

Positive Impact of a Symphony's Support of Elementary Music Education

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### Abstract

Professional music performance organizations represent a frequent, high-profile force in formal education today. A fundamental challenge these programs face is whether or not they actually accomplish what they intend in terms of student outcomes. This paper describes outcomes associated with the Adopt-A-School Program, a semester-long, intensive, multi-featured outreach effort to public elementary schools offered by the Saint Louis Symphony Orchestra. The program targets elementary schools, with students participating in classroom and extracurricular activities related to orchestra awareness, music terminology, and music experience. Working with pre/post testing of a sample of treatment and comparison second-grade classrooms from a large urban public school district, the authors applied two-sample independent t-test analysis that revealed statistically significant differences in gains between the samples. They found significantly greater gains overall in the treatment group, including in knowledge of instruments and attitude towards music. The Adopt-A-School Program resulted in enhanced learning and more positive attitudes about music and the orchestral experience. Applicability of the methods used in this research analysis to other outreach activities conducted by professional music organizations also is addressed.

### Keywords:

Elementary education, second grade, orchestra-school partnership, outreach, partnership, symphony

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## Introduction

Professional music performance organizations represent a frequent, high-profile force in formal and community education today. In addition to traditional programs that offer performance-focused exposure opportunities and young-artist support, many of these organizations commit themselves to the support of formal education's music curricula, partnering with schools and school districts in their communities to augment music classes in various ways.

These efforts share the same challenges faced by other arts organizations as they seek to positively influence formal arts education, stimulate student interest and understanding, and build audiences. As the role of community education partnerships between the arts and schools has increased in recent decades, so have these challenges. Building and sustaining workable relationships with schools and school districts, providing resources and support that are relevant to established curriculum, and maintaining funding support for these efforts are among the concerns with which arts organizations and their school partners contend.

Perhaps the most fundamental challenge faced, in those cases where specific objectives are stated, is whether or not the programming and associated resources provided actually accomplish what they intend (DeNardo, 1997). After the commitment of talent, funding, time and energy to develop partnerships, do the activities make a measurable positive difference?

This question is not empirically addressed – nor convincingly answered – as frequently as one may expect. University-based collaborations have been the subject of research and outcome assessment, but the contexts of music organization outreach support pose additional challenges (Campbell, 2008; Soto, Lum, and Campbell, 2009). Certainly the lack of resources set aside for evaluative research and a lack of readily available research support are among the reasons for

this lapse. The undertaking of a research component on top of the considerable work required to implement an arts education program of the type discussed here must appear daunting, especially in arts arenas such as music where the assessment of success in performance is well-developed but not necessarily relevant to all classroom purposes. Issues of instrumentation and appropriate analyses especially are challenging where such activities are not a built-in component of the program implementation. Finally, an underlying focus on building new audiences through performance exposure, itself a logistically demanding enterprise, remains as central as when reported more than 50 years ago (Hoffer, 1958).

This paper reports on the work of the Saint Louis Symphony Orchestra (Symphony) in evaluating its Adopt-A-School program, in order to assess the efficacy of its partnership with area schools in supporting their early music education (second grade) curriculum. As the Symphony also desires to create a coherent curriculum that can be disseminated to other symphonies across the country to support similar programming, an understanding of its impact is even more important.

#### Saint Louis Symphony Orchestra's Adopt-A-School Program

As part of its education and community partnerships outreach activities, the Saint Louis Symphony Orchestra has delivered the Adopt-A-School Program to selected second-grade classrooms in St. Louis area schools since the 2003-2004 school year. The program has undergone refinement over time, but its core collaboration of students, music teachers, their schools, Symphony musicians and staff to provide a focused music education program has remained consistent. Unlike some other similar collaborations, school administrators were open to Symphony input and lesson planning (Kushner, 1991).

The Adopt-A-School Program comprises a semester-long (16-week), intensive, multi-featured outreach effort to public elementary schools offered by the Saint Louis Symphony Orchestra's Department of Education and Community Partnerships. The program targets elementary schools and involves participating students in a variety of activities related to orchestra awareness, including interactions with Symphony musicians and staff. Various configurations of interaction are possible, from single, large group visits in one school to multiple intensive visits on an ongoing basis with students at one grade level within a school.

Much of the program's classroom work is led by Symphony musicians. The musicians represent each of the instrument groups of strings, percussion, woodwinds and brass. Musicians are trained in interacting with young children and are familiarized with lesson plans by program staff. Relevant to potential replication, musicians receive community service credits for their participation. Musician time spent with the program therefore is offset by musicians being excused from orchestra performance time.

The school-based portion of the program is designed to provide classroom sessions during music class. Orchestra staff and musicians representing the four instrument families lead the sessions. Students see and listen to the musicians play their instruments. For example a woodwind ensemble will play a short piece written for their instruments. Staff and musicians talk about how the instruments produce sounds, which instruments produce higher or lower sounds, and answer questions from the students. Questions may focus on how musicians became interested in playing music, how their careers developed, and how it feels to play in an orchestra, as well as more in-depth information about the instruments.

The stated goals of the program are to (1) increase students' understanding of the orchestra, (2) provide support for curriculum in other content areas, and (3) improve students' attitudes about music.

The Adopt-A-School Program is implemented in several school districts. However, it has been especially focused on building and sustaining a partnership with St. Louis Public Schools, the large urban school district in which the Symphony resides.

An independent St. Louis research and evaluation firm contracted with the Symphony to assess the success of the program in meeting these goals, and to ascertain results with as much statistical confidence as possible given the relatively small numbers involved in a given year. Evaluative work took place during three time periods between 2005 and 2009. This paper describes research into the impact of the program in five classrooms in two participating St. Louis Public Schools, compared to the experience of two classrooms in two comparison schools in the same district that implemented comparable music curriculum.

The focus on program implementation in one city school district helped to reduce variation in demographic characteristics and other potential confounding factors. The use of treatment and comparison schools was a quasi-experimental design in that schools and classrooms were not chosen randomly. However, the use of comparison schools did provide a context for examining treatment gains.

## Methods

### Design

The evaluation used a comparison group design to compare treatment and non-treatment students from schools with similar demographic characteristics. Teachers volunteered their classes to participate in the project with varied levels of active participation by the teachers. A

pretest and parallel form of posttest designed by the evaluators were administered to students at the beginning and the end of the semester program. The tests were designed to be age appropriate, with both pictures of instruments for purposes of orchestra location and quality of tone, and smiling, frowning and neutral facial expressions serving as the potential answers to 12 items on knowledge of instruments (three items), musical terminology (two items), and attitude (seven items).

### Subjects/Participants

As noted, subjects were second-grade students in a large urban school district. Students in five classes at two schools that participated in the Adopt-A-School Program were compared to students in two classes in each of two comparison schools. A total of 108 treatment students and 53 comparison students were included in the research. Comparison districts were selected by the district as good matches to the treatment schools, with teachers in a position to conduct the necessary testing. All schools have similar student demographics, with relatively high rates of free/reduced lunch (treatment schools: 79-93%; comparison schools: 89-96%) and largely non-white student bodies (treatment schools 63-97%; comparison schools: 76-90%).

Despite the disparity in number of students between the groups, the sample sizes were sufficient to enable statistical tests for significant differences between the two groups. Data collected from comparison teachers showed that the curriculum presented by both the comparison classes and the Adopt-A-School curriculum were similar in content and concepts. This curriculum aligned with the music curriculum guidelines in effect in the school district at the time the program began.

### Procedure

Test forms were distributed to participating treatment and comparison group teachers for delivery to students. Pretests were delivered no later than the week after the first session of the program and posttests were delivered within a week following the last session. Teachers followed a script and read the questions to the second-graders, making sure they were answering the question on the proper line of the test sheet. Completed tests were collected by Symphony staff and scored by evaluators. Analyses were conducted as described.

## Results

Using independent t-tests for the group analyses, pretest scores between treatment and comparison groups were not statistically different for the total score or for any subtest. This finding supports the assumption that students in both groups entered their courses with comparable levels of knowledge and similar attitudes. Table 1 presents the results of the gain score analysis. Following program implementation, the mean gain on the total score for the treatment group was significantly higher than for the comparison group ( $p \leq .05$ , effect size = .49). The effect size of .49 standard deviation units means that the average scoring student in the treatment group is estimated to have a posttest score that is greater than approximately 69% of the comparison students' posttest scores.

Table 1. Gain Score Results for Treatment and Comparison Groups

<Insert Table 1 about here>

When results for the three domains of the test were considered separately, the treatment group showed significantly higher gains for knowledge of instruments ( $p \leq .05$ , effect size = .58) and attitude about music and the symphony ( $p \leq .05$ , effect size = .49)

## Discussion



The Adopt-A-School Program was shown to have a significant effect on treatment students in terms of knowledge of instruments, attitude, and generally on program concept, compared to implementation of similar curriculum without symphony engagement in comparison schools.

Attitudinal change and the meaning of attitude are topics of considerable interest in the field, but interpretation of results require sensitivity due to the flexibility and changeability of abstract opinions held by young populations (Abeles, 2004; Byo, 1991). With that said, it would not be surprising that direct contact with instruments and musicians over an extended period of time would result in increased familiarity, comfort and positive feelings about the Symphony and related concepts.

Of additional interest is the question of how practicable such assessment attempts may be for other music programs in which professional companies support classroom curriculum. The resources required for the evaluative analyses, above those needed for the program implementation, included the time required to develop and pretest the questions; conduct the consenting process; prepare, deliver, collect and score the tests; and analyze, interpret and report results. Such an effort requires informed support and cooperation among school administration, teachers, performance organization representatives, and data analysts, in addition to students and their parents. The effort presupposes Symphony education staff available for support.

The degree of commitment from Symphony musicians affects replicability, as the time is not strictly donated but must be factored into the full schedules of the musicians' work under union agreements. The commitment required is orchestra-wide, not dependent on the interests of individual musicians.

What was learned? The Adopt-A-School Program works in the classroom setting to enhance young students' knowledge of musical instruments. Students with comparable curriculum but

without the Symphony program did not achieve the same results. Attitudes of treatment students showed greater gains, and the gains for these two domains were enough for overall gains in treatment students to exceed those for comparison students. Despite the small scale of the research, the results offer both evidence of the efficacy of the program and indications where further refinement may improve results from later implementation. The lack of evaluation of such music programs, focusing on specific learning objectives and using responsible analytic techniques, would hinder such understanding and yield results that could be cited for public relations purposes but not as proof of the efficacy of the treatment or the resources used. The fact that the Saint Louis Symphony Orchestra and its school district partner have committed themselves to such evaluation of their Adopt-A-School Program means that evidence-based information is available to help further address challenges, refine implementation and improve results for students.

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Table 1. Gain Score Results for Treatment and Comparison Groups

	Group	N	Mean	Standard Deviation	Gain	<i>t</i>	<i>p</i>	Effect Size
Pretest	Treatment	104	11.2	2.7		0.04	NS	
	Control	52	11.2	2.8				
Posttest	Treatment	76	13.7	2.4	2.5	2.0	.018*	.49
	Control	43	12.8	4	1.3			

\**p* < .05