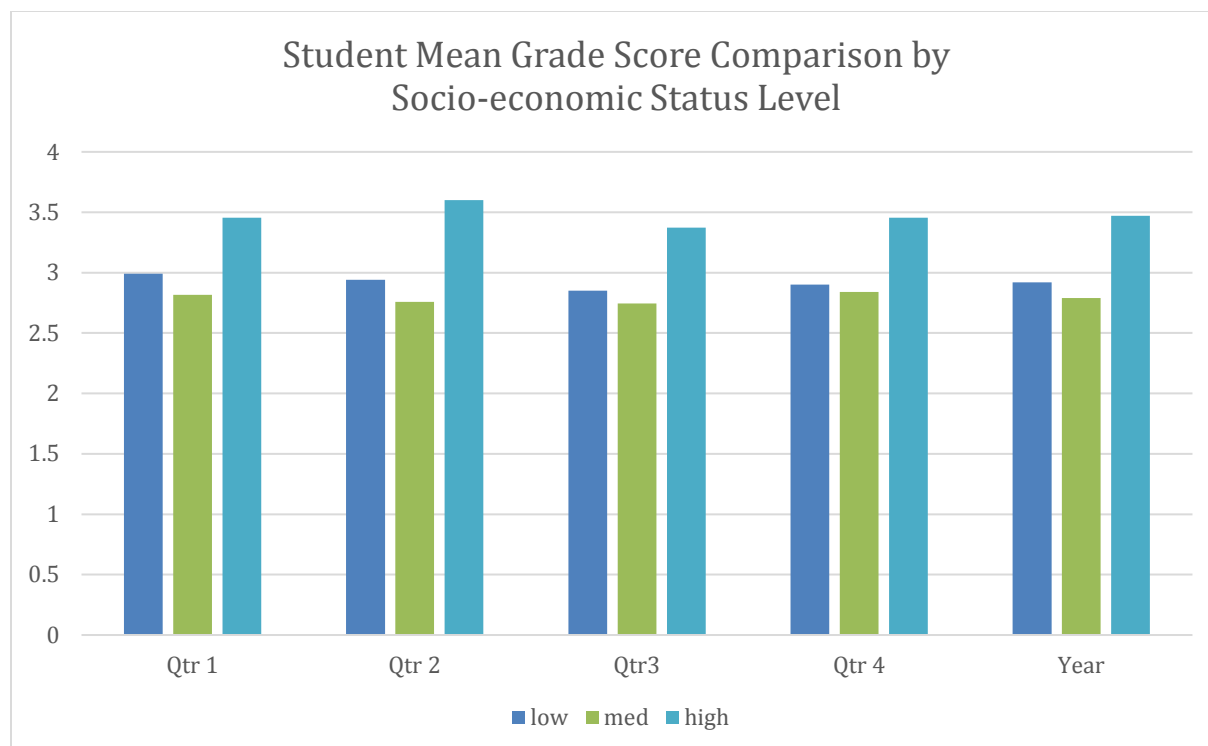


Figure 7. Student Mean Grade Score Comparison by Socio-economic Status Level

Finally, we calculated mean student grade scores by percentage of scholarship received through the program. This breakdown uncovered some interesting findings. When we broke down the students into varying levels of family income within the three levels of SES, grade scores showed a bit of a different picture. It is interesting to note that students in the low SES group, when disaggregated further by scholarship percentage, scored, overall, differently, than other scholarship percentage groups. The highest group mean score overall, was the low SES group with 96.43% scholarship. The table below shows mean grade scores for students in all scholarship groups. This is a sample of the total Kids' Orchestra population, but deemed a representative sample.

Scholarship Percentage	Qtr 1	Qtr 2	Qtr3	Qtr 4	Year
98.6	2.96	2.90	2.82	2.88	2.89
96.43	3.10	2.98	2.92	2.89	2.97

92.86	2.83	2.76	2.71	2.75	2.76
89	2.83	2.72	2.77	2.83	2.79
85.71	2.81	2.80	2.72	2.85	2.79
57	2.30	2.40	2.25	2.30	2.31

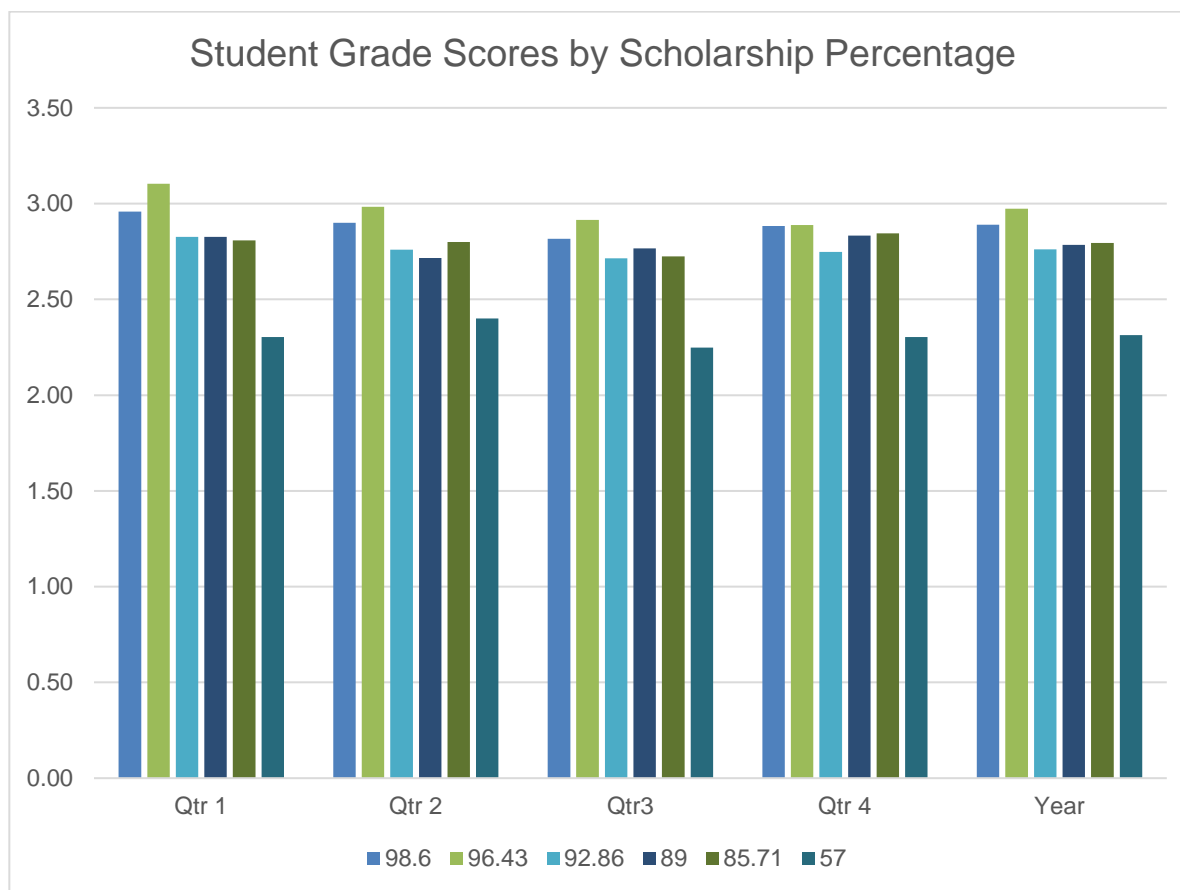


Figure 8. Student Mean Grade Score Comparison by Scholarship Percentage

These demographic variable comparisons offer further insight into the grade scores of students participating in Kids' Orchestra over time. For students who participate in Kids' Orchestra, student grades for the 2016-17 school year show higher mean scores on average than students of the same age, race and SES level who do not participate in Kids' Orchestra. These grade scores will continue to be followed as the program progresses. Larger samples of students with demographic information may help illuminate further findings.

Participant Perceptions - Survey Data Results

Method and Results - Foundations

Survey Questionnaire

The survey questionnaire instrument for this study was created through research into past surveys of similar organizations in the United States over the past five years. Research on potential benefits of musical training and participation was also evaluated. Data and instruments from these studies elucidated possible topics of interest and focus as well as possible benefits (musical, social, other) of this kind of after-school music program for elementary students in an urban area of the United States.

The survey questionnaire instrument was then drafted and piloted with a small group ($N=5$) of children in order to assess possible need for restructuring or alteration for clarity of language. Further, the researcher expected this instrument to be given to children prior instrument lessons or music class. The goal was to gather the children's ideas without disrupting their schedule too extensively. With this in mind, it was determined that the instrument should take no more than 5 – 7 minutes, on average, to complete. The pilot of the survey instrument proved to be very helpful in clarification of language, expected completion time, and question ordering. Edits were made and paper copies were created for each program site. The survey contained demographic data questions, open ended question prompts (with a box for words or drawings), and icons to circle in answer to some questions about feelings (smiley and sad faces associated with an answer of happy or sad).

Upon arrival at one end of semester class, children were invited to complete the survey questionnaire. They were given a copy of the two-sided instrument as well as a pencil with which to write as they checked in for the concert at a table set up for check in purposes.

Completed surveys were collected in a submission box and kept by the site coordinator who later transferred original survey questionnaires to the researcher.

Demographic Data - Foundations

Children ($N = 33$) participating in Foundations (general music for kindergarten and first grade students) for at least one semester completed the survey questionnaire. These data represent perceptions of children in the program from different area elementary schools as well as homeschooled children (male ($n = 22$, 67%), female ($n = 11$, 33%) between the ages of 5 –7 years of age.

Question 1. “Being in the program makes me feel...”

After the students completed demographic data the children were asked how participation in the program made them feel. The choices were happy (next to a smiley face icon), ok (next to a face with a straight mouth icon), or sad (next to a frowning face icon). Figure 9 (below) indicates the number of comments in each category.

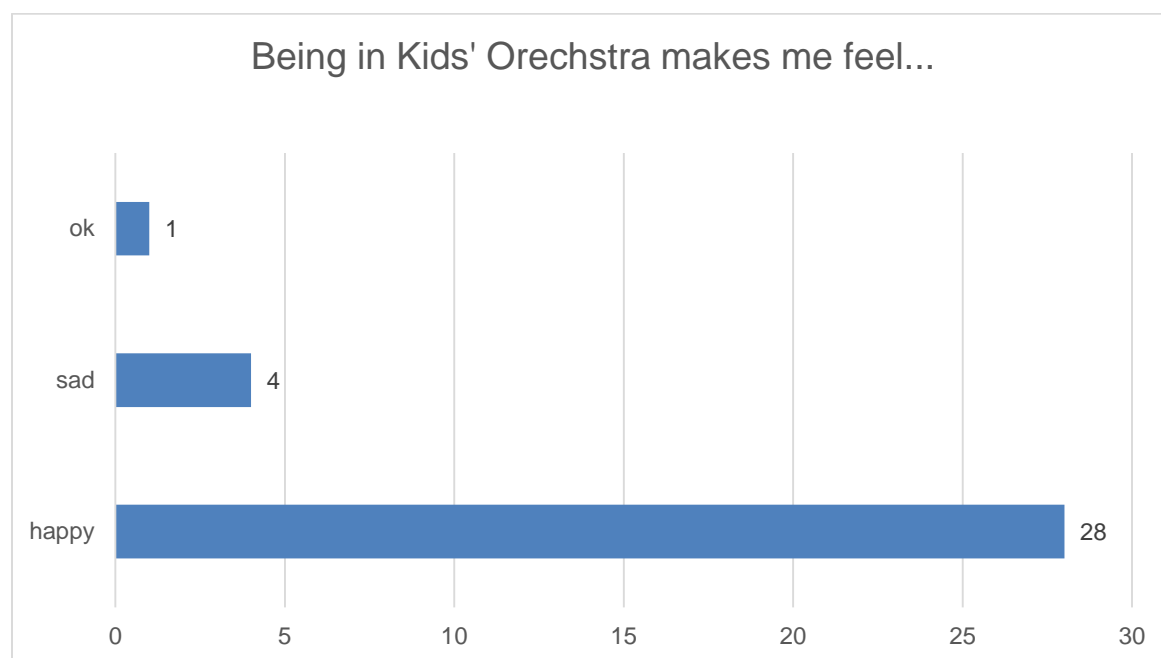


Figure 9.. Number of student responses how participation in the program makes them feel.

The majority of students ($n = 28$, 84%) circled the word or picture indicating the program made them feel happy. One child (3%) circled that the program made them feel 'OK' and 4 children (12%) said it made them feel sad.

Question 2. "My favorite thing about being in the program is..."

The next question asked a favorite thing about being a part of the program. Figure 10 (below) indicates the number of comments in each category.

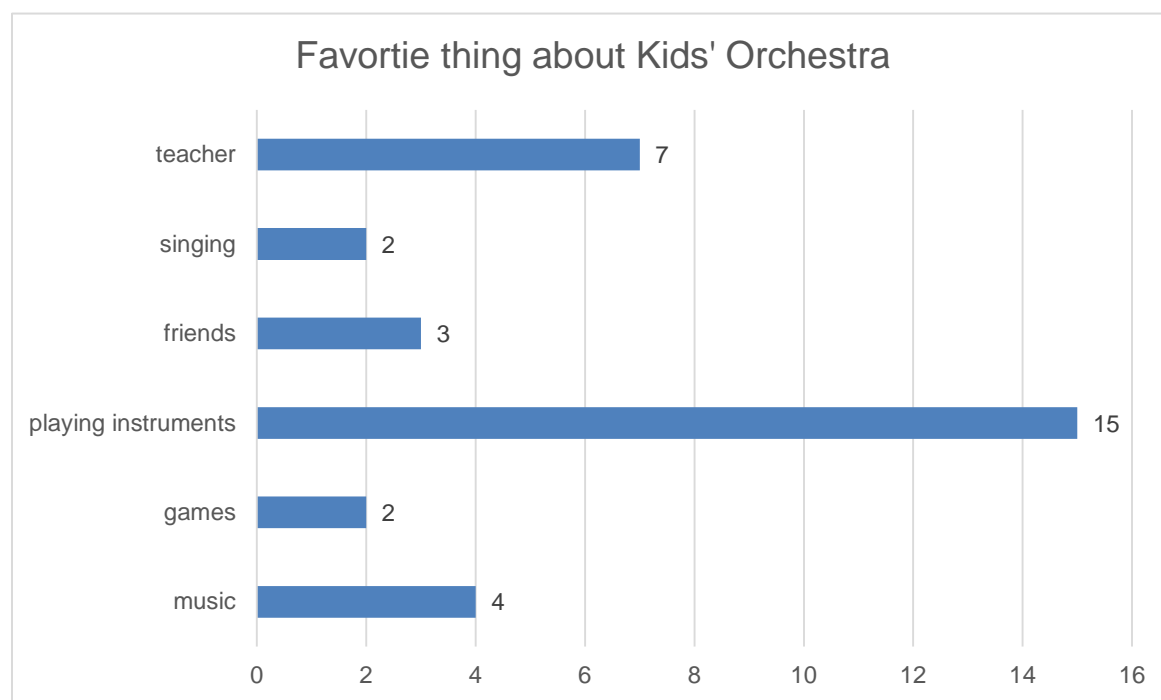


Figure 10. Number of responses in each category of favorite aspects of the program.

Children responded to this question by either writing a word or words in a text box or drawing a picture, or both. The most cited category had to do with playing instruments ($n = 15$) such as drums or xylophones. Another popular response was both music and singing ($n = 6$). Other categories were games ($n = 2$), friends ($n = 3$) and teacher ($n = 7$). Child respondents also cited snacks, drums, and homework as favorite aspects of the program.

Question 3. My teacher makes me feel...

The third question asked students how their teacher made them feel. Icons similar to the first question (smiley, ok face, and frown) were utilized to answer this question.

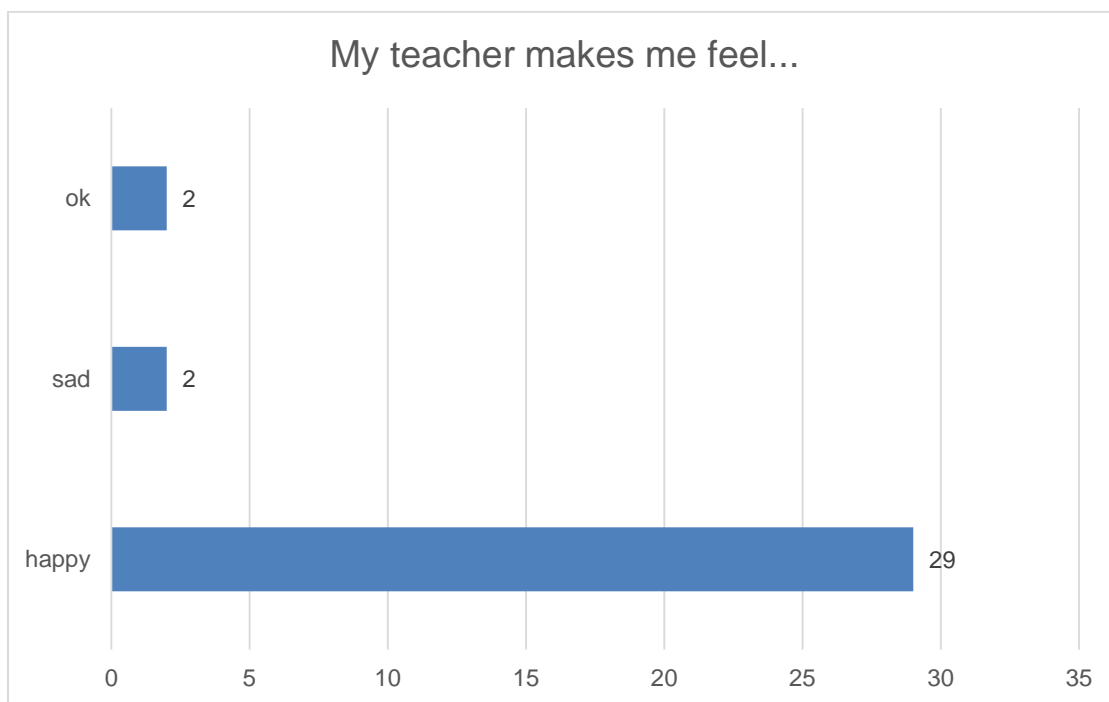


Figure 11. Numbers of children choosing each category of response about teacher.

Overall, students were very positive about their teachers in the program. Most children ($n = 29$, 88%) answered that their teacher made them feel happy. Two stated that their teacher made them feel ok and two answered sad.

Question 4. "One thing I wish was different about the program is..."

Students were asked what they wish was different about the program in the final question. Figure 12 (below) shows the number of comments in each category after analysis of the drawings and writing.

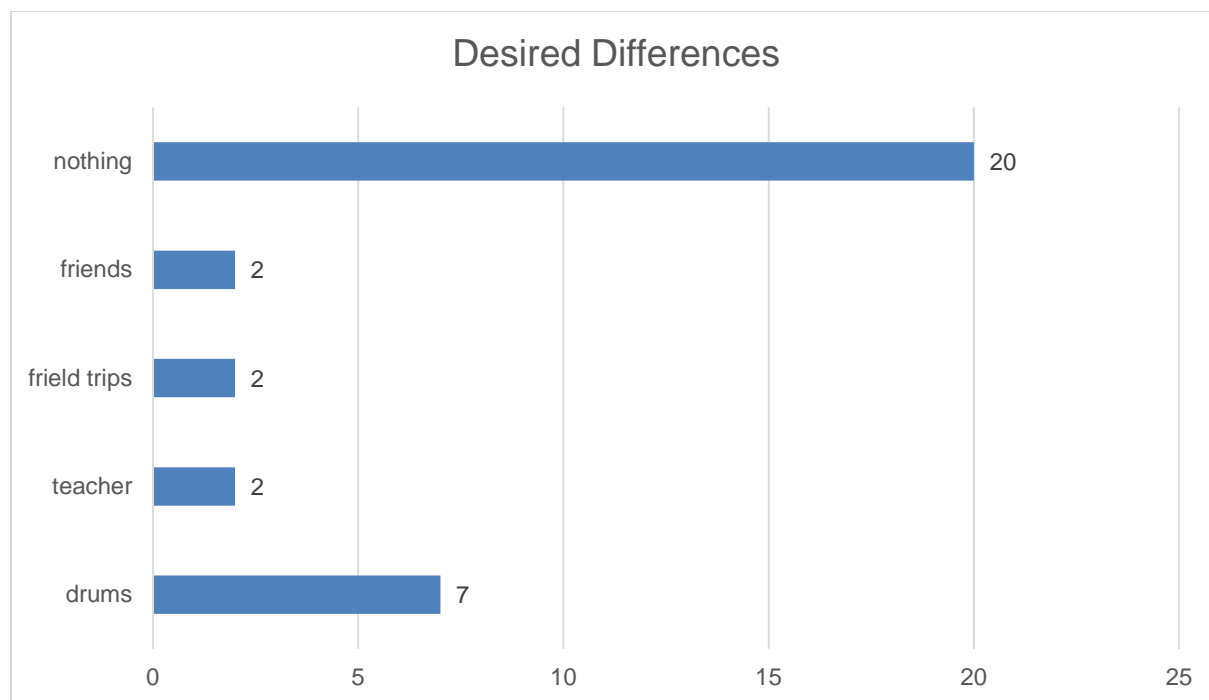


Figure 12. Number of comments in each category of desired differences.

Of the 73 students who responded to the final question, several ($n = 20$, 60%) commented that they didn't want any change in the program. Other offered ideas for changes in regards to friends ($n = 2$, 6%), playing drums ($n = 7$, 21%) and field trips ($n = 2$, 6%).

Method and Results - Choir and Instrumental Students

The second part of this study was a survey questionnaire given to 1st – 5th grade students who were either a part of a choir or played an instrument. The protocol and findings are given below.

Survey Instrument

Similar to the survey questionnaire created for the younger respondents, the survey questionnaire instrument for this study was created through research into past surveys of similar organizations in the United States over the past five years. Data and instruments from past studies offered insight into possible topics of interest and focus as well as possible researched

benefits (musical, social, other) of this kind of after-school music program for elementary students in an urban area of the United States.

The survey questionnaire instrument was then drafted and piloted with a small group ($N=5$) of children in order to assess possible need for restructuring or alteration for clarity of language. Further, the researcher expected this instrument to be given to students prior to choir or instrument classes. With this in mind, it was determined that the instrument should take no more than 5 – 7 minutes, on average, to complete in order to not take too much time from regular instruction. The pilot of the survey instrument proved to be very helpful in clarification of language, expected completion time, and question ordering. Edits were made and paper copies were made for each concert site. The survey contained demographic data questions, open ended question prompts, and a word checklist. The survey questionnaire collected data on perceived benefits of participation by children in this after-school music program.

Upon arrival at an end of semester class time, children were invited to complete the survey questionnaire. They were given a copy of the two-sided instrument as well as a pencil with during their snack time supervised by a site coordinator. Completed surveys were collected in a submission box and transferred to the researcher by the site coordinators and staff.

Demographic Data

Children ($N = 106$) participating in the after-school music program for at least one semester completed the survey questionnaire. These data represent perceptions of children in the program from 16 different area elementary schools as well as homeschooled students.

These data represent children (male ($n = 50$, 47%), female ($n = 56$, 53%) between the ages of 7 - 11 years of age in grades 2 – 5 (2nd grade ($n = 35$, 33%), 3rd grade ($n = 30$, 28%), 4th

grade ($n = 30$, 28%), and 5th grade ($n = 11$, 10%). Students played an instrument or were a part of choir.

Figure 13 below shows the number of students in each instrument or group who completed the survey questionnaire. Instruments or groups in the program at the time of this investigation were string bass, violin, clarinet, percussion, trumpet, viola, cello, flute, and choir.

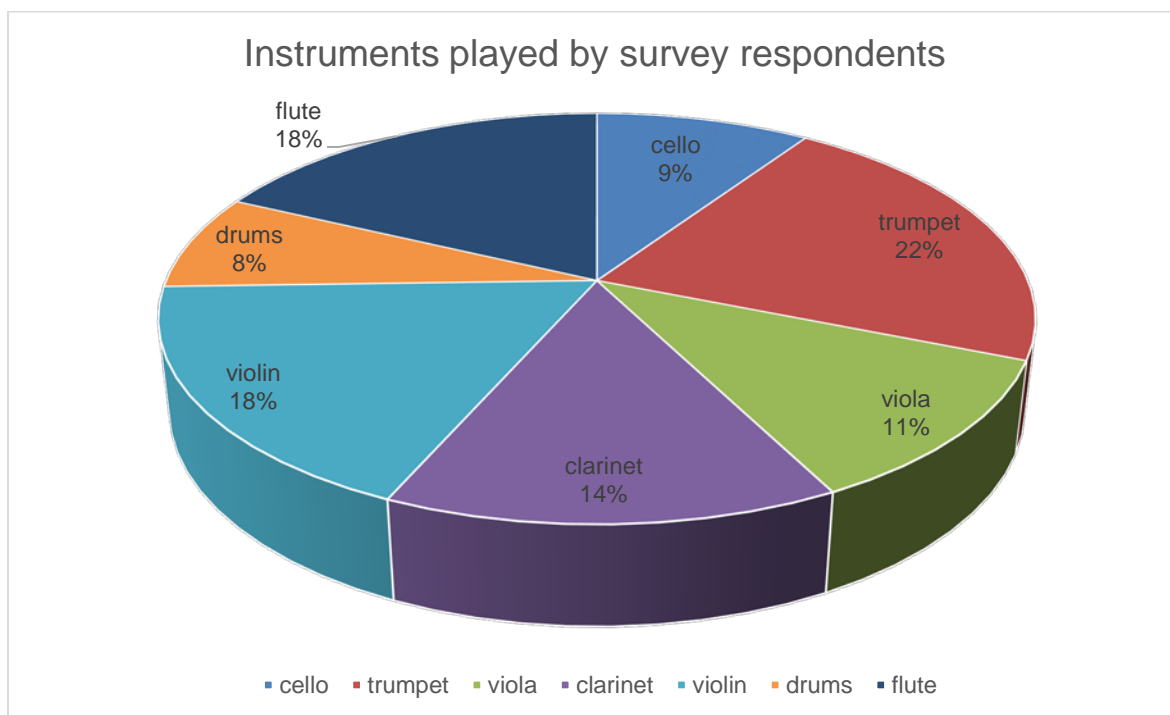


Figure 13. Number of students (1st – 5th grade) playing each instrument or participating in choir.

Participants/respondents included 1 student (1% of respondents) in choir and the remainder played brass, woodwind, and string instruments ($n = 105$, 99%). The students responding to the survey questionnaire played clarinet ($n = 15$, 14%), percussion ($n = 8$, 7.5%), trumpet ($n = 23$, 22%), viola ($n = 12$, 11%), cello ($n = 10$, 9%), flute ($n = 19$, 18%), violin ($n = 10$, 9%), and bass ($n = 36$, 34%).

Question 1. “I participate in Kids Orchestra because...”

After demographic data was collected on the student, an open-ended prompt asked them to complete the statement, “I participate in Kids Orchestra because...” Figure 14 (below) indicates the number of comments in each category.

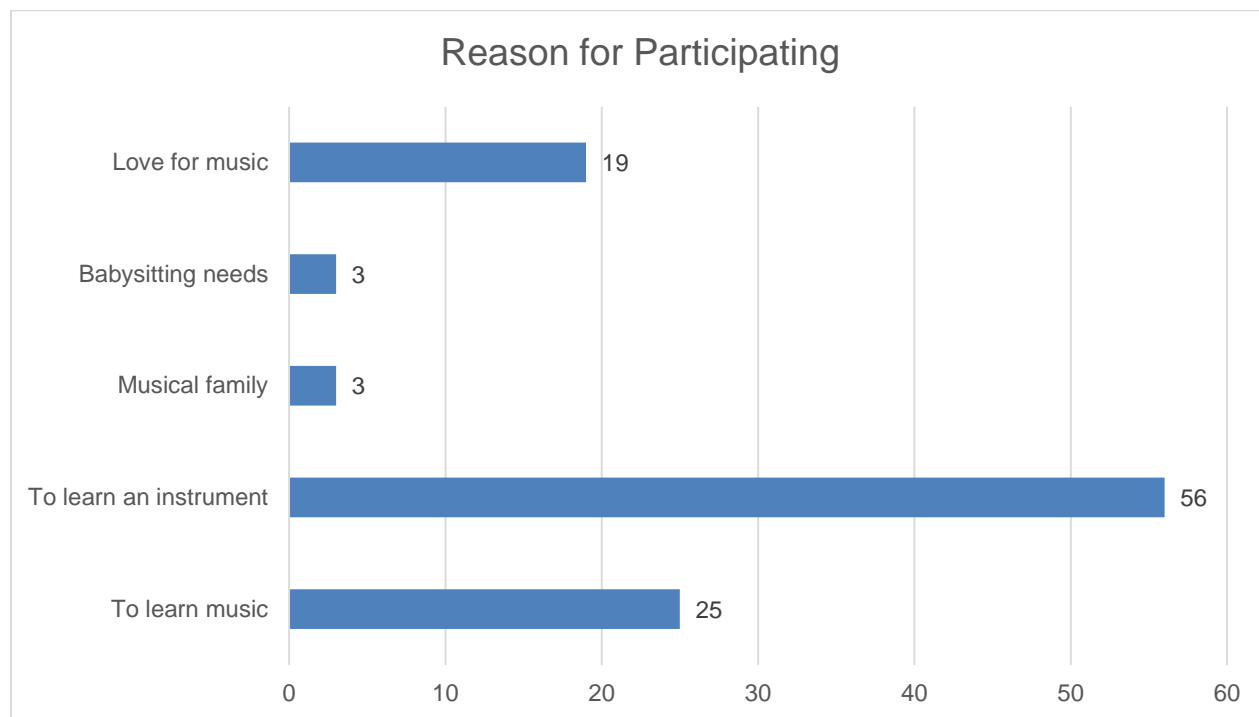


Figure 14. Reasons cited by children for why they participate in the program.

Child participants were asked their reason for participation in Kids Orchestra. Their responses ($n = 106$) were analyzed and coded (see Figure 2). Five main categories emerged through this analysis (learning music, learning instrument, love of music, musical family, and need for a babysitter).

Question 2. “My favorite thing about Kids Orchestra is...”

The second question on the survey questionnaire asked students to complete the statement “My favorite thing about Kids Orchestra is...” Figure 15 (below) shows the categories of response.

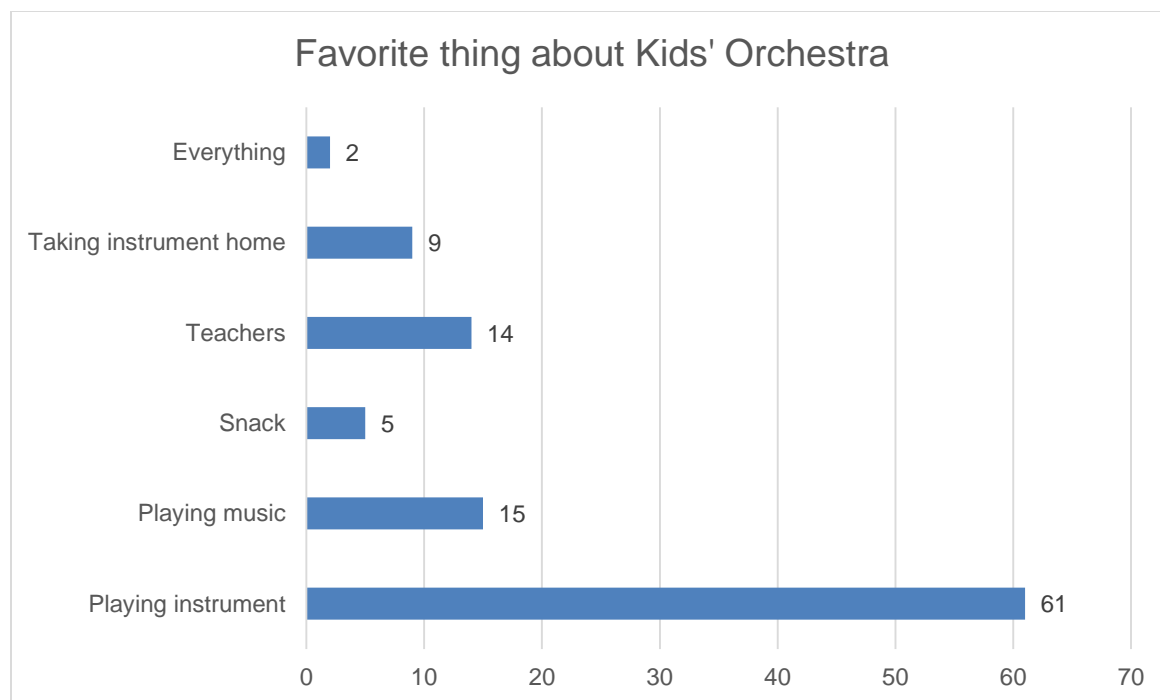


Figure 15. Favorite part of the program

Six main categories of response emerged after analysis of the participant responses. The most frequent participant response had to do with learning to play an instrument ($n = 61$, 41%). Playing music was another category with 15 responses (14%). Students also said they liked being able to take their instrument home ($n = 9$, 8%), snack ($n = 5$, 5%), teachers ($n = 14$, 13%), and everything ($n = 2$, 2%).

Question 3. “Being a part of Kids Orchestra makes me feel...”

The third question prompt asked students to complete the sentence, “being a part of the program makes me feel.” Most popular categories of response are show below in Figure 16.

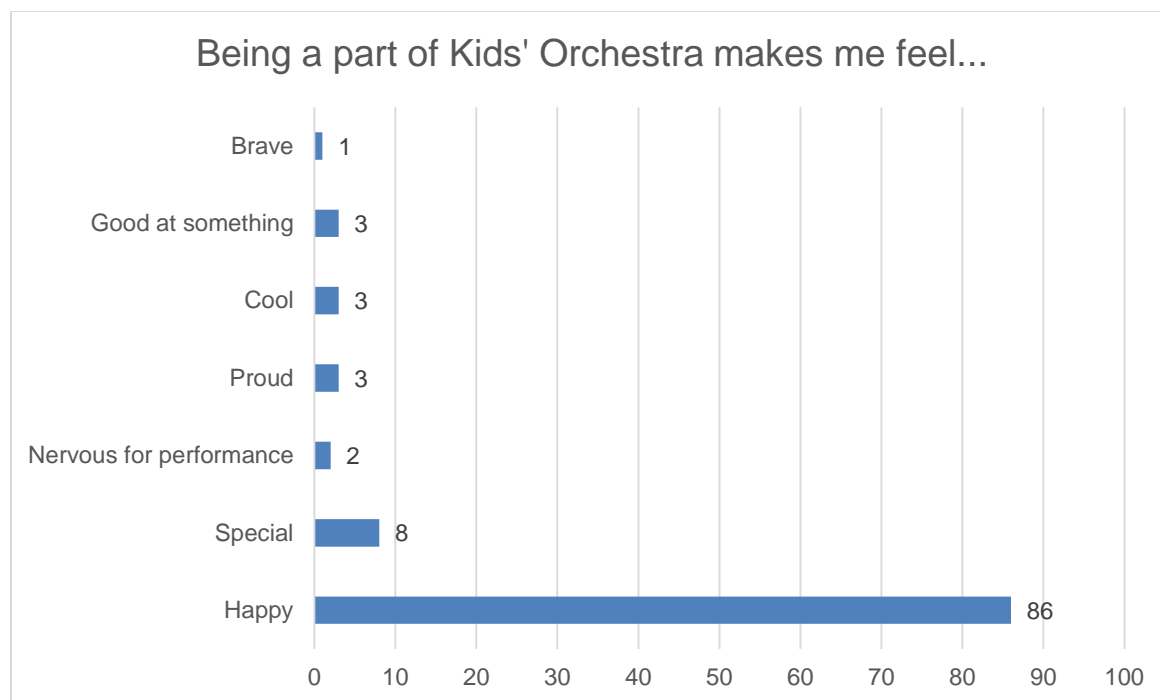


Figure 16. Children’s responses to the prompt: “Being in Kids Orchestra makes me feel...”

Participant responses ($N = 106$) to the statement “Being in Kids Orchestra makes me feel...” were analyzed and grouped into seven categories. The most frequent response was placed into the category “happy” ($n = 86$, 59%).

Special was another category that emerged with 8 (7.5%) participants making comments. The third most frequent categories of response were good at something, proud, and cool ($n = 3$, 3%). Some students also stated they were nervous about performance or felt brave.

Question 4. “My teacher is...”

The fourth question on the survey questionnaire was the prompt “My teacher is...” Many students responded to this with the name of their teacher ($n = 206$, 55%). Figure 17 (below) shows the four main categories of response with the number of response in each.

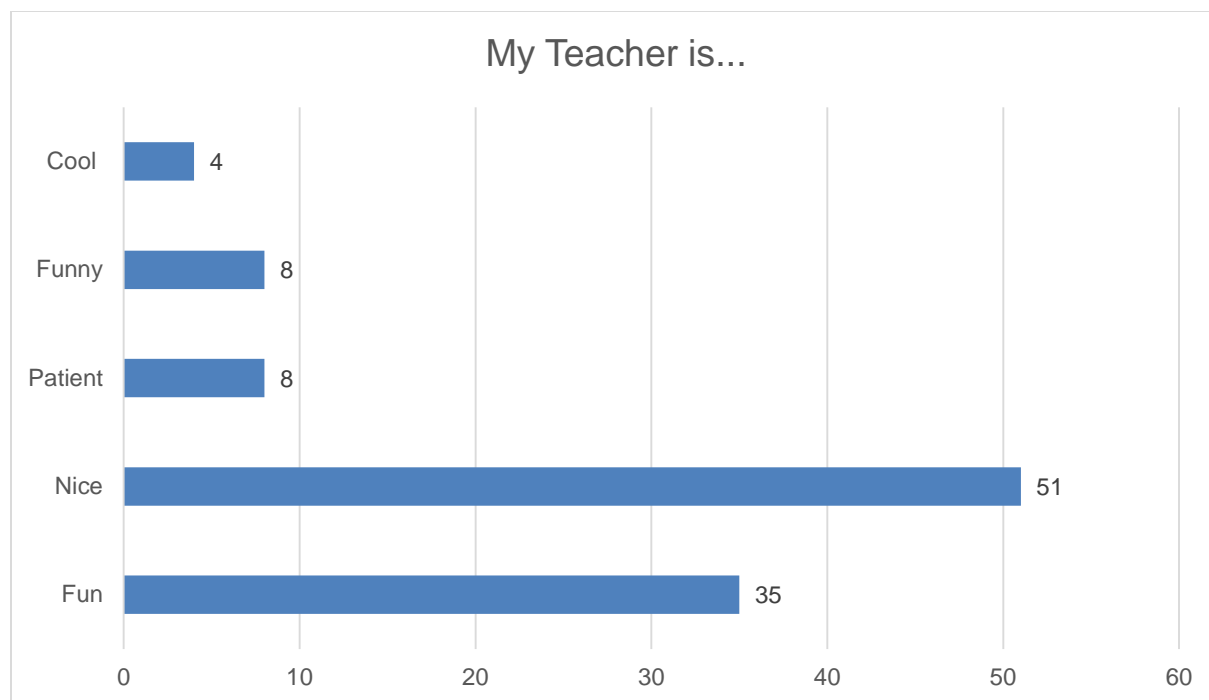


Figure 17. Children's top responses as to the prompt, "My teacher is..."

Most often students responded to this question with the word nice ($n = 51$, 48%). A common statement of the children surveyed for this study was that their teacher was fun ($n = 35$, 33%). Several comments were positive about teachers, such as patient and funny ($n = 8$, 7.5%). Other students commented that their teacher was cool ($n = 4$, 4%).

Question 5. "One way I wish Kids Orchestra was different is..."

Students were asked what they wish was different about the program in the final question. Some students did not complete the prompt. These answers were considered different than the comment "nothing" or "none." Therefore, there were a total of 383 discrete comments analyzed for this portion of the survey questionnaire. Figure 18 (below) shows the number of comments in each category after analysis of the written responses.

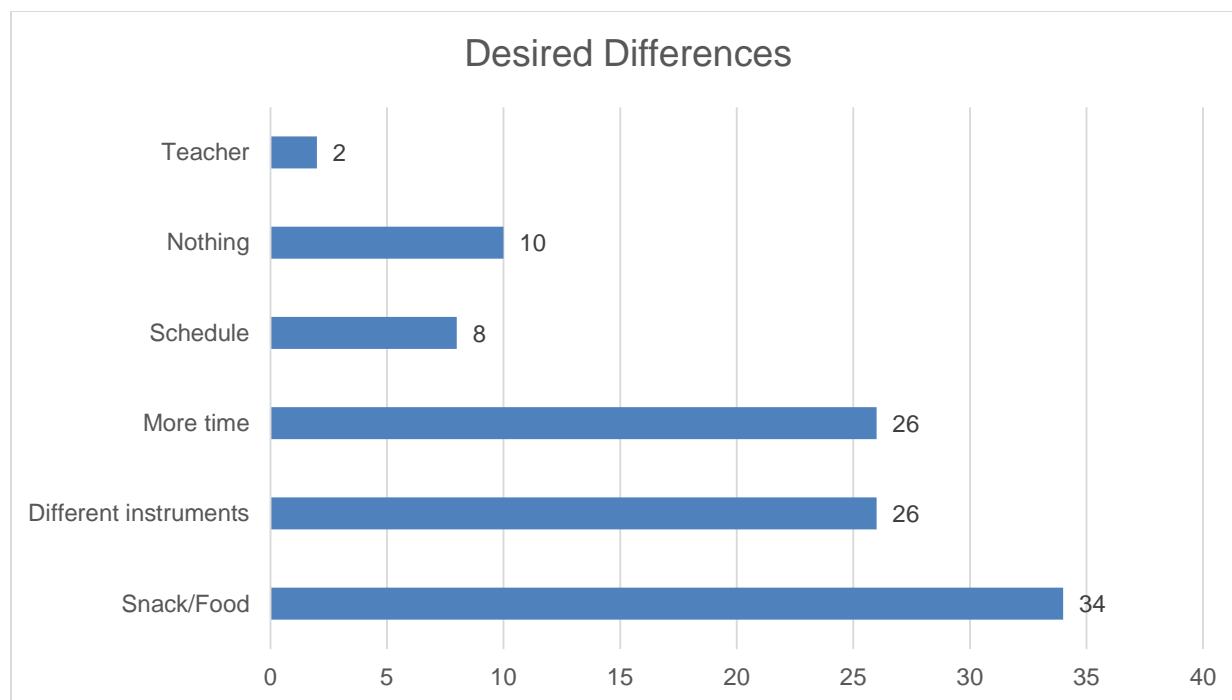


Figure 18. Tops categories of response to the prompt, “Something I would like to be different about the program is...”

Many comments ($n = 10, 9\%$) indicated students didn’t want any change in the program writing “none,” or “nothing.” Others offered ideas for changes in regards to snacks ($n = 34, 32\%$) with some writing, “better snacks,” and “they should change the snack menu.” Longer, more often or more time ($n = 26, 25\%$) was another category that emerged through analysis of the comments offered by participants. Some stated “that we have it every day,” “we could play all day,” “we could have a longer time,” or “more time.” homework, snack and recess.

Schedule ($n = 8, 7.5\%$) also came up in some comments. Some of the comments had to do with the daily/weekly program times such as “that it would be on a different day,” “I wish it was a different day,” and “go home earlier.

Students also commented on the desire to play different instruments ($n = 26, 25\%$). “We get to pick our instrument,” or “play a different instrument,” or “we can play more instruments.”

Percussion students had ideas on different drums they would like to experience such as “have bigger drums,” “that we could play snare,” and “play different types of drums.” Teacher ($n = 2$, 2%) was another factor noted by two participants.

Question 6. “Being a part of Kids Orchestra helps me know/feel...”

Finally, students were asked to check items on a list from phrases such as “I am doing better in math,” or “I am more confident” that completed the phrase “being a part of Kids Orchestra helps me know/feel...” Student response numbers are show below (Table 9).

Table 9. Number of participants who checked each statement in response to “being a part of Kids Orchestra helps me know/feel...”

Statement	<i>n</i>	%
I am confident	87	82%
I am a part of a team	87	82%
Like I am a musician	92	87%
I understand music better	62	58%
I have more friends	89	84%
I am nicer	68	64%
I like different kinds of music	96	91%
I can face challenges and succeed	94	89%
I am good at something	87	82%
I am doing better in math	96	91%
I am doing better in writing	68	64%
I have good attendance	71	67%

Overall, a majority of students marked each item/statement. The highest number of children marking the statements came with the answers to “I like different kinds of music” ($n = 96, 90\%$), “Like I am a musician” ($n = 92, 87\%$), and “I can face challenges and succeed” ($n = 94, 89\%$). Several children marked the statement “I am doing better at math” ($n = 96, 90\%$).

Method and Results - Parent Participants

Survey Questionnaire Instrument

The survey questionnaire instrument for this study was created through research into past surveys of similar organizations in the United States over the past five years. Research on potential benefits of musical training and participation was also evaluated. Data and instruments from these studies elucidated possible topics of interest and focus as well as possible researched benefits (musical, social, other) of this kind of after-school music program for elementary students in an urban area of the United States.

The survey questionnaire instrument was then drafted and piloted with a small group ($N=5$) of adults in order to assess possible need for restructuring or alteration for clarity of language. Further, the researcher expected this instrument to be given to parents and guardians prior to a student performance. With this in mind, it was determined that the instrument should take no more than 5 – 7 minutes, on average, to complete. The pilot of the survey instrument proved to be very helpful in clarification of language, expected completion time, and question ordering. Edits were made and paper copies were made for each concert site. The survey contained demographic data questions, open ended question prompts, and a word checklist. The survey questionnaire was aimed at collecting data on parent/guardian perceived benefits of participation.

Upon arrival at the end of semester performance, parents/guardians were invited to complete the survey questionnaire. They were given a copy of the two-sided instrument as well

as a pencil with which to write as they checked in for the concert at a table set up for check in purposes. Completed surveys were collected in a submission box available to parents/guardians at a table outside of the performance venue.

Demographic Data

Parents or guardians ($N = 117$) of children participating in the program for at least one semester completed the survey questionnaire. These data represent perceptions of parents or guardians of children in the program from 16 different area elementary schools as well as homeschooled students.

Question 1. “The reason my student(s) participates in Kids Orchestra is...”

After demographic data was collected on parent and student, parents/guardians were asked the main reason(s) their child participates in Kids Orchestra of Baton Rouge. Figure 19 (below) indicates the number of comments in each category.

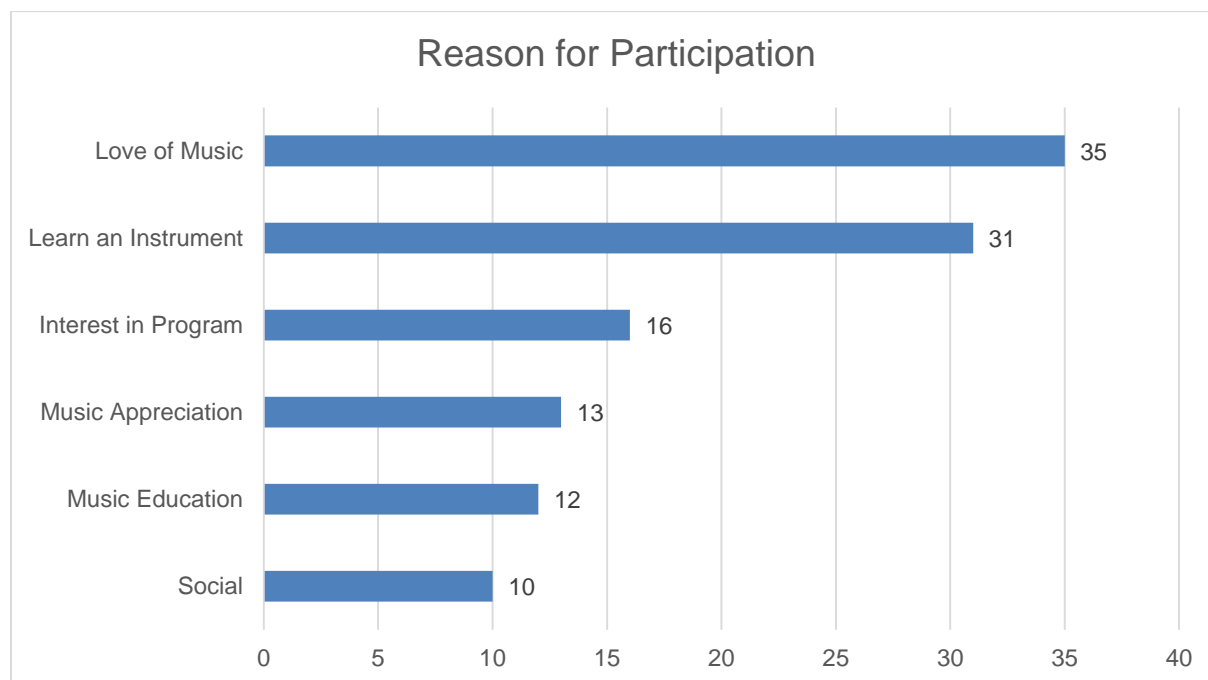


Figure 19. Number of parent/guardian responses on main reason for child’s participation in the program.

Parents were asked why their student joined Kids Orchestra. Their responses ($n = 117$) were analyzed and coded (see Figure 20). Eight main categories emerged through this analysis (social, general interest in the program, learning an instrument, music education/skills, singing/voice, music appreciation, family values and love of music). Comments in the social category ($n = 10, 9\%$) included statements such as “to give him a good musical foundation and help him develop good social skills,” and “character development, focus, and fun.” Among comments about general interest in the program ($n = 16, 14\%$) were comments such as “he wanted to join,” and “was interested in an after-school program.” The category with the greatest number of comments was the love of music ($n = 35, 30\%$). Parents made such comments as their students “love music” and “really loves music!” Another category was music education ($n = 12, 10\%$). Parents stated “we want to continue and expand her music education,” and “they enjoy music and it develops other skills and abilities for the future.”

Learning an instrument was another category that emerged with comments ($n = 31, 26\%$) such as “to fulfill her dream of playing an instrument,” “this is a wonderful opportunity to gain exposure to a variety of musical instruments and techniques,” and “opportunity to learn to play instrument.”

Question 2. “Since starting to participate in Kids Orchestra, I notice my child...”

The next question asked parents/guardians to comment on any changes they have observed in their child since being a part of the program. Figure 17 indicates the number of comments in each of seven categories that emerged through analysis of parent/guardian comments ($n = 117$ (happy ($n = 27, 23\%$), attends to music ($n = 24, 21\%$), sings/plays more ($n = 17, 15\%$), more confidence ($n = 16, 14\%$), increased focus ($n = 14, 12\%$), better behavior ($n = 11, 9\%$), and academic improvement ($n = 8, 7\%$)).

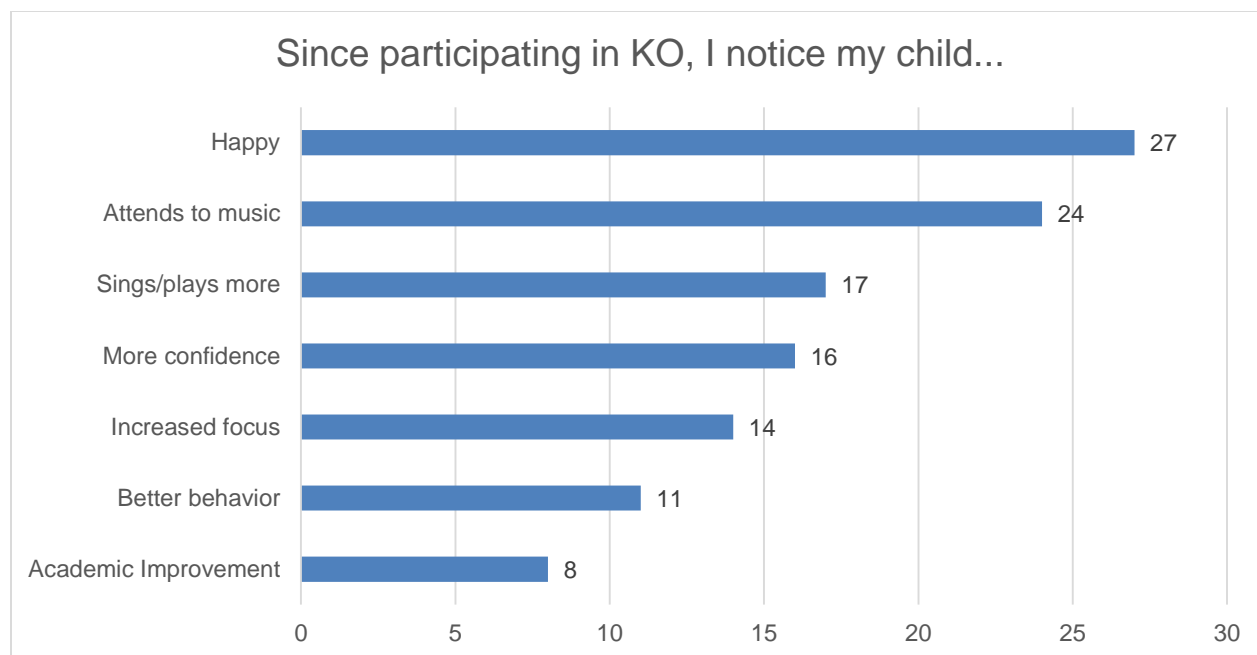


Figure 20. Changes observed in child since starting to participate in program.

Question 3. Aspects parents/guardians noticed change during their child’s participation in the program

The third question asked parents to mark certain areas (or supply others) that they think have been positively affected in their child who participates in Kids Orchestra (see Table 10 below).

Table 10. Number of participants who checked each statement in response to “check items that have improved since your child has been a part of the program”

Statement	<i>n</i>	%
Confidence	101	86%
Focus	94	80%
Peer Interaction	102	87%

Reading	96	82%
Math	89	76%
Attendance	86	74%
Behavior	92	79%
Attitude	97	83%

The most frequently marked factors were confidence ($n = 101$, 86%) and peer interaction ($n = 102$, 87%). Attitude was the second most frequently chosen factor ($n = 97$, 83%). Reading improvement was marked by 96 parents (82%) and focus was marked by 94 students (80%). Eighty-nine parents (76%) indicated math improvement and attendance was marked by 86 parents (74%).

Question 4. “The strongest benefit to my child(ren) participating in Kids Orchestra is...”

Parents were asked what the greatest benefit of participation was for their child. This open-ended question resulted in a total of 152 comments. These comments were then analyzed, coded, and sorted into four categories (school, general comments, social benefits, and musical benefits) (see Figure 21 below).

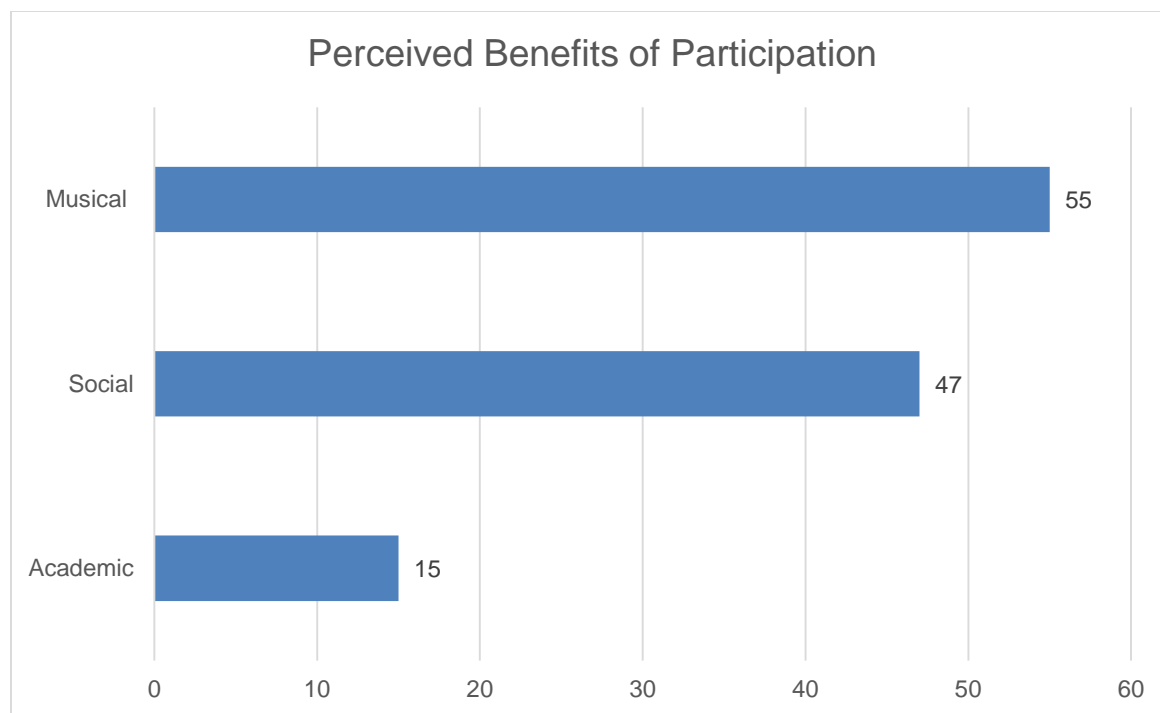


Figure 21. Number of comments in each category of perceived overall benefits of participation.

Question 5. Perceived drawbacks, something you would like to change

At the end of the survey questionnaire parents/guardians were asked what drawbacks they saw/experienced in the program or what they might like to see change. Most comments ($n = 75$, 64%) indicated no drawback or needed change (see Figure 22 below).

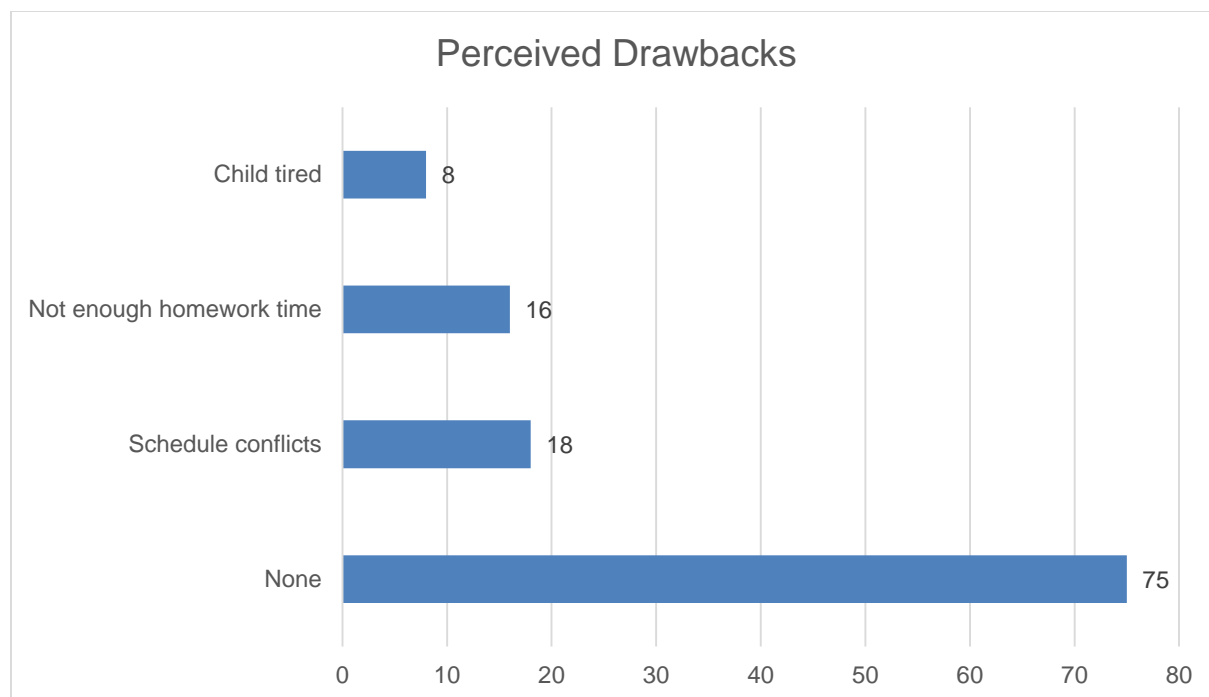


Figure 22. Number of comments in each category of parent comments on drawbacks of the program.

Overall, parents stated four main categories of drawbacks or desired changes. The most frequent comment was “none” or “nothing” ($n = 75$, 64%). The second most frequent comment category had to do with schedule conflicts ($n = 18$, 15%). These comments included statements about traffic, difficulty with parking, difficulty attending weekend rehearsals, or difficulty leaving work in time to pick up their child. Some respondents stated that it was difficult to complete their child’s homework at home after this program ($n = 16$, 14%) or that the children were more tired after an extended day ($n = 8$, 7%).

Method and Results - Classroom Teachers

Survey Questionnaire Instrument

The survey questionnaire instrument for this study was created through research into past surveys of similar organizations in the United States over the past five years. Research on

potential benefits of musical training and participation was also evaluated. Data and instruments from these studies elucidated possible topics of interest and focus as well as possible researched benefits (musical, social, other) of this kind of after-school music program for elementary students in an urban area of the United States.

The survey questionnaire instrument was then drafted and piloted with a small group ($N=5$) of adults in order to assess possible need for restructuring or alteration for clarity of language. Further, the researcher expected this instrument to be given to parents and guardians prior to a student performance. With this in mind, it was determined that the instrument should take no more than 5 – 7 minutes, on average, to complete. The pilot of the survey instrument proved to be very helpful in clarification of language, expected completion time, and question ordering. Edits were made and paper copies were made for each concert site. The survey contained demographic data questions, open ended question prompts, and a word checklist. The survey questionnaire was aimed at collecting data on parent/guardian perceived benefits of participation.

The survey was emailed to teachers at their school address. They were asked to return the survey within two weeks of receipt. The survey was sent at a time of year that avoided standardized testing and pre- or post- school holiday time. Completed surveys were sent to Kids' Orchestra staff or collected by staff within the two-week timeframe.

Demographic Data

Classroom teachers ($N = 13$) of children participating in the program for at least one semester completed the survey questionnaire. These data represent perceptions of classroom teachers of children in the program from 2 different area elementary schools.

Question 1. Aspects parents/guardians noticed change during their student’s participation in the program

The survey asked classroom teachers to mark certain areas (or supply others) that they think have been positively affected in their student(s) who participate(s) in Kids Orchestra (see Table 11 below).

Table 11. Number of participants who checked each statement in response to “check items that have improved since your student(s) have been a part of the program”

Statement	<i>n</i>	%
Attendance	11	77%
Homework	11	77%
Math	7	54%
Reading	7	54%
Writing	7	54%
Behavior	11	77%
Focus	11	77%
Peer interaction	11	77%
Self-confidence	11	77%

The most frequently marked factors were attendance, homework, behavior, focus, peer interaction, and self-confidence ($n = 11, 77\%$). Math, reading and writing were marked by 7 participants (54%) as showing positive change since participating in Kids’ Orchestra.

Question 4. “The strongest benefit to my student(s) participating in Kids Orchestra is...”

Teachers were asked what the greatest benefit of participation was for their student(s). This open-ended question resulted in a total of 13 comments. These comments were then analyzed, coded, and sorted into three categories (social, learning music or an instrument and creativity) (see Figure 23 below).

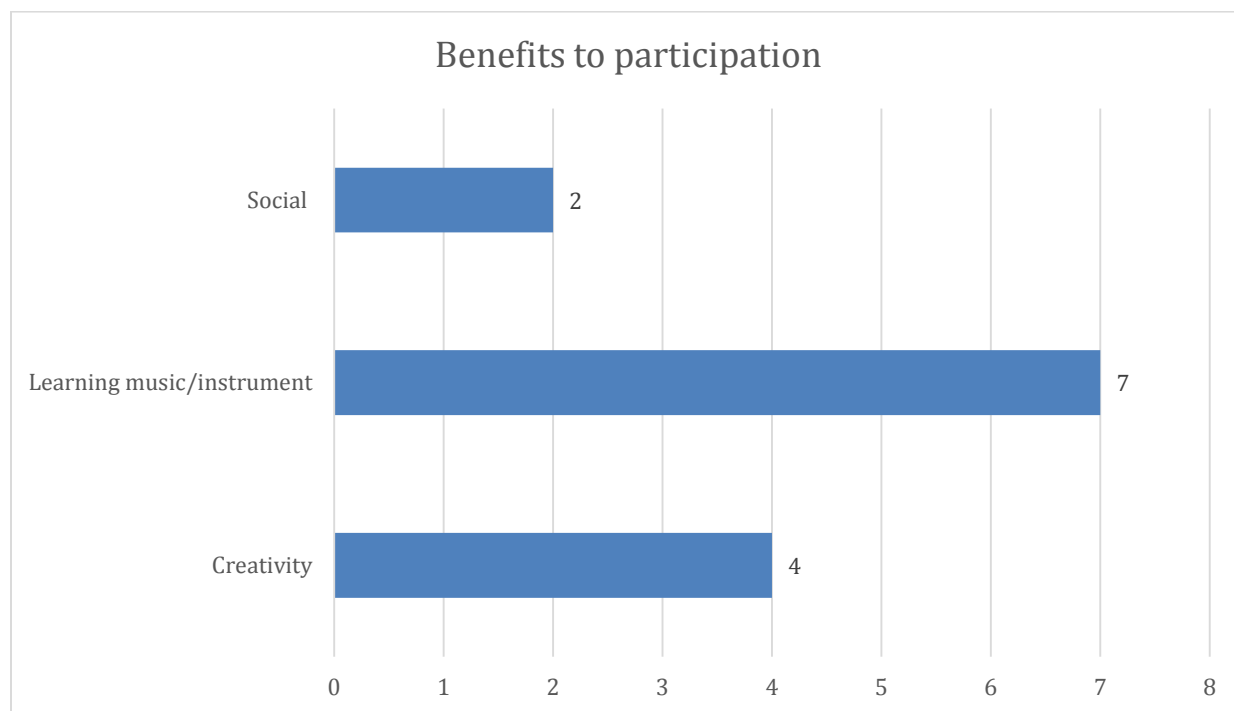


Figure 23. Number of comments in each category of perceived overall benefits of participation.

Method and Results - Teaching Artists

Survey Questionnaire Instrument

The survey questionnaire instrument for this study was created through research into past surveys of similar organizations in the United States over the past five years. Research on potential benefits of musical training and participation was also evaluated. Data and instruments from these studies elucidated possible topics of interest and focus as well as possible researched

benefits (musical, social, other) of this kind of after-school music program for elementary students in an urban area of the United States.

The survey questionnaire instrument was then drafted and piloted with a small group ($N=5$) of adults in order to assess possible need for restructuring or alteration for clarity of language. Further, the researcher expected this instrument to be given to parents and guardians prior to a student performance. With this in mind, it was determined that the instrument should take no more than 5 – 7 minutes, on average, to complete. The pilot of the survey instrument proved to be very helpful in clarification of language, expected completion time, and question ordering. Edits were made and paper copies were made for each concert site. The survey contained demographic data questions, open ended question prompts, and a word checklist. The survey questionnaire was aimed at collecting data on parent/guardian perceived benefits of participation.

The survey was emailed to teaching artists. They were asked to return the survey within two weeks of receipt. Completed surveys were sent to Kids' Orchestra staff within the two-week timeframe.

Demographic Data

Teaching artists ($N = 7$) of children participating in the program for at least one semester completed the survey questionnaire. These data represent perceptions of teaching artists of children in the program from various area elementary schools.

Question 1. Aspects teaching artists noticed change during their child's participation in the program

The survey asked classroom teachers to mark certain areas that they think have been positively affected in their child who participates in Kids Orchestra (see Table 12 below).

Table 12. Number of participants who checked each statement in response to “check items that have improved since you have been a part of the program”

Statement	<i>M rating</i>	% Rating positive change
Musical knowledge	4.71	100%
Musical skills	4.57	100%
Attitude	4.43	100%
Attendance	3.43	30%
Focus	4.00	85%
Social interaction	4.71	85%
Self-confidence	4.43	85%
Attitude	3.86	71%

The most frequently marked factors were musical knowledge, musical skills and attitude. These factors were rated by 100% of teaching artists. Focus, social interaction, and self-confidence were also rated as high positive change. artists as evidencing positive change while participants attended Kids’ Orchestra.

Conclusion/Discussion

Overall, the data collected through the use of child and parent/guardian survey questionnaires indicated many perceived benefits of participation. Like previous research showing that students who participate in musical training may experience academic, cognitive, social, and behavioral benefits, this study indicated many perceived benefits of participation.

The questionnaire used in this investigation gathered demographic data as well as asking children and parents/guardians about their perception of the program, teachers, and overall experience. Overall, therefore, most of the children said participating in the program made them feel happy. Many of the children in this program live in low SES households, attend schools with poor infrastructure, and face many difficulties such as not having enough food or appropriate clothing. It could be concluded, therefore, that this program is an important part of their lives, helping them to feel happy each week.

Child participants in grades 2 – 5 most often stated that their reason for being a part of the program was to learn an instrument or about the voice and their favorite thing about being in the program was singing or playing an instrument. Parent responses to why their student participated included love of music, interest in learning to play an instrument, and interest in the program.

The majority of students agreed that participating in the program makes them feel like they are good at something, like I'm a musician, I understand music better I am part of a team, more confident, and I can face challenges and succeed. Changes observed by parents since their child began participating in the program include: better behavior, academic improvement, increased focus, more confidence, sings/plays more, attends to music, and is happier. Top areas of change noticed by parents/guardians in students since participation included confidence, attendance, math, reading, behavior, focus, peer interaction, self-confidence, and attitude toward school.

At the end of each questionnaire, participants were asked about drawbacks that they would wish to change. The most frequent comment by child respondents in what they wished was different was “snack” or “food.” Most parent/guardian comments regarding drawbacks were “none” or “nothing” while other parents/guardians commented on things such as commute

or schedule difficulties and more homework time. These responses indicate that the majority of children and parents are satisfied with the program as it stands.

This line of investigation will continue with efforts to gain further insight by examination of the impact of an after-school music experience (orchestra and choir) on elementary school children's perceptions. Academic success, attendance, musical skills and knowledge, and behavioral/social outcomes (empathy, leadership, resilience, teamwork, and understanding of differences) will continue to be explored through observation, interviews, school records, and musical assessments. Further, teachers (classroom, music and after-school music) and administrators will be surveyed and interviewed. These additional sources of information and perspectives may offer further insight into the experience of the children in the program.

Research indicates that children who live in persistent poverty have an even greater risk of suffering detrimental effects on academic achievement and socioemotional functioning than students who experience occasional poverty (Gottlieb, Adler, Gottlieb, & Wishner, 1994; McLoyd, 1998). According to the Children's Defense Fund (2009), nearly 18% of children in the U.S. are poor and almost 8% of children in the U.S. live in extreme poverty. Low SES, family poverty, and living in an economically disadvantaged neighborhood are factors that can contribute to lower academic achievement, and an increase in socio-emotional problems at school. Programs such as Kids Orchestra that target students in low SES families and schools may offer a positive experience for children to learn, gaining skills and knowledge that may be transferred to the school day – academic, social, and emotional.

Convergence of Data

In comparing the survey and grade data, there are several interesting points of interest. First, classroom teachers most frequently marked factors were attendance, homework, behavior,

focus, peer interaction, and self-confidence. Parents /guardians most frequently marked factors were self-confidence, peer interaction, attitude, reading, and focus. Over 80% of students marked many factors including confidence, teamwork, like I'm a musician, have more friends, like different kinds of music, can face challenges and succeed, good at something, and better at math as getting better since they started in Kids' Orchestra. Grade data shows mean grades for Kids' Orchestra students in language, math, conduct, and science were 15% or more greater than those who did not participate during the 2015-16 school year. Further, in 2016-17, mean grades for Kids' Orchestra students in music, conduct, science, work habits were 15% or more greater than those who did not participate.

Student conduct is a key to academic and social success. This graded item includes behavior and focus but might also be influenced by such factors as self-confidence, teamwork, and peer interaction. Parents/guardians, teachers and students all marked these factors as showing positive improvement coinciding with Kids' Orchestra participation. On average, Kids' Orchestra students scored, on average, 15% or higher during both 2015-16 and 2016-17 school years based on grade score data.

Other findings showed similar convergence. For example, a majority of students marked that they were better at math and grade scores indicated this to be true. In 2016-17 student grade scores in work habits and music were also, on average 15% or more above the district average. Students marked that they felt like a musician, they were good at something, they could face challenges and succeed. These statements support a similar quantitative and perceptual finding.

There are many benefits to students participating in Kids' Orchestra. Their grades and perceptions, as well as the perceptions of their teachers and students, indicate a high level of

achievement. Students who participate in Kids' Orchestra are finding success in many facets of their lives both academically and socially.

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