



# **Project ARISE** **(Arts Residency Interventions in Special** **Education)**

2010 Final Performance Report to the US Department of  
Education



Prepared with the assistance of

the **ImproveGroup**™

## Table of contents

|   |    |
|---|----|
| Overview of quantitative data sources .....   | 3  |
| Section A-1 Complete evaluation and program planning activities .....   | 5  |
| Section A-2 Percentage of participants who benefit from standards-based arts<br>education and meet state standards in the arts will increase. ....              | 8  |
| Section A-3 Improve teaching methods of artists and teachers through<br>identification of curricular and pedagogical best practices and problem<br>solving..... | 9  |
| Section A-4 Improve student understanding of artistic processes and values .....  | 14 |
| Section A-5 Develop and improve pro-social behavior through the affective<br>dimensions of performing art.....  | 19 |
| Section A-6 Improve student critical thinking in and through the arts.....  | 28 |
| Section A-7 Use the performing arts to positively impact academic<br>performance .....  | 33 |
| Section A-8 Increase access to General Education for students in Special Day<br>Classes through behavior improvement .....                                      | 40 |
| Section A-9 Increase sustainability of the performing arts by institutionalizing<br>performing arts education in school settings.....                           | 46 |



## Overview of the ARISE program

The Artist Residency in Special Education (ARISE) program is a performing artist residency program. Through the program, performing artists are matched with a school based on the school's interests and availability. Several classrooms from each school participate. The program serves a mix of students. In general education classrooms, students with special needs and their peers are served together. In special day classes, all students have special needs.

Artists work in each classroom for about one hour per week for between 20 and 30 weeks, approximately the length of the school year. The ARISE residencies emphasize critical-thinking while engaging in the creative process, using the Performing Arts Workshop model of artistic inquiry.

### Overview of data sources

To measure the performance objectives, Performing Arts Workshop and their external evaluator, the Improve Group, used several sources of data.

**Student surveys** were completed by comparison-group and treatment-group students twice; once at the beginning of the residency period in fall, and again at the end of the residency period in spring. The target data for student survey indicators is a change in treatment-group survey responses that is greater than a change in comparison-group indicators. Cumulative data is presented from the 2007-08, 2008-09, and 2009-10 school years.

**Teacher surveys** were completed by comparison-group and treatment-group classroom teachers once at the end of the residency period. The teacher survey questions used a retrospective pre-test model; teachers were asked to rate their opinion or experience at the time of the survey and to reflect back to the beginning of the school year to rate their opinion or experience at that time. The target data for teacher survey indicators is a change in treatment-group survey responses that is greater than a change in comparison-group indicators. Cumulative data is presented from the 2007-08, 2008-09, and 2009-10 school years. Teachers also participated in focus groups to share more in-depth information about their perceptions and observations of the program; these were facilitated in-person in the 07-08 and 08-09 school years, with an online option added during the 09-10 year.

**Artist surveys** were completed by teaching artists once at the end of the residency period. The artist survey questions used a retrospective pre-test model; artists were asked to rate their opinion or experience at the time of the survey and to reflect back to the beginning of the school year to rate their opinion or experience at that time. Since there is not a comparison-group for artists, the target data for



artist survey indicators is a measurable change in student outcomes from the beginning of the residency period to the end. Cumulative data is presented from the 2007-08, 2008-09, and 2009-10 school years. Artists shared their impressions and observations during a focus group each year (administered in-person in the first two years and online in the final year).

Evaluators also analyzed school **attendance records** and **California State Test (CST) scores** of students in comparison-group and treatment-group schools. The target data for attendance records is stronger attendance for treatment-group students than for their comparison-group peers. The target data for CST scores is a stronger improvement in treatment-group students' scores than for their comparison-group peers. Cumulative data is presented from the 2007-08, 2008-09, and 2009-10 school years.

Classroom residency observations are another quantitative tool used to measure the project objectives. A select number of treatment-group classrooms with high student consent to participate in the evaluation were video-recorded during residency periods three times throughout the school year; only students with consent to participate in the evaluation were recorded. Then, senior artistic staff from Performing Arts Workshop and evaluators from the Improve Group determined an approach to ranking their observations and used a quantitative rubric during observations of the recordings; the same trained staff has rated observations for all three years of the evaluation and has used the same tools and standards for rating observations during this time. The observation forms were then analyzed to see the progression of students' artistic abilities and critical thinking skills, student teamwork and collaboration between teacher and artist. The target data for residency observation data is an observed improvement from the beginning of the residency period to later in the residency period; this could be at the middle of the residency (approximately 19 weeks into the residency) or the end of the residency (approximately 20 to 30 weeks into the residency). The residency observation tool was piloted in the 2007-08 school year, so cumulative data is presented from the 2007-08, 2008-09, and 2009-10 school years.





## Section A-1 Complete evaluation and program planning activities

|   |  |
|---|--|
| <b>1 Project Objective</b>                          | <input type="checkbox"/> Check if this is a status update for the previous budget period |
| Complete evaluation and program planning activities |  |

| <b>A Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
|--|---------------------|--------------------------|--------------|----------|--------------------------------|--------------|----------|
| Build relationship with and gain support from the San Francisco Unified School District.             | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     |                          |              | 100%     |                                |              | 100%     |
| <b>B Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
| Select schools for participation in evaluation activities of Years 2-4 of the grant period.          | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     | 8/8                      |              | 100%     | 8/8                            |              | 100%     |
| <b>C Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
| Select teaching artists for participation in evaluation activities of Years 2-4 of the grant period. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     | 12/12                    |              | 100%     | 12/12                          |              | 100%     |

### Explanation of Progress

#### **Measure A: Build Relationship With and Gain Support from SFUSD**

Performing Arts Workshop has sustained a strong relationship with the SFUSD Special Education Department during this entire evaluation period. Department staff sees value in Project ARISE (Arts Residency Interventions in Special Education) and the data that has come out of its evaluation. Although the Special Education Department at the San Francisco Unified School District (SFUSD) experienced turnover in the 2008-09 and 2009-10 school years, Workshop staff reached out to the new Executive Director of Special Education at SFUSD, who expressed enthusiasm and support for ARISE. District staff was involved in some of the initial kick-off meetings with participating classroom teachers. They gave



invaluable advice regarding useful incentives for participation, finding new ways to reach and ask questions of participants, and making the entire evaluation process simpler for participants.

In exchange, Project ARISE has supplied Special Education instructors of SFUSD with information on how the performing arts can be effectively taught in their classrooms and the benefits of receiving the Artists-in-Schools program now or in the future. For all three years of the program, Performing Arts Workshop held a Special Day Class Teacher Summit for Special Education classroom teachers, principals, and arts coordinators participating in ARISE, and staff from the District's Special Education office, including the Supervisor for Elementary Special Education and the Special Education Ombudsperson. This meeting, training and information exchange provided Performing Arts Workshop with an opportunity to ask teachers questions about their unique experiences with the ARISE program and in turn, allowed the Special Education teachers from different schools to share their experiences teaching students with special needs. The Summit also provided an opportunity to share promising practices identified in Years One and Two of Project ARISE. The meeting was a rare opportunity for collegial collaboration not otherwise offered to teachers by the SFUSD or any other entity. These meetings also involved an interactive workshop wherein participants experienced some theater exercises from ARISE classrooms that they could then take back to their classrooms.

In April of 2009 and January 2010, the Workshop's Artists-in-Schools Program Manager and Artistic Director presented an overview of Project ARISE to SFUSD Arts Coordinators during a meeting hosted by the Visual and Performing Arts office. The presentation emphasized ensuring access and equity in the arts among students with special needs along with offering key findings from the 2007-08 and 2008-2009 project years. At the request of the SFUSD, the January 2010 the meeting also included a professional development workshop, with the same audience, around the arts and Special Education.

### **Measure B: Select Schools and Classroom Teachers for Participation**

In September and October of 2007, Performing Arts Workshop completed selection of five treatment site and three comparison site public elementary schools in the San Francisco Unified School District. The process for school selection included the following steps: (1) identified schools that have similar numbers of Special Education students and types of services; (2) sent initial outreach letters to principals; (3) met with principals to describe the structures of the program and evaluation, including responsibilities of teachers and school staff; (3) led kick-off meetings with Special Day Class and Inclusion classroom teachers highlighting the structures, tasks and responsibilities of the ARISE Project program and the evaluation, including discussion of all surveys and other forms that they would be required to complete or return. All five treatment and three comparison sites continued with ARISE in



the 2008-2009 school year, and four treatment sites and three comparison sites continued with Project ARISE for the entirety of the 2009-2010 school year. An additional indicator of success in this area is that the schools themselves see ARISE as one of their critical programs and successes; two of the five treatment schools applied for and won the prestigious U.S. Department of Education “Blue Ribbon School” award in 2008-09, citing Project ARISE as one of the schools’ keys to success.

A total of 33 teachers in treatment classrooms participated in ARISE for at least one school year between September 2007 and May 2010; eleven of these teachers participated for all three years of the program and eight additional teachers participated for two years. Twenty-five teachers participated in the ARISE evaluation as comparison teachers for at least one school year between September 2007 and May 2010. Two of these teachers participated for all three years of the evaluation and six teachers participated for two years. Some teachers that had been involved in Project ARISE were unable to continue with the program because they were no longer employed by the school, or had no Special Education students in subsequent school years. Additional teachers were recruited for Project ARISE from treatment and comparison schools, using the same criteria from the previous school years. Teachers were asked to participate if their third, fourth and fifth grade classrooms had one or more inclusion (Special Education) students.

### **Measure C: Select Artists for Participation**

Performing Arts Workshop created a team of teaching artists to serve in the ARISE Project residencies. These artists work as a team with the curricular guidance of an Artist Mentor who has significant experience teaching in Special Education settings and with the Performing Arts Workshop teaching methodology. The ARISE artist team meets monthly and on an as-needed basis to discuss promising strategies for engaging students as well as common challenges. Throughout the three-year evaluation period, a total of 12 teaching artists worked with ARISE classrooms.

### **Additional supporting data**

Performing Arts Workshop has disseminated research findings through conferences and publications. Workshop staff presented findings on ARISE in a session at the American Association of Theatre Educators’ annual conference in August 2010, the Arts Education Partnership’s forum in October 2009 and at the Support for Families of Children with Disabilities annual conference in March 2010. Additionally, the Workshop published findings from ARISE reports on [www.issuelab.org](http://www.issuelab.org), an online clearinghouse of non-profit research. Disseminating findings helps increase the sustainability of the performing arts education by conveying the importance of performing arts education in school settings.



## Section A-2 Percentage of participants who benefit from standards-based arts education and meet state standards in the arts will increase

|   |  |
|---|--|
| <b>2</b> Project Objective                          | <input type="checkbox"/> Check if this is a status update for the previous budget period |
| GPRA Performance Measure #1 Indicator<br>8.1.1 of 1 |  |

| A Performance Measure  | Measure Type | Quantitative Data |       |   |                         |       |   |
|--|--------------|-------------------|-------|---|-------------------------|-------|---|
|  |              | Target            |       |   | Actual Performance Data |       |   |
|  |              | Raw #             | Ratio | % | Raw #                   | Ratio | % |
| Percentage of participants who benefit from standards-based arts education and meet state standards in the arts will increase. | Project      |                   |       |   | 1,039                   |       |   |

### Explanation of Progress

Measure A: During the 2007-08, 2008-09 and 2009-10 school years, **Performing Arts Workshop served about 11,000 students in twenty-seven K-12 schools with its Artists-in-Schools residency program. Twenty-two of these schools are in the San Francisco Unified School District, two are in the Jefferson Unified School District, one is in the Pacifica School District, one is in the Hayward Unified School District, and one is in the Berkeley Unified School District.**

From September 2007 to May 2010, Performing Arts Workshop served 1,039 students in five schools in the San Francisco Unified School District through the ARISE Project with its Artists-in-Schools program. Of all students participating in Project ARISE, 85 students were served in Special Day classes and 278 students participated in ARISE for at least two of the three years the program was offered in their school.

The ARISE Project is funded through the Arts Education Model Development and Dissemination grant program. These residencies were also funded by grants from the San Francisco Department of Children, Youth and their Families (DCYF), the Stulsaft Foundation, the California Arts Council, Cisco Systems and the local Zellerbach Family Foundation. Three of the five treatment schools provided matching funds to support Project ARISE in their schools.



### Section A-3 Improve teaching methods of artists and teachers through identification of curricular and pedagogical best practices and problem solving

| 3 Project Objective   | Check if this is a status update for the previous budget period |
|---|---|
| Improve teaching methods of artists and teachers through identification of curricular and pedagogical best practices and problem solving. |   |

| A Performance Measure   | Measure Type | Quantitative Data |         |       |                         |       |     |
|---|--------------|-------------------|---------|-------|-------------------------|-------|-----|
| General Education teachers in AIS classrooms report greater confidence in reaching students in Special Education than comparison-group teachers, as measured by teacher surveys and focus groups. | Project      | Target            |         |       | Actual Performance Data |       |     |
|   |              | Raw #             | Ratio   | %     | Raw #                   | Ratio | %   |
|   |              |                   | > 10/26 | > 38% |                         | 45/54 | 83% |

- Data source: Teacher responses to open-ended survey items. See Explanation of Progress below.

| B Performance Measure   | Measure Type | Quantitative Data             |       |   |                             |       |   |
|---|--------------|-------------------------------|-------|---|-----------------------------|-------|---|
| Teachers and artists identify strategies for using the performing arts to teach students in Special Education and mainstreaming classrooms, as measured by teacher and artist surveys and focus groups and action research process notes and reports. | Project      | Target                        |       |   | Actual Performance Data     |       |   |
|   |              | Raw #                         | Ratio | % | Raw #                       | Ratio | % |
|   |              | > 0.2 change on a 10-pt scale |       |   | 1.5 change on a 10-pt scale |       |   |

- Data source: Changes in teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.



| C Performance Measure  | Measure Type | Quantitative Data                       |       |   |                                       |       |   |
|--|--------------|---|-------|---|---------------------------------------|-------|---|
| Partnerships between teachers and artists lead to best practices and usable curricula, particularly for reaching students in Special Education and mainstreaming classrooms, as measured by teacher and artist surveys, teacher and artist focus groups and action research reports. | Project      | Target                                  |       |   | Actual Performance Data               |       |   |
|  |              | Raw #                                   | Ratio | % | Raw #                                 | Ratio | % |
|  |              | > 0.4<br>change<br>on a 10-<br>pt scale |       |   | 1.6<br>change<br>on a 10-<br>pt scale |       |   |

- Data source: Changes in teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

| D Performance Measure   | Measure Type | Quantitative Data |       |      |                         |       |     |
|---|--------------|-------------------|-------|------|-------------------------|-------|-----|
| Artists improve the adaptability of their lesson plans to Special Education environments. | Project      | Target            |       |      | Actual Performance Data |       |     |
|   |              | Raw #             | Ratio | %    | Raw #                   | Ratio | %   |
|   |              |                   |       | >44% |                         |       | 55% |

- Data source: Residency observations taken at beginning-of-year, mid-year and end-of year. See Explanation of Progress below.

**Measure A:** The target data for open-ended teacher survey responses is having a higher presence of the item in treatment-group teacher survey responses than in the comparison-group teacher survey responses. General Education and Special Education teachers in Artists-in-Schools (AIS) classrooms reported greater confidence in reaching students in Special Education through the performing arts when compared with comparison-group teachers. In open-ended responses in the teacher survey, 83% of teachers in treatment classrooms (45 of 54 teachers) reported they felt that their students made gains through using the performing arts in the classroom by the end of the school year. In contrast, 38% of teachers in comparison classrooms felt that their students made gains through using the performing arts in the classroom (10 of 26 teachers). In focus groups, teachers in treatment classrooms discussed the ways that the performing arts impacts students in Special Education by offering them opportunities to feel successful in the classroom and giving them an opportunity to be on “equal ground” with mainstream students.

**Measure B:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teacher surveys show that Special Day Class and General Education teachers in treatment classrooms show



significantly greater gains in their comfort trying new techniques in the classroom (1.5 points gained from pre-test to post-test on a 10-point scale) than do comparison group teachers (0.2 points gained from pre-test to post-test).<sup>1</sup>

**Measure C:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teacher surveys show that partnerships between teachers and artists lead to promising practices and usable curricula, particularly for reaching students in Special Education and mainstreaming classrooms. Teachers in treatment classrooms show significantly greater gains in their comfort assessing the quality of their students' dance or theatre work (1.6 points gained from pre-test to post-test on a 10-point scale) than do comparison group teachers (0.4 points gained from pre-test to post-test).<sup>2</sup> This indicates that teachers in treatment classrooms are benefiting from the partnership with ARISE teaching artists by learning best practices and usable curricula.

**Measure D:** The target data for residency observation indicators is an observed improvement in student demonstration from the beginning of the residency period to later in the residency period. Using a rubric to measure residency observations from the beginning, middle and end of the residency period, artists demonstrated improvement in using teaching methods appropriate to age and ability levels of students throughout the course of the residency. The first sets of observations were taken about 12 weeks after the residency started. Forty-four percent (44%) of observations from the beginning of the residency show that artists strongly displayed that they used teaching methods appropriate to age and ability levels of students, compared with 70% of observations at the middle of the residency and 55% of observations at the end of the residency.

Data from focus groups shows that teachers reported that artists generally improve the adaptability of their lesson plans to Special Education environments. In focus groups, teachers reported that artists work extremely well with students with disabilities or special needs. One teacher of a Special Day Class said that, "Our current artist has been wonderfully responsive and is quite vigilant about picking up on student strengths and individual needs." A General Education teacher added, "[The artist] seems really capable of meeting my students where they're coming from." Teachers shared that ARISE provides an opportunity for Special Education students to allow their strengths to come through and to feel successful in school. As one Special Day Class teacher explained, "[The artist] has done a nice job of

---

<sup>1</sup> Differences between treatment and comparison teachers are significant at the 0.05 confidence level.

<sup>2</sup> Differences between treatment and comparison teachers are significant at the 0.05 confidence level.





creating activities that make my students feel successful, whether it be through improv[isation], games, or exercises.”

### **Qualitative data**

#### ***Interaction and communication between teachers and artists***

Teachers and artists reported that during ARISE sessions teachers for the most part observe the class and help when disciplinary or communication difficulties surface. All artists agreed that teacher involvement was beneficial for the residency. As one artist explains, “When teachers participate in my classes, the class seems to have a stronger bond.” Another stated, “It has been really nice to have some teachers ask to be brought into the exercises. One of the things that I was hearing was that I was teaching too much verbally, and the teachers said that if I needed to display something, then we could do it together. So I have done that. Having him come up and display something with me, without me explaining it; that was really valuable.”

Teacher’s level of communication and collaboration with the artist is dependent on their own interests and what they seek out. The program requires two planning meetings between teachers and artists; teachers meet with the artist for their school at the beginning of the residency to discuss and schedule the year ahead and also midway through the residency to touch base. Several teachers reported that they email with artists or leave notes back and forth to check in about how things are going. Teachers say that artists should provide teachers with lesson objectives and periodically talk with them about student needs.

#### ***Artists’ approach to teaching and adjustments for students’ needs***

According to focus groups, artists use a framework to accomplish the overall goals of the lessons based on student and teacher needs, the length of the residency and the artist’s background. The teaching spaces used by all teaching artists are “home space” (warm-up activity in a circle), “dance space” (all students perform activities) and “theater space” (students watch other students perform). During these “spaces,” artists teach students primarily through role playing and teaching vocabulary.

Most teachers state that artists are responsive to students’ needs and adjust their teaching methods accordingly. For example, artists make adjustments based on how quickly students grasp artistic concepts and vocabulary. In regard to Special Day Classes, teachers say it is important for artists to know when to slow down in teaching material to these students. One teacher of a Special Day Class said that the artist in her class has “been so responsive... He’s been able to build the structure of his class around my students’ needs... Like, if you had a fifty minute class, he has had to make it 30 to 35 minutes of material to accommodate my students’ attention spans. He’s really been able to read the students... In the last month, month and a half, I’ve seen a large positive shift.” Artists reported that one promising way to help Special Education students succeed was by establishing and adhering to rituals for the





residency so that students would know what to expect. Artists also repeated the same concept over and over with small variations to help the students gradually build their expertise.

### ***Examples of positive impacts on students***

One teacher explained, “[The artist] builds up to what he expects from the students. He explains it, and then there is a big group activity where they are practicing. Then he breaks it down into parts, and he has them all model, evaluate, and critique. And then they get sent off to do their small groups or whatever they are going to do for the rest of the day. For the ELL [English Language Learner] students this really boosts their confidence: they have a good concept of what is expected [through modeling], and then they are successful. I only have one inclusion student, and they do not face the same challenges [in the art activities] that they face in the classroom. At least with mine, [the artist] makes it so interesting... What he is doing really works.”

Teachers felt that the performing arts activities assisted in mainstreaming Special Education students. A teacher explained how the performance activities allowed one student to participate in ways he is not normally able to, “I have one RSP [Resource Specialist Program] student who actually doesn’t speak much English, but he was amazing in theatre class. He was actually one of the best actors. He is amazing in taking what [the artist] is teaching him and using it. He participates quite often, and he is included in the activities quite often.” Another explained that their inclusion students do not have helpers in drama class and are able to participate just like any of their classmates - without assistance from aides.

### ***Tools that teachers adopted for use in the classroom***

Through ARISE, some teachers reported that they have learned techniques they regularly use in the classroom, such as clapping or beating rhythms to indicate transition time or that their students need to pay attention. Teachers also use theatre games to teach vocabulary and rhythm games to teach spelling. As one teacher described, “I try to incorporate movement when I teach vocabulary. We do movements to remember the words, in small reading groups.” Another added, “I have used the drum and instruments in my class for spelling: where they use the rhythm to spell out the words.” A third teacher said, “Specifically regarding using controlled movement in the class; I know that that is important to all of my special needs kids. Sitting is really challenging to them. The ARISE program will give me some ideas - especially [the artist] - on how to take two to three minute breaks to move around the room.” Teachers also reported that they have offered their students more choices for presentations than in the past. One teacher stated, “...now they have the tools to decide which approach they want to take. And they are doing that.”



## Section A-4 Improve student understanding of artistic processes and values

|   |   |
|---|---|
| <b>4 Project Objective</b>                                      | <input checked="" type="checkbox"/> Check if this is a status update for the previous budget period |
| Improve student understanding of artistic processes and values. |   |

| <b>A Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
|--|---------------------|--------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in AIS classrooms show growth in understanding and use of artistic vocabulary, as measured by surveys and focus groups. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     |                          | > 0/26       | > 0%     |                                | 6/54         | 11%      |

- Data source: Teacher responses to open-ended survey items. See Explanation of Progress below.

| <b>B Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
|--|---------------------|--------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in AIS classrooms demonstrate abilities to analyze performing arts demonstrations, as measured by artist surveys and focus groups and residency observations. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     |                          |              | > 78%    |                                |              | 82%      |

- Data source: Residency observations taken at beginning-of-year, mid-year and end-of year. See Explanation of Progress below.

| <b>C Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
|--|---------------------|--------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in AIS classrooms improve their abilities to create performing art, as measured by student surveys, artist surveys, and residency observations. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     |                          |              | > 29%    |                                |              | 36%      |

- Data source: Residency observations taken at beginning-of-year, mid-year and end-of year. See Explanation of Progress below.

### Explanation of Progress

**Measure A:** According to teacher focus groups and surveys, classroom teachers agree that the ARISE Project has improved student understanding of artistic concepts and vocabulary. The target data for



open-ended teacher survey responses is a higher presence of the item in treatment-group teacher survey responses than in the comparison-group teacher survey responses. In open-ended responses in the teacher survey, 11% of teachers in treatment classrooms (6 out of 54 teachers) specifically mentioned that their students learned artistic vocabulary during the school year, but none of the comparison group teachers reported that their students learned artistic vocabulary during the school year. In the focus groups, teachers shared that students have learned artistic concepts and the application of the terms. Teachers reported using the artistic concepts they see modeled during the residency to teach students other subjects. Classroom teachers observed that students have improved in their verbal and non-verbal communication abilities. Teachers said that understanding the concept of having or being an audience member and analysis of artistic concepts improved throughout the course of the ARISE residency.

**Measure B:** The target data for residency observation indicators is an observed improvement in student demonstration from the beginning of the residency period to later in the residency period. Residency observations were completed by program staff that have been involved in this process for three years. Using a rubric to measure residency observations from the beginning, students were observed making revisions to their work based on reflection slightly more at the middle and end of the residency compared to the beginning of the residency. Observations from the beginning of the residency show that students somewhat displayed reflection on what worked and what could be improved in their performance in 78% of cases, compared with the 80% of cases from the middle and 82% of cases from the end of the residency.

**Measure C:** The target data for residency observation indicators is an observed improvement in student demonstration from the beginning of the residency period to later in the residency period. Using a rubric to measure residency observations from the beginning, middle and end of the residency period, students demonstrated improvement in their ability to create performing art over the course of the residency. At the end of the residency, 36% of the observations reviewed indicated that students strongly displayed the use of vocalization to express emotion and feeling compared with 0% of the observations reviewed at the middle of the residency and 29% of the observations reviewed at the beginning of the residency.



## **Qualitative data**

### ***Teachers and artists agree ARISE has improved students' arts and language understanding***

According to focus groups, classroom teachers and teaching artists agree that the ARISE Project has improved student understanding of artistic concepts and vocabulary. At the beginning of the residency, students did not recognize the ARISE residency activities as “theatre;” however, by the end of the residency, students understand that they have learned a form of theatre. Teachers reported that students learn vocabulary related to theatre, such as act, improv, audience, performer, stage, stage directions, pantomime, tableaux, tempo, and tempo terminologies, such as allegro and adagio. In addition, teachers and artists reported that students demonstrate mastery of artistic concepts whether or not they learned the appropriate vocabulary.

Some teachers incorporate vocabulary from the residency into other aspects of their curriculum, while others do not. In both cases, teachers reported that they see their students use the vocabulary correctly outside of the residency in other classroom activities. An artist explains the growth he has seen, “I had a thing where we would sit down in a circle and say one word about how they did. Now we are working at a different level, and they are using more vocabulary... In the beginning, it was just trying to hear them, and now it is about wanting more words. They are all speaking loud enough to be heard. Now, when we are doing movement, I push them a little bit. I tell them that they are at an advanced level. I say ‘I need to hear you, I need to see you, I need to understand you, and you know how to do it.’ It takes it up a notch for them. I tell them that I know that they can do it, so they will reach for it... [A mentor artist] taught me to really highlight when someone was doing something great, and then we all get excited.”

During the course of an action research project, a teacher particularly noted how the structure of the sessions strengthens the vocabulary for ELL students through creative application and reinforcement. As the teacher stated, “This format provided ELLs an opportunity to acquire new concepts and language and to fully apply higher order thinking skills to these concepts.”

### ***Students applied what they learned***

Artists report that the metrics to best assess student learning through the arts are (1) student actions and quality of questions they ask, (2) incorporation of new concepts as students participate in the class, (3) personal reflections and (4) level of participation.

Several teachers described how their students applied skills learned in the residency to other class presentations, such as poetry readings, history presentations, performing plays, or singing songs.

The concept of “rehearsal” was found to be particularly important in the teacher action research focusing on ELL students. Students still learning English can apply this concept to their everyday situations. In theatre class, they decide how they can improve upon a performance and self-monitor

*Prepared by:*



when they are ready to perform. In their everyday interactions in English, they also employ this skill. As the teacher explained, "Rehearsal is an important skill for ELLs because preparation and mastery builds self-confidence. Rehearsal also gives ELLs the opportunity to consider and practice with the form, nuances and meanings of the English language. Finally, the repetitive process of rehearsal develops fluency and is a discipline that students learned to apply in other subject areas. The process of rehearsal also fine tunes students' metacognitive skills."

### ***ARISE has advanced students' interpersonal skills and individual qualities***

Teachers across schools valued that students not only learn how to perform through ARISE, but also how to be a respectful audience member. Throughout the course of the school year, students have gained an appreciation for performers, as they have realized how difficult it is to get up in front of others and perform. An artist explained, "I think it is really important to put these students in a situation where they are challenged to be respectful. Not just asked, but challenged to be respectful... They are being challenged to be brave [by performing] and they are challenged to be respectful as audience members." As another teacher shared, "Students in my class have become more brave, and have volunteered in the school talent show. They also enjoy seeing others perform and have become more appreciative audience members when we have school performances." Another added, "Also I think the kids started to see the amount of work it takes to perform, rather than just jumping on stage and expecting everything to work."

Teachers have seen their students be more respectful when their peers are performing, and they are also more attentive when going on class trips to concerts, plays or other performances. Teachers expressed that students have learned and understand more clearly the concept of performance through the residency. A teacher described, "I think for the kids, the biggest change that I have seen is that, in the beginning of the year they were acting for themselves. They had a lot of fun doing things, but now they have turned their focus and if you have them in a group, they are performing for each other. They now realize the purpose of a performance, so they have changed their focus to more of what is going on with the audience. This is more with the fifth graders: the fourth graders are still real self-centered. But the fifth graders are more focused, they rehearse, and they practice what they would like to get across. They have changed their focus and their awareness."

Students are more comfortable in front of the class, even outside of the residency. As one Special Day Class teacher shared, "This has been the 3rd year that my students have had this program and each year it has been different, and so I think it has given them an awareness of different ways in which they can express themselves, and that it doesn't always have to be verbally, which they struggle with. My students actually performed twice for the school this year; at a school wide assembly, where they did the Can Can dance and sang a song, as well as in their mini opera. Three years ago, they struggled to go up on stage and recite a poem... [Now my students display increased knowledge and competence in] using their body as their language [through] facial expressions, self-control, [and] story/theater



elements.” Teaching artists also observed that students are more comfortable in front of people, as one shared in a survey, “My 5th graders from [one teacher’s] class have each told me that they thought theatre would be scary but that they weren’t afraid of being in front of people anymore [after participating in ARISE].”

To explain the growth that he has seen due to ARISE, a teacher said, “With my kids, they all love music and over half love to sing and dance. That has really come through in the classroom. [Now] I will be teaching and a kid will just break out into song. Whether that is appropriate or not is a question, but just the fact that they feel comfortable enough... So, one of the things that I have started doing is, in the afternoons as they are getting ready to go I will put on music. It gives them time to have some fun and sing and dance as they are getting their bags packed. Seeing the growth that they have made over last year, the kids that I am thinking of never would have felt comfortable just singing in the middle of class and in front of other people [before the residency]. We are doing a performance on Wednesday, and it is some of those kids who are the leaders.”



## Section A-5 Develop and improve pro-social behavior through the affective dimensions of performing art

| <b>5 Project Objective</b>  | <b>Check if this is a status update for the previous budget period</b> |
|---|--|
| Develop and improve pro-social behavior through the affective dimensions of performing art. |  |

| <b>A Performance Measure</b>               | <b>Measure Type</b> | <b>Quantitative Data</b>     |              |          |                                |              |          |
|--|---------------------|------------------------------|--------------|----------|--------------------------------|--------------|----------|
| Improve student behavior in the classroom. | Project             | <b>Target</b>                |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>                 | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     | >0.4 change on a 10-pt scale |              |          | 1.4 change on a 10-pt scale    |              |          |

- Data source: Changes in teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

| <b>B Performance Measure</b>  | <b>Measure Type</b> | <b>Quantitative Data</b>      |              |          |                                |              |          |
|---|---------------------|-------------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in general education AIS classrooms, regardless of whether or not they have special needs, work together better in team activities, as measured by teacher surveys and focus groups and action research reports. | Project             | <b>Target</b>                 |              |          | <b>Actual Performance Data</b> |              |          |
|   |                     | <b>Raw #</b>                  | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|   |                     | > 1.7 change on a 10-pt scale |              |          | 2.3 change on a 10-pt scale    |              |          |

- Data source: Changes in teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

| <b>C Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b>      |              |          |                                |              |          |
|--|---------------------|-------------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in AIS classrooms enjoy and are more engaged in learning than their comparison-group peers, as measured by student and teacher surveys. | Project             | <b>Target</b>                 |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>                  | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     | > 1.3 change on a 10-pt scale |              |          | 1.8 change on a 10-pt scale    |              |          |

- Data source: Changes in teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.



| D Performance Measure  | Measure Type | Quantitative Data                       |       |   |                                       |       |   |
|--|--------------|---|-------|---|---------------------------------------|-------|---|
|  |              | Target                                  |       |   | Actual Performance Data               |       |   |
|  |              | Raw #                                   | Ratio | % | Raw #                                 | Ratio | % |
| Students in AIS classrooms, particularly students in Special Education, are more adaptable to change in their environment, as reported by their classroom teachers, as measured by teacher and artist surveys, focus groups and action research reports. | Project      | > 1.1<br>change<br>on a 10-<br>pt scale |       |   | 1.0<br>change<br>on a 10-<br>pt scale |       |   |

- Data source: Changes in teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

### Explanation of Progress

**Measure A:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teacher surveys demonstrate that students improved their behavior throughout the course of the school year. Teachers in both treatment and comparison classrooms generally reported increases in their students' pro-social behaviors over the course of the school year. Teachers in treatment classrooms reported significantly greater gains in their belief that "my students are rarely disruptive in class" over the course of the ARISE residency (1.4 points gained from pre-test to post-test on a 10-point scale) than did comparison classroom teachers (0.4 points gained from pre-test to post-test on the same scale).<sup>3</sup>

**Measure B:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teacher surveys demonstrate that General Education students and Special Education students in mainstreaming Artists-in-Schools (AIS) classrooms worked better in team activities from the beginning of the residency to the end of the residency. On average, teachers in treatment classrooms rated their students' ability to work well in teams at the beginning of the residency as 5.07 on a 10-point scale with 1 being strongly disagree and 10 being strongly agree. At the end of the residency, teachers in treatment classrooms rated their students' ability to work well in teams as an average of 7.33 on the same scale. This represents a 2.3-point increase from pre-test to post-test for teachers in treatment classrooms on a 10-point scale. Teachers in comparison classrooms experienced a 1.7-point change on this item from pre-test to post-test. Teachers in treatment classrooms showed a greater amount of growth, although the difference in growth between treatment and comparison groups was not statistically significant.

<sup>3</sup> Differences between treatment and comparison teachers are significant at the 0.05 confidence level.





**Measure C:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teacher surveys demonstrate that students in Artists-in-Schools (AIS) classrooms gained more in the area of student engagement in learning than did their comparison group peers. On average, teachers in treatment classrooms rated their agreement with the statement “my students care about the quality of their work” as 5.98 on a 10-point scale (with 1 being strongly disagree and 10 being strongly agree) at the beginning of the residency. At the end of the residency, teachers in treatment classrooms on average rated their agreement with the statement “my students care about the quality of their work” as 7.79 on that same scale. This represents a 1.8-point increase from pre-test to post-test for teachers in treatment classrooms on a 10-point scale, which is higher than the 1.3-point change from pre-test to post-test reported by teachers in comparison classrooms. Teachers in treatment classrooms showed a greater amount of change, although the difference in change between treatment and comparison groups was not statistically significant.

**Measure D:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. On average, teachers in treatment classrooms rated their students’ ability to adapt to new situations with ease at the beginning of the residency as 6.13 on a 10-point scale (with 1 being strongly disagree, and 10 being strongly agree). At the end of the residency, teachers in treatment classrooms rated their students’ ability to adapt to new situations with ease as an average of 7.17 on that same scale. This represents a 1.0-point increase from pre-test to post-test for teachers in treatment classrooms on a 10-point scale. Teachers in comparison classrooms experienced 1.1-point change on this item from pre-test to post-test. Teachers in comparison classrooms showed a greater amount of change, although the difference in change between treatment and comparison groups was not statistically significant.

### **Qualitative data**

#### ***ARISE contributed to the students’ increase in self-confidence***

According to focus groups, the ARISE Project increases students’ self-confidence and willingness to take risks. For example, reticent students were more likely to volunteer to answer questions, openly ask questions during the lessons and make unique artistic choices. One classroom teacher stated, “students with self-confidence issues have been more willing to engage in class with [the ARISE teaching artist].”

Students that are shy and withdrawn participate more and learn that they can present themselves in front of others. A teacher stated, “I think they have developed a greater sense of self-confidence in performing. They have developed a greater sense of stage presence and placement on the stage and body movement in relationship to other people.” Several teachers discussed how the ARISE residency

*Prepared by:*



specifically benefits English Language Learner (ELL) students. As one teacher explained, “I saw the biggest change and increases in confidence among the ELL kids. Those kids that were quieter at the beginning of the year, because they were not as comfortable speaking. It has really given them a boost in confidence.”

Improvements in the self-confidence of ELL students were also noted in the action research. As the action research teacher explained, “[ELL] students gained confidence in their ability to formulate and express their ideas and opinions. Their experiences in theatre arts - as performers and as audience - helped them develop a variety of skills and techniques that they brought back to the classroom. These included collaboration, eye contact, wait time, tone and physical gestures. These skills and techniques provided ELL’s with the tools to frame and deliver their thoughts and ideas. It gave them confidence in their ability to present.”

Another teacher explained how the program has helped their Special Day Class students express themselves, “I have a Special Day Class, and a lot of my kids struggle with self-confidence, because they are behind in academics. But this is a way for them to feel confident in themselves because there is no wrong answer. They can just express themselves, which has helped them a lot in the classroom. It has helped their personalities come out a lot over the last two years, since the start of the [ARISE] program.”

A teacher whose students were notably shy and did not like to be in front of the class, stated, “I liked the way they worked together as a team [during ARISE], and then they discussed things. [The students] seemed more confident and more willing to be in front of the class... they are confident in class. [ARISE] really developed their self-confidence.” A Special Day Class teacher shared, “The quieter students were able to show their personal strengths in front of the more outgoing types. I think this helped them bond and build more confidence. There were some situations in which students laughing at another student made him feel intimidated and upset. Luckily, though, he still wanted to participate despite feeling put down.” Another Special Day Class teacher shared the impact they felt ARISE had on their students saying, “I do know that many students are more likely to take risks when it comes to sharing verbally.” One of the artists also shared this sentiment, stating, “I think my kids learn risk as their biggest thing [from ARISE]. A lot of them [were] pretty inhibited [before participating].”

Teachers shared that ARISE provides an outlet for expression for students who are learning English and may not have the vocabulary to express themselves verbally. “In general many of the students are second language learners and lack confidence in speaking or [performing] creative movement in front of others so this class helped bring kids out of their shells and [they] are learning how to open up [and] to express themselves.”

Teachers shared that students who struggle academically are given an opportunity to gain confidence and to excel through ARISE. As one teacher shared about the impact of ARISE on academically challenged students, “[They gain] confidence! All my students that struggle with academic areas blossom in ARISE they finally have the opportunity to shine.” Another added, “Some [academically



challenged] students found their niche and thrived [through ARISE]." A Special Day Class teacher elaborated, "I think [ARISE] is great and that this program is a must. These students are behind academically and for most of them, they will always be behind, but they still need the same opportunities of the arts as the other students do."

While students' decreased anxiety in public performance has been demonstrated during the lessons, teachers cannot solely attribute this improvement to the ARISE Project due to its limited exposure in the classroom. Additionally, some students do not participate in ARISE activities. They either choose to opt out for the day or are removed by the classroom teacher, primarily because of existing behavioral issues, and not because of the activity itself. Teachers indicated that the level of student focus during ARISE sessions can depend on the time of day. There could be a different level of focus in the morning than right before lunchtime.

### *Self-control and classroom management were positively affected by ARISE*

Classroom teachers and teaching artists report that students have become more self-disciplined, especially students with prior disciplinary issues. Teachers also report that their reticent students have become more verbal as a result of participating in ARISE. Also, they have generally worked together better through the ARISE lessons. Team-oriented activities have decreased tensions among students and reinforced the benefits of working together, especially with students who do not normally socialize or work together. Teachers of Special Day Classes say that their students have become calmer during class because the program allows them to release their personality and energy in a safe and well-structured environment.

One Special Day Class teacher noted surprise about some students' negative behavior. She feels that her students are not used to the level of excitement and activity in the classroom and so break protocol, becoming competitive and difficult to manage. As the ARISE Project has progressed however, she has seen growth in students' cooperation, control of energy, trust in and comfort with themselves and appreciating each other's creative work.

Students learn how to control their bodies by participating in the residency's movement exercises. A teacher explains, "Some of the kids get really excited when they do the rhythm part. Sometimes they get too excited and they can't control their bodies, but when they do the dance they are more controlled, and do not get too out of control. So that it is a way for them to learn to control their bodies." Teachers reported that students have used the body control techniques at other times in the classroom, and this has been very effective for some of the students who feel compelled to move and fidget frequently.

Artists and teachers both reported in focus groups that they have seen changes in the respect from students throughout the course of the residency. An artist explained, "I see more respect from the kids... I see that they do not act out as much, and they are more responsive. The SDC classes are not as violent or sarcastic when I come in. They are ready, and it is like another world. They hug me or give me a



handshake, or they will ask me how I am doing. It is less about ego, and more about how I see they are maturing.” Another SDC teacher shared a story of changes she has seen, “I would say that it is [the artist’s] personality. Some of the students will not always make eye contact, but [the artist] will get down and make eye contact with those students. So she builds those relationships with them. I have some students that are much more engaged this year. Part of this is related to developmental issues and the growing that they have done between this year and last year, but they are much more engaged. Last year, one student would start crying and get upset, and now he is right there all the time. He is actually making noises and verbalizing his excitement when she brings out the blue ball. I think it is about [the artist] making that eye contact and making those connections.”

Teachers reported that the timing of the residency determines whether the residency has an impact on the classroom behavior for the rest of the day. When the residency is followed by classroom instruction, students are calmer and more ready to learn after ARISE. As a teacher explained, “[ARISE has an impact] with [decreasing] conflict. And I also know that my students have a lot of energy, and [the ARISE] class will be good because it has so much movement. I notice that after [ARISE] class... they came right in, sat down, and did some of their best work because they had a chance to move their bodies. And not bad movement, but controlled movement. I am excited because I am going to plan some of my toughest academic classes for right after [ARISE] class because of the focus they will have.” Teachers reported that when their residency is at the end of the day, or right before a break, it is hard to measure how the classroom behavior is changed.

### ***Students’ multiple intelligences and self-expression were noticed as a result of ARISE***

ARISE allows for children’s multiple intelligences to be appreciated. As one teacher shared, “ARISE provides an opportunity for students to receive positive reinforcement for possessing other intelligences. It shows my students that being a good reader or mathematician are not the only ways to be a success in school.” Another added, “This is where ARISE is great. I have some students who never have an opportunity to be recognized for their talents. This program gives some of these students that opportunity.” A teacher shared examples stating, “I think about one of my students who was recognized for her humor. I think of another who is constantly being asked to stay on task and quiet down having the opportunity to move and shout appropriately. I think of another student with low reading/math skills, but tremendous movement capability being applauded for his miming ability.” Another added, “I have noticed, however, a real appreciation for the students to whom theater arts come naturally. I see and feel them get recognition from their peers and that feels like a great recognition of the multiple intelligences in the room.”

Teachers reported that their students who are most gifted in the performing arts are often inclusion students and other students that struggle with academics. ARISE gives these students a chance to shine in the classroom and levels the playing field for inclusion students. A teacher stated, “Some of the kids



that have a more difficult time in class, they're the ones that find success in theatre arts. It is a great confidence booster for them; they shine. I have seen a couple of them really blossom through the theatre arts program, and that is transferring to the classroom. They have the opportunity to have that kind of artistic expression, and then get recognized for it. It is a great boost for them." Another added, "I think it has been good for my students and the morale of the class. It has given kids who are not academically as strong a chance to shine, and vice versa. Those kids who usually always get gold stars are maybe not as comfortable moving their bodies."

Along that line, teachers noted that students that are most gifted in other subject areas often struggle in the performing arts. Teachers said that it was helpful for these students to see their inclusion student peers excel in an area that they find difficult. A teacher describes what they witnessed, "I would definitely say that I have noticed increased self-confidence. I would also say that it is often those students who struggle in a number of different areas who often excel in the arts. That has been really nice. This may sound really bad, but it seems like some of the students who struggle more with the ARISE class are those that are really academically strong [in other subject areas]. It is interesting to see them out of their comfort zone. I think it is really good for my class when the other kids in my class can see the really high-achieving academic students feeling nervous and uncomfortable, and not as free in their bodies. Those are things that other kids experience so much more often when they are required so often to do academics. The ARISE class is where I just get to sit back and observe. And other kids get to shine. Without the ARISE classes, those kids would not get that opportunity to shine." The experience of struggling has helped these students develop empathy for their peers that struggle with other subject areas.

Teachers shared that ARISE can have a strong impact on students who are nonverbal and who need other outlets for expression. As a Special Day Class teacher shared, "I think it helps for the confidence of my nonverbal students who often have a difficult time participating in group discussions and activities, but are able to fully participate in nonverbal movement activities during ARISE that their verbal peers are doing also."

During the Special Education educators' dinner in February 2008, teachers of Special Day Classes identified some additional benefits of the ARISE Project for their students' social behaviors and attitudes. The setting and structure of the ARISE lessons allows students to be themselves and learn without concern over being wrong or having the "right answer." There is no pressure from testing or parents. Instead, students learn with their own creations. Special Day Class teachers also see that arts education has behavioral and therapeutic benefits to their students in addition to the academic benefits. One teacher identified a particular student who started out the school year depressed and with few social skills; recently this student performed a tableau in front of an audience with without fear.

Teachers reported that the residencies give students a chance to relax; their curricular days are so focused on achievement in Language Arts and Math skills, that they rarely have a chance to be a kid. ARISE gives students this opportunity. A teacher elaborated, "It was an opportunity for my students to

*Prepared by:*



experience something that I could not give them... some things are more important than the academic aspects, and there is so much pressure with that, [ARISE] is an opportunity where the kids can get away from that [pressure]." Another teacher added, "I've noticed that most of the children know this is a time to relax and it's ok to express yourself creatively and let loose within the boundaries of the class." Teachers also said that the ARISE residency is the one time a week that the students with ADHD have a chance to be themselves in school, as they are able to express themselves through their bodies.

### ***Respect, inclusivity, and socialization increased***

Throughout the residency, teachers agreed that students have become more respectful of their peers when performing. Artists noticed that as students took risks in their own performances, they have developed more compassion for their peers and have been kinder to their classmates. An artist described, "I think that there is a really extreme focus, and there is an eagerness to show their work now. There is huge disappointment when we have to end class and not every group can perform. So there is an eagerness to show off their work, which is really exciting. And that eagerness translates into a willingness to turn around their behavior in the classroom. In the SDC classes, it has been really nice because I was able to work with those same students last year, and I will really be able to have a journey with those kids... I really think that they are nicer to each other and they are more attentive to each other's work. Things just go so much smoother!"

Teachers noted that through ARISE the classroom becomes a more inclusive environment for students who may otherwise feel excluded. As a teacher shared, "I noticed today that when enabled to select their own groups, they all chose groups I would not have guessed. They included students who are frequently excluded. It was delightful." Another General Education teacher explained, "I think the whole teamwork and building trust [through ARISE] is helpful to help [Special Education] students become more part of the class, as they can often feel separated academically."

Teachers reported in focus groups that they have seen changes in student behavior throughout the course of the residency. As a Special Day Class teacher shared, "I'm sure ARISE activities that promote students watching each other perform and performing with each other cooperatively have helped advance their social skills with their classroom peers. They all have autism so need a lot of work with socializing with each other."

Teachers stated that the ARISE residencies are an opportunity for Special Education students to be treated the same way as their General Education peers. A teacher stated, "Almost always, performing arts is a curriculum that almost all kids can be a part of. Involves every person, every time." General Education teachers have different strategies when working with artists; some teachers do not tell artists which students are Special Education students unless an issue arises. A teacher explained, "My biggest thing in the beginning is to treat them like any other student, and if there need to be any modifications made after that, then go ahead from there, but not to set limits at the beginning... There is no need for anyone to know that they are inclusion students [in this] setting." A few teachers shared that their



Special Education students are able to do the same things as other students during ARISE and often enjoy the activities more as they provide an outlet for the students to demonstrate how they are feeling.

An artist described a breakthrough in pro-social behavior he had with an inclusion student, "I am always trying to ... work on inclusion issues... I do have a mainstream mute [student], who I have never worked with before. He hasn't spoken since kindergarten, and he is in fourth grade. He does whisper talking now. You know, I only have him for about 45 minutes a day. I told him, when you are ready to speak that is up to you. It is not up to me. But I do need you to participate. He nods. I get another nod. So he does pantomime or other things. I had him pantomime what he did for Thanksgiving. It got to him, and he [started] whisper[ing]. That was two months ago, and now he is whispering all the time. At the end, we say thank you to each other. When it gets to him, I would tell him that he could just nod his head, but now he whispers thank you."





## Section A-6 Improve student critical thinking in and through the arts

|  |   |
|--|---|
| <b>6 Project Objective</b>                                 | <input checked="" type="checkbox"/> Check if this is a status update for the previous budget period |
| Improve student critical thinking in and through the arts. |   |

| <b>A Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
|--|---------------------|--------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in AIS classrooms improve their understanding of vocabulary and concepts related to performing arts, as measured by student and artist surveys, artist focus groups and residency observations. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     |                          |              | > 22%    |                                |              | 30%      |

- Data source: Residency observations taken at beginning-of-year, mid-year and end-of year. See Explanation of Progress below.

| <b>B Performance Measure</b>  | <b>Measure Type</b> | <b>Quantitative Data</b>      |              |          |                                |              |          |
|---|---------------------|-------------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in AIS classrooms improve more than their peers in areas of critical thinking, such as considering the pros and cons of ideas, expressing new ideas with comfort, reflecting about their work, being receptive to feedback and caring about the quality of their work, as measured by teacher, student and artist surveys and action research reports. | Project             | <b>Target</b>                 |              |          | <b>Actual Performance Data</b> |              |          |
|   |                     | <b>Raw #</b>                  | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|   |                     | > 1.3 change on a 10-pt scale |              |          | 1.5 change on a 10-pt scale    |              |          |

- Data source: Average change in teacher survey responses for four survey items from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

### Explanation of Progress

**Measure A:** The target data for residency observation indicators is an observed improvement in student abilities from the beginning of the residency period to later in the residency period. Using a rubric to measure residency observations from the beginning, middle and end of the residency period, students





demonstrated their understanding of vocabulary and concepts related to performing arts in the beginning, middle and end of the year. At the beginning of the residency (on average twelve weeks after the residency started), 22% of the observations reviewed strongly displayed students modeling activities or movements for their peers, compared with 10% of observations at the middle of the residency and 30% of observations at the end of the residency. Additionally, different scales or ranges of performance, such as large or small movements with varied intensity and high and low space were strongly displayed in 33% of observations reviewed at the beginning of the residency, 20% of the observations reviewed at the middle of the residency and 17% of the observations reviewed at the end of the residency.

**Measure B:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teacher surveys demonstrate that students in treatment classrooms generally improve more than their peers in comparison classrooms in the area of critical thinking. Teachers in both treatment and comparison classrooms reported increases in their students' critical thinking abilities over the course of the school year. When rating individual students' abilities to consider the pros and cons of ideas, teachers in comparison classrooms rated significantly more positive change for their students (1.2-point change from pre-test to post-test on a 10-point scale) than did teachers in treatment classrooms (1.0-point change).<sup>4</sup> When rating individual students' abilities to show comfort expressing ideas, teachers in comparison classrooms rated more positive change for their students (1.2-point change from pre-test to post-test on a 10-point scale) than did teachers in treatment classrooms (1.1-point change), though this difference was not statistically significant. Teachers in treatment classrooms rated their students to have more favorable change than did teachers in comparison classrooms in the areas being receptive to feedback (1.8-point change versus 1.5-point change, respectively) and being reflective about their work (1.9-point change, versus 1.3-point change, respectively). When examining the four survey items above together, teachers in treatment classrooms reported a 1.5-point average improvement from pre-test to post-test on a 10-point scale while teachers in comparison classrooms reported a 1.3-point average improvement from pre-test to post-test.

### Qualitative data

#### *Critical thinking and peer feedback improved among students*

Teachers shared that artists ask students to reflect on and critique their classmates' work. A teacher stated, "My students are more able to critique other work constructively. Instead of only saying, 'I liked

---

<sup>4</sup> Differences between treatment and comparison teachers are statistically significant at the 0.05 confidence level.



it' they can express reasons for liking a performance and offer suggestion on how one could improve a performance."

During a teacher's action research project, she noted significant improvement in the ELL students' critical thinking skills and abilities. The teacher explained, "Their questioning became more sophisticated – moving from the concrete "what" and "when" to a more abstract "why" and "how." This led to much better comprehension." The teacher also noted gains in the students' abilities to make inferences and students demonstrated higher level thinking in History and Literature. The teacher stated, "Students engaged in small and large group activities that challenged them to form an opinion and interpret new information creatively. They relied on skills and techniques learned in theatre arts to help them approach these activities."

"Also, I feel like kids don't often reflect on other kids' work at all [in other classes]. They don't look at another kid's math test and say 'well, you could have answered that question differently.' There is no value in that really, but in theatre work there is value in observing other peoples' work and giving them feedback." Another artist adds, "To expose students to specific art forms in order to engage different ways of thinking and acting. Ultimately, it promotes critical thinking, and not just academic, linear thinking."

Students use critical thinking skills when judging the quality of their peers' performances, and making recommendations on how the performance could be improved in the future. Findings from a residency observation illustrate this point. Two students acted out a skit demonstrating conflict in front of their classmates. After the skit had ended, the audience members were asked to provide the performers with feedback on how they could improve their performance. The audience members offered suggestions on how to alter the performance to better demonstrate conflict; their suggestions ranged from changing voice intonation to changing body language. The students used their classmates' feedback to improve their performance and through this process, performers and audience members both improved their critical thinking skills through the arts. An artist explains this importance stating, "I would also say that it is really important to establish in a classroom an opportunity for students to work in groups in a context that they are not used to, toward creative problem solving."

### ***Students' capacity for vocabulary increased***

Classroom teachers generally noticed improvement in students' artistic concepts and vocabulary. In the artist focus group, artists explained that they use vocabulary words to introduce new concepts, such as "conflict" and "suspense." Artists introduce vocabulary words and discuss them at length to ensure that students understand the vocabulary. Then, students use critical thinking skills to demonstrate their understanding of the topics by using conflict or suspense in their performance. A teacher described how the artists reinforce vocabulary, stating, "He actually puts vocabulary words on paper and brings them in, which is also good. He reinforces it. He brings in the words the next week on a piece of paper and says, 'Does anyone remember what this is? Can you give me an example of it?' So he is really good at

*Prepared by:*



teaching them vocabulary. So I know they are learning vocabulary.” Both artists and teachers reported that students demonstrate in performances that they understand the complex topics covered in the residency. Teachers also felt that the activities reinforce the student’s vocabulary for parts of the body.

### *Confidence and communication skills improved*

Teachers shared that the artists will often use group exercises and present the students with a problem that they must work together to solve. Teachers shared that through these activities students build problem solving skills and teamwork skills.

Teachers report that students enjoy expressing themselves artistically and physically and transfer these skills and the increase in confidence to other classes. As a teacher wrote on a survey, “My students have gained confidence in their performance abilities and they have learned to have fun and express themselves freely.” A Special Day Class teacher shared in a survey, “They feel more comfortable sharing verbally in front of their peers. Their self-esteem has increased.” Another teacher wrote, “[With performing arts, students have been] learning how to express themselves using their bodies, [that] breaking out of their quiet ‘shell’ [and] their comfort zone is ok, and of course [gaining] confidence.”

Teachers felt that nonverbal communication skills improved through ARISE. As a Special Day Class teacher shared on a survey, “I think the [performing arts] have led to increased non-verbal communication. My students are more likely to ‘act out’ parts of stories/ characters since participating in ARISE.”

### *Students enjoyed the ARISE residency*

Teachers report that students enjoy expressing themselves artistically and physically; students look forward to the residency time and are disappointed if they miss a class. A teacher shared her impressions, “The only problem that I have is the [artist] is too popular. There is a music class at the same time, and some of the students are supposed to go and learn the trumpet, but some of them don’t want to because they want to go to [the ARISE] class instead.” Another teacher shared, “They love it. If I have to reschedule for some reason and have it a day later, they come in and say ‘What? How come we don’t have it?’ They expect it and they want it.”

### *Teachers’ adoption of ARISE lessons in their classroom*

Teachers found that through incorporating arts into their other subjects they can improve student comprehension. As one teacher shared in a survey, “I look for ways to incorporate performing arts activities in science [and] history to make abstract concepts more meaningful.” Another teacher shared, “I see the benefits of using theater in my classroom to enhance comprehension and social studies content.”



During the ARISE sessions, artists adjusted their lessons to meet students' needs and try to encourage teachers to incorporate artistic concepts and activities into their curriculum. However, most teachers do not directly use the artist's concepts in their lesson plans. One teacher says that he has his students write in journals to reflect on the artist lesson to develop their critical thinking skills. Otherwise, there are few times where ARISE concepts are brought directly into the classroom.



### Section A-7 Use the performing arts to positively impact academic performance

|  |   |
|--|---|
| <input checked="" type="checkbox"/> <b>Project Objective</b>       | <input checked="" type="checkbox"/> Check if this is a status update for the previous budget period |
| Use the performing arts to positively impact academic performance. |   |

| A Performance Measure  | Measure Type | Quantitative Data |       |     |                         |       |    |
|--|--------------|-------------------|-------|-----|-------------------------|-------|----|
|  |              | Target            |       |     | Actual Performance Data |       |    |
|  |              | Raw #             | Ratio | %   | Raw #                   | Ratio | %  |
| Students in AIS classrooms show greater gains in standardized exams than comparison-group students, and the achievement gap between students in Special Education and General Education is decreased, as measured by standardized test scores. | Project      |                   |       | -1% |                         |       | 2% |

- Data source: California Standards Test scores. See Explanation of Progress below.

| B Performance Measure   | Measure Type | Quantitative Data                           |       |   |  |       |   |
|---|--------------|---|-------|---|--|-------|---|
|   |              | Target                                      |       |   | Actual Performance Data                    |       |   |
|   |              | Raw #                                       | Ratio | % | Raw #                                      | Ratio | % |
| Classrooms that receive the AIS program have lower tardiness and absence records, as measured by school attendance records. | Project      | <3.6 absences per 100 days in the classroom |       |   | 2.9 absences per 100 days in the classroom |       |   |

- Data source: School attendance data. See Explanation of Progress below.



| Performance Measure   | Measure Type | Quantitative Data             |       |   |                             |       |   |
|---|--------------|-------------------------------|-------|---|-----------------------------|-------|---|
|   |              | Target                        |       |   | Actual Performance Data     |       |   |
|   |              | Raw #                         | Ratio | % | Raw #                       | Ratio | % |
| Students in AIS classrooms show more improvement than their comparison-group peers in areas of academic progress, such as learning information quickly, feeling successful and approaching problems creatively, as measured by teacher and artist surveys and teacher focus groups. | Project      | > 1.2 change on a 10-pt scale |       |   | 1.2 change on a 10-pt scale |       |   |

- Average change in teacher survey responses for three survey items from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

### Explanation of Progress

**Measure A:** The evaluator collected 2009 and 2010 California Standards Test (CST) scores for students in treatment and comparison classrooms participating in the ARISE evaluation. The California Standards Tests were administered to students at the end of each school year. Students are assigned a performance level for each subject, derived from their raw test scores. The performance levels are: far below basic, below basic, basic, proficient and advanced. Students that achieve proficient or advanced have a passing score; students that achieve far below basic, below basic or basic do not have a passing score. The performance levels of students are standard across grade levels and so can be compared from one year to another.

The evaluator examined CST scores for 3rd through 5th grade students that had parental consent to participate in the evaluation for the school year. To measure change over time, the evaluator recorded each student's performance level in the subjects of English Language Arts and Mathematics for the current and previous school years. Students that were missing CST data for the current and/or previous school years were excluded from the analysis. The evaluator assigned numeric values to each of the performance levels (far below basic=1, below basic=2, basic=3, proficient=4 and advanced=5). The evaluator then calculated the percent of students with a passing score in treatment classrooms and in comparison classrooms for the current and previous school years CST tests in English Language Arts and Mathematics. The average performance level included data for all students that had consent to participate in the evaluation and took the tests in the current and previous school years. The previous school year CST scores served as a baseline data for the current school year CST scores.



Students in treatment schools showed greater gains in the California Standards Tests compared to students in comparison classrooms. From 2009 to 2010, 12% more students in treatment classrooms had a passing score on English Language Arts, compared with 9% more students in comparison classrooms. While treatment students showed greater gains than comparison students, this change was not significantly different. On the other hand, students in treatment classrooms had significantly greater gains in the areas of Mathematics when compared with comparison students.<sup>5</sup> From 2009 to 2010, 2% more students in treatment classrooms had a passing score on Mathematics, while 1% fewer students in comparison classrooms had a passing score on the Mathematics CST.

**Measure B:** The target data for attendance records is lower absenteeism and fewer tardies for treatment-group students than for their comparison-group peers. The evaluator collected school attendance records from treatment and comparison classrooms participating the ARISE evaluation from September 2007 through May 2010. Attendance rates were examined for the 3rd through 5th grade students in the five treatment and three comparison elementary schools, including rates of absenteeism and tardiness. Analysis performed on both semesters combined for treatment versus comparison classes showed a significantly lower number of tardies and absences for students in treatment classes.<sup>6</sup> Students in treatment classrooms had an average of 2.9 absences and 1.3 tardies per 100 days in the classroom, while students in comparison classrooms had an average of 4.1 absences and 3.0 tardies per 100 days in the classroom. Treatment-group students had significantly fewer absences and tardies than their comparison-group peers.

**Measure C:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teachers in both treatment and comparison classrooms generally reported increases in their students' academic progress over the course of the school year. Teachers in treatment classrooms reported slightly greater gains in their students' ability to learn new information quickly over the course of the school year (1.4-point change from pre-test to post-test on a 10-point scale) compared to teachers in comparison classrooms (1.3-point change from pre-test to post-test). On the other hand teachers in treatment classrooms rated their individual students' ability to display feelings of success slightly lower compared with teachers in comparison classrooms (1.1-point change versus 1.2-point change, respectively) as well as their students' ability to approach problems creatively (1.1-point change) compared with comparison classrooms (1.2-point change), though this change was not statistically significant. When examining the

---

<sup>5</sup> Differences between treatment and comparison students are statistically significant at the 0.05 confidence level.

<sup>6</sup> Differences between treatment and comparison students are statistically significant at the 0.05 confidence level.



above three survey items together, teachers in treatment classrooms reported a 1.2-point average change from pre-test to post-test on a 10-point scale while teachers in comparison classrooms reported a 1.2-point average change from pre-test to post-test. When the three survey items listed above are taken together, teachers in treatment classrooms and comparison classrooms showed the same amount of growth.

### **Qualitative data**

#### ***Positive impact on academic performance was observed***

Several teachers said that ARISE is one piece of the puzzle that contributes to student development. Changes that teachers noted and attributed to ARISE include improvements in public speaking and group work. They also noticed an increased interest in writing scripts and skits, learning about sequencing in stories, as well as more students wanting to be heard in class.

A teacher shared their perspective of how ARISE helps students academically, stating, “Academically it helps them with concepts and vocabulary words that are not easily defined. Sometimes they cannot find the word to express what they are trying to say, and they will get up and show me what it means, or they will act it out. The same with interpretations. Again, it is concepts that they cannot put words to yet, but now they have the tools to express what they are trying to say in other ways. So I have seen that come through with vocabulary and concepts that are difficult to describe when they do not have the vocabulary yet.” A teacher added, “[ARISE theatre] helps them think about different types of genres, which translates also into their reading and writing. I think that it is good for them to think about the different types of theatre and writing. [The artist] is good about pointing out – this is comedy or drama, etc.”

Another teacher shared their impressions, stating, “With my class [the artist] did slightly different things, based on their needs... He did a lot of work with my group on conflict resolution, because that has been coming up in my class sometimes. He had them acting out different ways to solve problems. It addresses their needs. They have a lot of drama that goes on, so it was nice for them to get the chance to ‘do’ drama, but in a more productive way. [The artist] also worked on control with them. There are some kids in my class that have a lot of trouble just sitting in a chair. So he did a lot of work with them on appropriate ways to use their bodies, and how they can be aware of their bodies and control them a little better, which definitely supports their academics.”

Other teachers reported they could think of a handful of students that have improved academically over the course of the year, and would attribute their growth, in part, to the ARISE program. A teacher talked about a particular student saying, “I am thinking about one student in particular who I struggle with because he is hyper and it is hard for him to settle down. There are lots of factors, but I think one of them was the [ARISE] program. He participates a lot in theatre class. It gives him the opportunity to





move around, which I do not allow much in my own classroom. He is really wiggly. I think a lot of it has to do with confidence. He is a very shy little boy, and now his self-confidence is improving, and academically he has improved a lot, too.”

Teachers reported that English Language Learner students benefited from the residency in several ways; they were able to communicate without using words, which helped them participate in the classroom. As a teacher described, “I feel like a lot of my students have seen growth, but that is going to happen anyways. The program may have something to do with it, but I can’t say the extent to which it had an effect. But I can think of a couple students that... don’t show a lot of interest [in school] or they struggle with reading. And based on my understanding of what they were doing last year, I have seen big improvement in those students. I mean, I am not going to say that it is because of their participation in the program, or [the ARISE] class, but I am sure it is a factor. I am thinking of one of these students whose performance in front of the class was really impressive. And they are usually pretty shy and struggle with English. It is definitely an opportunity for those kids to shine, especially for those that are learning English. It is a chance for them to use their bodies and express themselves only partly with words.” Additionally, teachers reported that it has helped their students to practice English; and one teacher mentioned that it was useful for students learning English to listen to and work with another English-speaking adult on a regular basis.

The impacts on ELL students were also seen during the action research project. Additionally, the teacher noted academic improvements in the areas of Literature and History. The teacher credited this change to improved levels of comprehension and greater engagement with the material. The teacher explained the impacts in History class, “Early in the year, students accepted our historical texts (fiction and non-fiction) as delivered and demonstrated basic comprehension. Later in the year, students sought to understand what life was like during a historical period, what motivated or influenced people during that time, what it felt like to live during that time, etc.” The teacher noted similar improvements in Literature, with gains in interpretation and inference as compared to a previously basic understanding of explicit words. The teacher explained, “Theatre arts activities (speaking, performing and kinesthetic) helped ELLs to infer emotion, motivation, and cause/effect more clearly than they had at the start of the year.”

### ***Enjoyment and improved socialization among students had positive impacts on academics***

One Special Day Class teacher shared how the ARISE program influences the academics of students through improving pro-social behavior, “When students feel more comfortable in their own skin and more at ease with their classmates, they focus less on the social (feeling inadequate, embarrassed, etc.) piece of school and more on the academic piece. I think all of my students have probably benefited in this sense.”



Some teachers reported a connection between the students' enjoyment of ARISE and their motivation to be at school. As one teacher shared, "My students fully enjoy our session with [the artist]. They verbally and physically cheer when they see 'ARISE' posted on our daily schedule. They also enjoyed putting together a performance to show [the artist] appreciation for the skills he has taught us this year." Another teacher shared on a survey, "[My students have gained] a sense of enjoyment of theater. They're joyful learners on theater day."

Some teachers reported that because their students really look forward to the ARISE program it improves students' overall attitudes about school and motivation to be at school. As a teacher explained, "Yes [it has an impact on their academic performance,] because it gets them excited. If that is what it takes to get them excited about school, then the rest of the day they are much more in tune. Their attitude about school has such a great impact on what they are able to take in when we are giving a lesson. It is those things that engage them – like theatre and music and dance – that keep them feeling positive about learning, school, and the things that they get to do at school."

### *Teachers' integration of ARISE lessons and students' adaptation of skills*

A few teachers shared that applying engagement techniques in the classroom has increased student focus and in turn academic performance. One teacher shared, "By using some of the strategies to engage students during the rest of the week, I think there has been impact on academics." Another added, "Children responded better when there was a chant, a cheer, or a particular sound such as a chime to draw their attention to, so the class stayed focused and the teacher is able to move on with the lesson." An artist shared, "One of my teachers now uses one of my phrases for focus 'Eyes, ears, and whole body!' in her classroom."

### *Difficulty in determining improvements in academic performance*

According to focus groups, classroom teachers acknowledge the difficulty in attributing improvements in academic performance to the ARISE Project. The residencies coincide with the school year and student growth in maturity, so teachers feel that they are unable to determine exactly what changes in academic success could be attributed to ARISE.

Teachers would like to see more about the long-term impact of the program before making a judgment. Some teachers did see improvement in their students' ability to follow directions. For students in Special Education, teachers report that the ARISE Project has a positive impact on their academic performance because it doesn't require quantitative metrics.

Classroom teachers report that insufficient time and resources to incorporate the arts into their curriculum is a possible reason for the inability to identify any measurable academic changes from artistic education. Teachers and artists also report that they generally do not spend much time together planning and reflecting on ARISE lessons throughout the school year. They find it difficult to coordinate



schedules for a formal meeting, so communication is at most brief periods outside of class. However, both teachers and artists desired more time for planning and reflection on lessons in order to coordinate the artists' lessons with the teachers' general curricula.



## Section A-8 Increase access to General Education for students in Special Day Classes through behavior improvement

|  |   |
|--|---|
| <b>8 Project Objective</b>   | <input checked="" type="checkbox"/> Check if this is a status update for the previous budget period |
| Increase access to General Education for students in Special Day Classes through behavior improvement. |   |

| <b>A Performance Measure</b>   | <b>Measure Type</b> | <b>Quantitative Data</b>      |              |          |                                |              |          |
|--|---------------------|-------------------------------|--------------|----------|--------------------------------|--------------|----------|
| Students in Special Education who are receiving the AIS program show more improved behavior than their comparison group peers, as measured by teacher surveys and focus groups and IEP behavior goals. | Project             | <b>Target</b>                 |              |          | <b>Actual Performance Data</b> |              |          |
|  |                     | <b>Raw #</b>                  | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|  |                     | > 1.3 change on a 10-pt scale |              |          | 2.4 change on a 10-pt scale    |              |          |

- Data source: Change in Special Day Class teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

| <b>B Performance Measure</b>  | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |   |              |          |
|---|---------------------|--------------------------|--------------|----------|---|--------------|----------|
| Students in Special Education are mainstreamed for more hours after receiving the AIS program, as measured by IEP program goals and school records. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b>  |              |          |
|   |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>  | <b>Ratio</b> | <b>%</b> |
|   |                     | >0                       |              |          | 1 teacher at one school and the principal from another school reported a greater amount of mainstreaming happened |              |          |

- Data source: Qualitative data from teacher focus groups.

### Explanation of Progress

**Measure A:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Results from teacher surveys indicate that Special Education students in the treatment group show more improved behavior than their General Education peers. Special Day Class teachers in treatment classrooms rated

Prepared by:



the students to have significantly greater gains in the area of being respectful of their classmates (2.4-point gain from pre-test to post-test on a 10-point scale) than students rated by General Education teachers (1.3-point gain).<sup>7</sup> General Education teachers in comparison classrooms rated their students to have greater gains in the area of being respectful of their classmates (1.3-point gain from pre-test to post-test on a 10-point scale) than students rated by comparison-group Special Day class teachers (1.2-point gain); the difference in growth reported by Special Day class and General Education teachers in comparison classrooms was not statistically significant.

**Measure B:** When designed, the evaluation team intended to measure this benchmark using IEP data; however, IEP data was found to have limitations and ultimately was not made available to the evaluation team. The San Francisco Unified School District IEP format includes some basic information on time spent in General Education settings; however, the IEP format does not specifically state the hours spent in General Education classrooms. Additionally, district and school staff raised concerns that requesting IEP data would result in lower consent to participate in the ARISE evaluation for Special Education students (the target population that makes up a tenth of our total sample).

The qualitative data below outlines progress towards this benchmark. In focus groups, teachers reported that through ARISE, students learn strategies for improving their behavior, such as controlling their bodies (gross and fine motor skills) and respecting their peers. Teachers reported that these techniques help Special Education students spend more time in general education classrooms because behavior issues are an obstacle that keeps students from being mainstreamed. ARISE can assist students in improving behavior. A teacher described how ARISE helps with inclusion, stating, “Anything that would help our students learn to control their bodies in space is going to help them be more included in the general education program. Generally it is behavior issues that gets them removed from the general education program, because it is just disruptive to other kids. It is not so much about academics, because you can modify that or give them more time. So anything that will help them learn to participate as part of a group will increase their inclusion time.” As another teacher shared, “I have a few students who crave attention that would otherwise play out badly in the classroom. ARISE gives these students a positive outlet.” The artists agreed with this sentiment, as one artist shared, “Definitely my ‘difficult’ students are my best performers in almost all my classes, that’s what theatre does, gives attention to those who need it!” Another artist added, “I would agree with [the other artist], my ‘difficult’ kids are often the ‘leaders’ in the group improv... they often are the one organizing ‘You go here’, ‘You say this...’ etc. and he/she really wants the improv to be [very good].”

---

<sup>7</sup> Differences between treatment and comparison teachers are statistically significant at the 0.05 confidence level.



Special Education teachers reported that their students recognize that they get the same programming as their general education peers through ARISE. This gives some students confidence in their abilities that is not limited to the performing arts. Teachers reported some of their Special Education students have requested to spend more time in mainstreamed classrooms. As a teacher explained, “With some of my [Special Education] kids, they are starting to realize their placement in school and they are trying to get out of it. They are constantly asking, ‘can I go to this class, or that class?’ Several of them have joined clubs or safety patrol, which hasn’t happened in the past.” Another added, “I have seen increased confidence and a willingness to participate in class.” One Special Day Class teacher felt that ARISE helped students become more comfortable with mainstreaming, stating, “[ARISE] definitely built self-esteem and self-concept [in my students]. Academics are hard for them, but this was something where they could feel successful every time. Also, my students felt more comfortable with mainstreaming and going into new situations [after participating in ARISE].” Another Special Day Class teacher explained, “The kids need many chances and multiple ways to succeed. Success is key to their self-concept which in turn affects behavior. I think they need as many different ways as possible so they can find themselves, performing arts are one of them.”

### **Qualitative data**

#### ***How artists engaged with and increased access for students in Special Day Class***

According to focus groups, teachers generally believe that artists do a good job of including and engaging special education students in their lessons. Artists say that they make adjustments for special education students. These adjustments include generally slowing down the flow of the class, particularly in the sections of the lessons where these students have to learn, perform and judge movements. Teaching artists also break their lessons down into smaller instructional steps for students in Special Education. A couple of the artists say that they use props to help students visualize artistic concepts in action.

A teacher explained, “From the very beginning, he asked me if there is anything that he needed to know about my students, and he asked how he should deal with behavior. He was really sensitive to all their needs. I have one student that is in a walker, and [the artist] has been good about making sure that he is included as much as he can and adapts activities for him.”

Teachers reported that the artists will check-in with them to brainstorm about ways to include students with special needs and handle behavior problems. An artist shared his experience, “I will ask the teachers: does this work? How is this? What is going on next? What is happening with this student? Should we push them more? Should we put them in the mainstream class? We discuss different things. I am in a SDC class where the kids were throwing each other against the wall. I wrote to that teacher and said, ‘This is what I need. This is what I want you to do, and this is what I am doing in order to have a



successful workshop.' It is really a new thing for me to ask for what I need when I need it. It was like night and day: suddenly I had a lot of support, and he never left the room during the class again. We didn't go in the gym anymore, and we figured out a way to open up the space [within the classroom]."

Special Day Class teachers reported that the artists have gotten to know their students throughout the year. Artists do a good job of engaging Special Education students, and hold them to appropriately high standards in their work together. An artist shares the connection they felt with an SDC class, "I get the sense that it is just a time for joy [during my class]. At first, I walked in and they didn't know who I was. But now, when I walk in there is a lot of excitement. For example, there is this one girl who, every time she sees me she says "superman." I have no idea why. She used to say "shower." Now she says "superman." But regardless of the word that she is using, it is such a sweet connection, and I can feel the connectedness getting stronger every time. They are also comfortable with the lesson plan. I do the same lesson plan every time, and just add a little bit every time for this population. It makes them feel really empowered because they know it. They know what they are doing. They do this whole dance together and perform for each other. To me, it feels like a party." Another artist wrote on the survey, "The biggest successes were some very profound moments when I was able to connect deeply with the students beyond and through the structure of the lesson plan. There were instances where I knew without doubt that connections were happening that were very important in these students' lives, as well as in my own."

An artist on the survey shared her feelings of success in positively affecting the behavior of students, "One of the big successes was being able to engage some of the students who initially had problems interacting with the group in a positive way. I was able to help them change some of the negative behavior so that they would spend more time doing the exercises instead of acting out. I used some of the behavior modification methods that I am also trained in. Another success was having my most difficult group be more respectful to their teacher and have less time periods where they displayed aggression toward the teachers or their peers. That was a great success for that class." Another also felt they had an impact, writing, "My SDC class - this group started out kicking and screaming and at some point, this changed, they were waiting for me, ready, kind with each other, less volatile."

A Special Day Class teacher shared, "[The artist] did a very nice job modifying the activities for the different students. [She] definitely pushed the students that were more capable and she adapted the activities for those that were struggling, and did a great job of including my student who uses the walker." Another teacher shared, "The artist, for the most part, knew how to interact with those who were inclusion students. They were excited and focused." Teaching artists also shared in surveys that they modify their lessons continually throughout the year to accommodate students and to adapt to their needs and abilities. As one artist explained, "Yes, I created my curriculum overview in the beginning, and changed it a lot. There were certain ideas that didn't work with the students, others that were great, some that needed to be broken down into simpler objectives, ideas, or exercises. The whole process was revision."





As many of the teachers have worked with ARISE across multiple years, they may give the artists feedback about what works and what does not work with their students. In focus groups, teachers reported that through ARISE students learn body awareness and control. A teacher shared, “[ARISE is] another opportunity for children to understand who they are and to experience movement and body, [to explore] how their bodies work. They don’t normally experience that. Kids need movement. Performance is that avenue for kids to show their strength.”

### ***ARISE offers increased access for Special Day students into general education***

During the Special Education teachers’ dinner, Special Day Class teachers and staff from the SFUSD Special Education Department identified some unique benefits that the ARISE Project has for their students. Of particular significance is the fact that students in Special Education receive less arts education programming than their peers in general education. This is particularly true for students who are emotionally disturbed and are often excluded from arts programming because of behavior. The ARISE Project has introduced the performing arts to many of these students for the first time. The ARISE Project also connects students in Special Day Classes with the rest of the school. Special Education students are aware of the programs and services that other students get and are used to being left out. Having the ARISE Project in their classroom makes them feel connected rather than isolated.

At Stevenson Elementary, the principal reported increased mainstreaming attributed to ARISE in addition to a noticeable shift in her general education teachers’ perspectives on hosting mainstreaming students from Special Day Classes. Prior to ARISE, teachers felt put out and unprepared to host mainstreamed students; however, after observing students doing the same ARISE lessons in their Special Day Classes that were being taught in the general education classrooms, they developed an overall positive attitude towards inclusion. They were able to see that Special Education students were capable of learning with simple adaptations and the school culture around inclusion changed over the course of ARISE.

### ***ARISE helps teachers see their students in different environments***

Having an arts education expert teach the residency classes also has unique benefits to the Special Day Class. It allows classroom teachers and students to see each other in a different environment. In stepping back from the teaching role, classroom teachers are able to observe behaviors and attitudes in their students that they might otherwise miss. For students, having a new face in the class also creates more focus in the class, because they can attend to a new person with a different style.

### ***Suggestions for improving ARISE workshops with regard to the needs and limitations of students, teachers, and artists***

While teachers generally believe that artists do a good job of including and engaging special education students, some special education teachers say that artists could do a better job with pacing. One





teacher of a Special Day Class states that the artist in his class “can go kind of fast. My class needs lots of repetition... They need steps broken down, written down.” A teacher of a Special Day Class for deaf and hard of hearing students says that the artist’s pace makes it difficult for the interpreter to keep up; she also suggested that the artist provide her with lesson plans in advance so that she can teach American Sign Language signs for new terms and phrases to her students.



## Section A-9 Increase sustainability of the performing arts by institutionalizing performing arts education in school settings

|  |   |
|--|---|
| <b>9 Project Objective</b>   | <input checked="" type="checkbox"/> Check if this is a status update for the previous budget period |
| Increase sustainability of the performing arts by institutionalizing performing arts education in school settings. |   |

| <b>A Performance Measure</b>  | <b>Measure Type</b> | <b>Quantitative Data</b>      |              |          |                                |              |          |
|---|---------------------|-------------------------------|--------------|----------|--------------------------------|--------------|----------|
| Teachers in AIS classrooms show greater use of performing arts in their regular curriculum than comparison-group teachers, as measured by teacher surveys and focus groups and action research process notes and reports. | Project             | <b>Target</b>                 |              |          | <b>Actual Performance Data</b> |              |          |
|   |                     | <b>Raw #</b>                  | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|   |                     | > 0.7 change on a 10-pt scale |              |          | 1.5 change on a 10-pt scale    |              |          |

- Data source: Changes in teacher survey responses from pre-test to post-test for comparison and treatment groups. See Explanation of Progress below.

| <b>B Performance Measure</b>  | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |   |              |          |
|---|---------------------|--------------------------|--------------|----------|---|--------------|----------|
| Teachers and artists report that performing arts have an increased value in the school environment, as measured by teacher and artist focus groups. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b>  |              |          |
|   |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>  | <b>Ratio</b> | <b>%</b> |
|   |                     | >0                       |              |          | 4 teachers specifically stated they have an increased appreciation of the value |              |          |

- Data source: Qualitative data from teacher focus groups. See Explanation of Progress below.

| <b>C Performance Measure</b>  | <b>Measure Type</b> | <b>Quantitative Data</b> |              |          |                                |              |          |
|---|---------------------|--------------------------|--------------|----------|--------------------------------|--------------|----------|
| Teachers document and use new curricular approaches, as measured by teacher surveys and focus groups and action research process notes and reports. | Project             | <b>Target</b>            |              |          | <b>Actual Performance Data</b> |              |          |
|   |                     | <b>Raw #</b>             | <b>Ratio</b> | <b>%</b> | <b>Raw #</b>                   | <b>Ratio</b> | <b>%</b> |
|   |                     |                          | > 7/26       | > 27%    |                                | 39/54        | 72%      |

- Data source: Teacher responses to open-ended survey items. See Explanation of Progress below.



| D Performance Measure   | Measure Type | Quantitative Data |       |   |  |       |   |
|---|--------------|-------------------|-------|---|--|-------|---|
|   |              | Target            |       |   | Actual Performance Data  |       |   |
|   |              | Raw #             | Ratio | % | Raw #  | Ratio | % |
| Artists are consulted about using performing arts across the curriculum and teachers incorporate arts into the lesson plan, as measured by artist and teacher focus groups and surveys. | Project      | >0                |       |   | 2 artists report their teachers actively participate and seek ways to integrate arts |       |   |
|   |              |                   |       |   |  |       |   |

- Data source: Qualitative data from teacher focus groups. See Explanation of Progress below.

### Explanation of Progress

**Measure A:** The target data for teacher survey indicators is a change in treatment-group teacher survey responses that is greater than a change in the comparison-group teacher survey responses. Teacher surveys demonstrate that teachers in ARISE classrooms show greater use of performing arts in their regular curriculum than comparison group teachers. Teachers in treatment classrooms reported that at the end of the school year, they use dance or creative movement techniques more frequently in their lesson plans (1.3 increase from pre-test to post-test on a 10-point scale) compared with comparison group teachers (0.2 change from pre-test to post-test).<sup>8</sup> Treatment teachers also use theater more often in their lesson plans (1.7 increase on a 10-point scale) than do comparison teachers (1.2 change on the same scale). While treatment teachers report greater gains on this item, the difference between treatment and comparison teachers is not statistically significant. When examining the two survey items above together, teachers in treatment classrooms reported a 1.5-point average increase from pre-test to post-test on a 10-point scale while teachers in comparison classrooms reported a 0.7-point average change from pre-test to post-test.

**Measure B:** This performance measure was designed to measure qualitative data; the target data is a general consensus through teacher and artist focus groups that the school places an increased value in the performing arts. In focus groups, teachers reported that they believe the arts have a positive impact on student learning and more should be done to help teachers incorporate arts in the classroom. However, focus groups with classroom teachers and teaching artists show that incorporating arts into

<sup>8</sup> Differences between treatment and comparison teachers are statistically significant at the 0.05 confidence level.



the classroom is particularly difficult largely due to limited time and resources. As one teacher explains in a survey, "I find it difficult to incorporate [art] with all the standards I need to teach. I like [art taught] on its own, with an outside teacher. Art for art's sake."

In focus groups, teachers reported that their students benefit from learning from an expert in the field through ARISE. Many teachers said ARISE is valuable because it offers their students something they cannot give them themselves. One teacher explained, "It is a great program that truly benefits the students. They are able to work on skills that are not addressed specifically in the district-adopted curriculum, and it opens up and gives these students an opportunity to experience arts that they may not have otherwise had an opportunity to." Another teacher shared, "[Students] learn about cooperation and develop courage and public speaking skills. I would also express gratitude that this program offers something to my students that I don't feel all that capable of teaching them myself." A few teachers shared in surveys that they are very comfortable with having a trained arts teacher come in to teach, but less confident in integrating the arts themselves.

Many of the classroom teachers have participated in ARISE for all three years that the programming has been offered; they continued with the ARISE program because they value the opportunity for their students to participate in the performing arts. As one teacher shared, "I believe in the program. I know it works." Another stated, "I was extremely impressed with the first artist and saw a strong change and impact with that group of students. After that, I was sold on the program."

**Measure C:** The target data for open-ended teacher survey responses is a higher presence of the item in treatment-group teacher survey responses than in the comparison-group teacher survey responses. Results from teacher surveys show that teachers in the treatment groups document and use new curricular approaches after the ARISE residency. In open-ended responses in the teacher survey, 72% of teachers in treatment classrooms (39 of 54 teachers) reported new specific tools to use performing arts in the classroom that they learned about in the school year, compared with 27% of teachers (7 of 26 teachers) in the comparison group. Teachers in the treatment group listed a variety of performing arts techniques they learned that aim to energize students, get their attention and engage them further in lessons.

**Measure D:** This performance measure was designed to measure qualitative data; the target data is a general consensus through teacher focus groups and surveys that artists are consulted about using performing arts across the curriculum and teachers incorporate arts into the lesson plan. In teacher focus groups, some teachers reported that they have consulted with the teaching artist about integrating artist's techniques into their classroom teaching. As a teacher shared, "I've incorporated



some of it into our writing. We have done a lot of work on elaborative or expressive writing, showing what a character feels instead of telling and things like that. I've incorporated some of the movement and acting into that." Another teacher shared that being involved in the ARISE program for multiple years has helped her integrate performing arts in the classroom: "Since this is the third year of implementation, I have found it very natural to incorporate more performing arts in my classroom."

Teachers apply performing arts concepts to their classrooms in their own ways. Some examples include asking students to take a story from the Language Arts class and turn it into a play to perform for their classmates, using an ARISE activity as a transition, singing songs learned from the artists, and prompting students to apply skills or techniques they learned in ARISE into presentations or plays. One teacher shared that they applied concepts they learned in ARISE to a class presentation about blood cells. Other teachers shared that they felt that the activities carried into physical education classes or that concepts overlap with other arts residencies the students are participating in. A Special Day Class teacher explained in a survey, "I learned that seemingly ordinary classroom supplies and activities can be used within a performing arts context. No extra props/ expenses are needed - just imagination."

### **Qualitative data**

#### ***Challenges to increasing sustainability of performance art in educational settings***

According to focus groups with classroom teachers and teaching artists, incorporating arts into the classroom is particularly difficult largely due to limited time and resources. Teachers talk of the numerous curricular mandates that they are required to teach by and that it is challenging to fulfill those mandates and provide arts education at the same time. Some schools do have external funding and programs for arts education but those programs are not a high priority for the schools or District, even if arts education are a part of the school's mission statement.

Outside of the ARISE residencies, students have limited opportunities to participate in performing arts activities at school. According to focus group respondents, the biggest obstacles teachers face in including performing arts in the classroom are a lack of time and a lack of training. Teachers also struggle with getting students grade up to speed that are at a lower level than expected. As a teacher explained, "I think that with the district itself, and with us being in a performance improvement school, it is difficult to do anything in the performing arts. But I am so, so determined, to get these students performing at the level that they need to be [academically], because I know how it affects their futures, that I am very focused on getting them to meet academic standards. I forget sometimes that it is important, also, to expose kids to the arts... after the state test I do reader's theatre with the kids. I would like to do it at the beginning of the year, but it takes away from other things that I would otherwise be doing, because we are under such scrutiny."



Teachers value the performing arts, but find that without expertise it takes too much time to plan lessons that incorporate the performing arts. Additionally, teachers face a lot of pressure to focus their instruction on areas of standardized testing, such as math and reading. They feel their students gain a lot from the performing arts activities, but these activities take more classroom time than direct instruction. Students get very excited about the performing arts, and need a longer “cool down” time after these activities when compared with other classroom instruction.

Teachers feel that successful arts programs are characterized by rigor, structure, well-prepared teachers and hands-on learning. Most special education and general education teachers were satisfied with the program and the artists that taught it in each of the program years. Artists believe that closer relationships with the teachers and access to adequate teaching spaces would improve the learning environment.

### *Support for increasing its sustainability*

Teachers report that they believe the arts have a positive impact on student learning and more should be done to help teachers incorporate arts in the classroom. Teachers feel that their students benefit from learning from an expert in the field through ARISE. Many teachers reported that they could not provide the quality of performing arts instruction that their students receive from the ARISE teaching artists. Some felt that it would help if artists would share ideas for incorporating arts in other subject areas, as a teacher explained, “I think it might help, if there was time before school starts in the fall, for the artists to sit with grade level teachers and say, ‘these are activities that you can use for social studies. These are some examples of activities that you can use in the classroom.’ And plan out different things... that were adapted to a particular grade level and content area.”

Some teachers have found small ways to incorporate activities they have seen the artists doing or concepts from the ARISE class into their teaching. As one teacher responded on the survey, “Yes, my thoughts have changed during the course of the year. While I've always felt that the performing arts were valuable to learning, I was neither comfortable nor clear about how to incorporate them into classroom. Observing our Resident Artist in action and watching how the students respond to challenges has provided me with ideas and tools to incorporate into the classroom.” In the focus groups, teachers shared that they use movements to teach vocabulary, some work to allow students options in activities or presentations; others try to work with the artists to ensure that the subjects covered in each class complement each other. The survey results showed that teachers learned tableaux, vignettes, pantomime, team builders, and ice breakers that use movement. They learned to use the drum to signal start, move, slow or freeze, as well as games for transitions or to gain student focus. A teacher explained in a focus group, “We do some kind of role playing for conflict management. I also have my kids write skits that incorporate vocabulary from the week. I do try to transfer some of the theatre arts games and use them in the curriculum as well.”



The majority of teachers have participated in ARISE for multiple years that programming has been offered; they continued with the ARISE program because they value the opportunity for their students to participate in the performing arts. As a teacher wrote in the survey, "Using performing arts in the classroom is great! It has improved my students' confidence, creative imagination, oral skills, vocabulary, listening, following directions, and having fun acting out a story or situation." Another survey respondent shared, "Individually, the students have gained [through participation in ARISE]: increased confidence, new and varied means of expression, improved focus, opportunities to challenge themselves, opportunities and framework[s] to learn from and appreciate their peers. The Theatre Arts class is an equalizing environment for the class, meaning that all students enter at the same level. Each week offers new challenges, and new opportunities for different individuals to feel successful. It also offers an environment where students can more easily learn from and appreciate each other's creativity and talents."



## Conclusion

**We have identified a number of key findings throughout the study. These are described below**

### *Through ARISE, students with special needs have a chance to shine in the classroom*

Several teachers reported that the ARISE residencies are one of the only times in school where inclusion students are treated the exact same way as their general education peers. In ARISE, there is no “wrong answer” and creativity is rewarded so even students who struggle with other subjects are able to demonstrate talents and take risks in front of their peers. Teachers and teaching artists in all treatment schools reported that students gain self-confidence and stage presence through ARISE. Teachers found that students who are most gifted in the performing arts are often inclusion students and students who struggle with other, more traditional academic subject areas such as Language Arts and Math. ARISE gives these students a chance to shine in the classroom and levels the playing field for inclusion students. This helps boost students’ self-confidence; one teacher explains the benefit of the residencies for students with special needs, “I have seen a couple of [students] really blossom through the theater arts program, and that is transferring to the classroom. They have the opportunity to have that kind of artistic expression, and then get recognized for it. It is a great boost for them.” Another teacher explains that ARISE is the only opportunity for their students to excel in school because “without the ARISE classes, [these students with special needs] would not get that opportunity to shine.” Teachers also reported that some of the students that are gifted in other subject areas struggle in the performing arts. It was helpful for these students to see their inclusion student peers excel in an area that they find difficult. The experience of struggling in theatre class has helped these students develop empathy for their peers that struggle with other subject areas.

### *ARISE helps teachers learn new techniques to use in the classroom*

Teachers participating in ARISE showed significantly greater gains in their comfort trying new techniques in the classroom compared to teachers in comparison classrooms. Teachers adapt the techniques used by the teaching artist for their own classrooms. For example, teachers use techniques for gaining student attention, including clapping or beating rhythms to indicate transition time or that their students need to pay attention. Some teachers use theatre games to teach vocabulary and rhythm games to teach spelling. Teachers also reported that they integrate the performing arts into other academic areas, such as Language Arts and Social Studies, through the use of tableaux, vignettes, skits or role playing. General and Special Day Class teachers also learned techniques for working with special





needs students, such as using controlled movement in the classroom to help students that are compelled to frequently move around.

### ***Through ARISE, students enjoy themselves in school***

Teachers reported that their school day is so focused on achievement in Language Arts and Math skills; students have to be so serious that that they rarely have a chance to “be a kid.” Teachers reported that through ARISE, students have the chance to “be a kid” by playing, expressing themselves creatively and having fun during the school day. They shared that the vast majority of their students really look forward to the residency class. Teachers reported that when students have something to look forward to in the school day, they are more likely to attend school and enjoy themselves. Data from school records show that students in treatment classrooms had fewer absences and significantly fewer tardies than students in comparison classrooms.

### ***ARISE is one of few opportunities for students in special education, particularly those in Special Day Classes, to have arts education.***

Incorporating arts into the classroom is difficult largely due to limited time and resources. Teachers have numerous curricular mandates and it is challenging to fulfill those mandates and provide arts education at the same time. Further, schools have reduced specialist time in response to tightened budgets, so few students see an arts teacher on a regular basis. While some schools have external funding for arts education, those programs are not a high priority for the schools or District. Outside of the ARISE residencies, students have limited opportunities to participate in performing arts activities at school. According to focus group respondents, the biggest obstacles teachers face in including performing arts in the classroom are a lack of time and a lack of training. Teachers also struggle with getting students grade up to speed that are at a lower level than expected.



## Appendix A : Quantitative data results and statistical analysis

### Student survey results

Table A1: Student survey results in treatment and comparison classrooms

| Survey item   | Treatment v. Comparison | N   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | $\chi^2$ |
|---|-------------------------|-----|---------------|-----------------------------|----------------|------------------------------|----------|
| I like going to school+                             | Treatment               | 770 | 2.41          | .603                        | 2.38           | .583                         | 0.033    |
|   | Comparison              | 281 | 2.51          | .580                        | 2.40           | .619                         |          |
| I work very hard on my homework.                    | Treatment               | 768 | 2.61          | .522                        | 2.57           | .524                         | 0.985    |
|   | Comparison              | 281 | 2.62          | .550                        | 2.58           | .549                         |          |
| I learn a lot in school.                            | Treatment               | 767 | 2.72          | .479                        | 2.71           | .483                         | 0.793    |
|   | Comparison              | 278 | 2.76          | .459                        | 2.75           | .459                         |          |
| I pay attention in class.                           | Treatment               | 766 | 2.51          | .536                        | 2.47           | .535                         | 0.985    |
|   | Comparison              | 278 | 2.48          | .562                        | 2.46           | .534                         |          |
| I like the other kids in my class.                  | Treatment               | 769 | 2.40          | .562                        | 2.32           | .521                         | 0.994    |
|   | Comparison              | 280 | 2.48          | .599                        | 2.40           | .560                         |          |
| I feel comfortable talking in class.                | Treatment               | 767 | 2.17          | .707                        | 2.20           | .705                         | 0.463    |
|   | Comparison              | 276 | 2.17          | .786                        | 2.25           | .753                         |          |
| I like to do art in school.                         | Treatment               | 769 | 2.62          | .653                        | 2.58           | .648                         | 0.655    |
|   | Comparison              | 279 | 2.68          | .609                        | 2.67           | .621                         |          |
| I like to hear what people think of my school work. | Treatment               | 764 | 2.21          | .729                        | 2.19           | .690                         | 0.549    |
|   | Comparison              | 279 | 2.28          | .718                        | 2.20           | .775                         |          |
| I understand the rules in my school and classroom.- | Treatment               | 765 | 2.87          | .357                        | 2.85           | .374                         | 0.009    |
|   | Comparison              | 277 | 2.76          | .493                        | 2.84           | .379                         |          |
| I like to follow directions.                        | Treatment               | 767 | 2.55          | .569                        | 2.51           | .569                         | 0.152    |
|   | Comparison              | 280 | 2.61          | .552                        | 2.55           | .591                         |          |
| Playing theater games.-                             | Treatment               | 732 | 2.28          | .647                        | 2.29           | .599                         | 0.005    |
|   | Comparison              | 267 | 2.12          | .730                        | 2.27           | .672                         |          |
| Making up new dance moves.-                         | Treatment               | 733 | 1.75          | .806                        | 1.68           | .754                         | 0.019    |
|   | Comparison              | 273 | 1.83          | .820                        | 1.88           | .820                         |          |
| Acting or performing in class.                      | Treatment               | 732 | 1.98          | .740                        | 2.01           | .697                         | 0.054    |
|   | Comparison              | 274 | 2.01          | .775                        | 2.04           | .748                         |          |
| Dancing in front of other people                    | Treatment               | 731 | 1.66          | .760                        | 1.63           | .714                         | 0.182    |
|   | Comparison              | 276 | 1.70          | .792                        | 1.77           | .824                         |          |
| Telling stories.                                    | Treatment               | 730 | 2.08          | .750                        | 1.97           | .726                         | 0.454    |
|   | Comparison              | 275 | 2.24          | .742                        | 2.15           | .724                         |          |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction



**Table A2: Student survey results in Special Day Class and General Education classrooms (inclusion students and students with no special needs) from Treatment Classrooms**

| Survey item   | Special Day Class versus General Education Student | N   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | $\chi^2$ |
|---|--|-----|---------------|-----------------------------|----------------|------------------------------|----------|
| I like going to school.                             | Special Day Class                                  | 25  | 2.33          | .868                        | 2.68           | .627                         | 0.136    |
|   | General Education                                  | 745 | 2.41          | .593                        | 2.37           | .579                         |          |
| I work very hard on my homework.+                   | Special Day Class                                  | 24  | 2.50          | .780                        | 2.67           | .565                         | 0.016    |
|   | General Education                                  | 744 | 2.61          | .512                        | 2.56           | .523                         |          |
| I learn a lot in school.                            | Special Day Class                                  | 23  | 2.71          | .550                        | 2.65           | .573                         | 0.486    |
|   | General Education                                  | 744 | 2.72          | .477                        | 2.72           | .481                         |          |
| I pay attention in class.                           | Special Day Class                                  | 24  | 2.29          | .806                        | 2.38           | .711                         | 0.711    |
|   | General Education                                  | 742 | 2.52          | .524                        | 2.47           | .528                         |          |
| I like the other kids in my class.+                 | Special Day Class                                  | 24  | 2.17          | .778                        | 2.50           | .659                         | 0.020    |
|   | General Education                                  | 745 | 2.41          | .553                        | 2.31           | .515                         |          |
| I feel comfortable talking in class.                | Special Day Class                                  | 23  | 2.13          | .815                        | 2.48           | .790                         | 0.166    |
|   | General Education                                  | 744 | 2.17          | .704                        | 2.20           | .701                         |          |
| I like to do art in school.                         | Special Day Class                                  | 24  | 2.67          | .702                        | 2.75           | .608                         | 0.470    |
|   | General Education                                  | 745 | 2.62          | .652                        | 2.58           | .649                         |          |
| I like to hear what people think of my school work. | Special Day Class                                  | 24  | 2.38          | .824                        | 2.50           | .722                         | 0.904    |
|   | General Education                                  | 740 | 2.21          | .726                        | 2.18           | .687                         |          |
| I understand the rules in my school and classroom.  | Special Day Class                                  | 23  | 2.58          | .654                        | 2.65           | .647                         | 0.032    |
|   | General Education                                  | 742 | 2.88          | .340                        | 2.86           | .361                         |          |
| I like to follow directions.                        | Special Day Class                                  | 24  | 2.29          | .859                        | 2.46           | .779                         | 0.535    |
|   | General Education                                  | 743 | 2.56          | .556                        | 2.52           | .561                         |          |
| Playing theater games.                              | Special Day Class                                  | 22  | 2.58          | .717                        | 2.55           | .671                         | 0.981    |
|   | General Education                                  | 710 | 2.27          | .643                        | 2.29           | .595                         |          |
| Making up new dance moves.                          | Special Day Class                                  | 22  | 2.26          | .915                        | 2.23           | .813                         | 0.911    |
|   | General Education                                  | 711 | 1.73          | .798                        | 1.66           | .746                         |          |
| Acting or performing in class.-                     | Special Day Class                                  | 22  | 2.58          | .654                        | 1.91           | .750                         | 0.000    |
|   | General Education                                  | 710 | 1.96          | .734                        | 2.01           | .695                         |          |
| Dancing in front of other people.-                  | Special Day Class                                  | 22  | 2.30          | .876                        | 1.68           | .839                         | 0.019    |
|   | General Education                                  | 709 | 1.64          | .748                        | 1.63           | .710                         |          |
| Telling stories.                                    | Special Day Class                                  | 22  | 2.57          | .788                        | 2.18           | .795                         | 0.440    |
|   | General Education                                  | 708 | 2.07          | .745                        | 1.97           | .724                         |          |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction



**Table A3: Student survey results in Special Day Class and General Education classrooms (inclusion students and students with no special needs) from Comparison Classrooms**

| Survey item   | Special Day Class versus General Education Student | N   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | $\chi^2$ |
|---|--|-----|---------------|-----------------------------|----------------|------------------------------|----------|
| I like going to school.                             | Special Day Class                                  | 29  | 2.79          | .559                        | 2.55           | .783                         | 0.450    |
|   | General Education                                  | 252 | 2.48          | .575                        | 2.38           | .597                         |          |
| I work very hard on my homework.                    | Special Day Class                                  | 29  | 2.55          | .783                        | 2.72           | .591                         | 0.350    |
|   | General Education                                  | 252 | 2.62          | .517                        | 2.56           | .543                         |          |
| I learn a lot in school.                            | Special Day Class                                  | 29  | 2.83          | .468                        | 2.86           | .351                         | 0.538    |
|   | General Education                                  | 249 | 2.76          | .458                        | 2.73           | .469                         |          |
| I pay attention in class.                           | Special Day Class                                  | 29  | 2.66          | .614                        | 2.62           | .561                         | 0.956    |
|   | General Education                                  | 249 | 2.46          | .553                        | 2.44           | .529                         |          |
| I like the other kids in my class.                  | Special Day Class                                  | 29  | 2.55          | .783                        | 2.62           | .561                         | 0.678    |
|   | General Education                                  | 251 | 2.47          | .575                        | 2.38           | .555                         |          |
| I feel comfortable talking in class.                | Special Day Class                                  | 26  | 2.70          | .609                        | 2.35           | .892                         | 0.067    |
|   | General Education                                  | 250 | 2.11          | .782                        | 2.24           | .738                         |          |
| I like to do art in school.                         | Special Day Class                                  | 29  | 2.72          | .702                        | 2.72           | .649                         | 0.707    |
|   | General Education                                  | 250 | 2.67          | .599                        | 2.67           | .619                         |          |
| I like to hear what people think of my school work. | Special Day Class                                  | 27  | 2.70          | .669                        | 2.74           | .526                         | 0.039    |
|   | General Education                                  | 252 | 2.23          | .710                        | 2.14           | .775                         |          |
| I understand the rules in my school and classroom.  | Special Day Class                                  | 27  | 2.78          | .577                        | 2.78           | .506                         | 0.718    |
|   | General Education                                  | 250 | 2.76          | .484                        | 2.84           | .364                         |          |
| I like to follow directions.                        | Special Day Class                                  | 28  | 2.72          | .528                        | 2.71           | .600                         | 0.400    |
|   | General Education                                  | 252 | 2.60          | .554                        | 2.53           | .588                         |          |
| Playing theater games.                              | Special Day Class                                  | 26  | 2.58          | .578                        | 2.31           | .788                         | 0.023    |
|   | General Education                                  | 241 | 2.07          | .729                        | 2.26           | .660                         |          |
| Making up new dance moves.                          | Special Day Class                                  | 26  | 2.26          | .813                        | 2.35           | .797                         | 0.686    |
|   | General Education                                  | 247 | 1.79          | .809                        | 1.83           | .809                         |          |
| Acting or performing in class.                      | Special Day Class                                  | 27  | 2.44          | .641                        | 2.19           | .834                         | 0.280    |
|   | General Education                                  | 247 | 1.97          | .775                        | 2.02           | .738                         |          |
| Dancing in front of other people.                   | Special Day Class                                  | 26  | 2.19          | .879                        | 2.23           | .815                         | 0.719    |
|   | General Education                                  | 250 | 1.64          | .765                        | 1.72           | .811                         |          |
| Telling stories.                                    | Special Day Class                                  | 26  | 2.50          | .762                        | 2.38           | .804                         | 0.209    |
|   | General Education                                  | 249 | 2.22          | .736                        | 2.13           | .712                         |          |



## Student survey illustration results

**Table A4: Is there an illustration?**

|                           | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|---------------------------|---------------------|----------------------|--------------------|---------------------|
| N                         | 182                 | 182                  | 505                | 505                 |
| Is there an illustration? | 96%                 | 95%                  | 97%                | 98%                 |

**Table A5: How many people are performing?**

|            | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|------------|---------------------|----------------------|--------------------|---------------------|
| N          | 173                 | 173                  | 487                | 489                 |
| 0          | 1%                  | 2%                   | <1%                | <1%                 |
| 1          | 9%                  | 8%                   | 6%                 | 2%                  |
| 2 to 4     | 75%                 | 71%                  | 78%                | 71%                 |
| 5 or more+ | 16%                 | 20%                  | 16%                | 27%                 |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction

**Table A6: For those with two or more performing, what genders are represented?**

| Genders         | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|-----------------|---------------------|----------------------|--------------------|---------------------|
| N               | 174                 | 173                  | 492                | 495                 |
| All same gender | 41%                 | 43%                  | 45%                | 44%                 |
| Mixed gender    | 18%                 | 12%                  | 18%                | 17%                 |
| Cannot tell     | 41%                 | 45%                  | 37%                | 39%                 |

**Table A7: Does the illustration include other people?**

|                        | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|------------------------|---------------------|----------------------|--------------------|---------------------|
| N                      | 182                 | 182                  | 505                | 505                 |
| Teacher                | 1%                  | 2%                   | 2%                 | 3%                  |
| Audience+              | 5%                  | 4%                   | 8%                 | 8%                  |
| Other, but cannot tell | 1%                  | 0%                   | 0%                 | <1%                 |
| Other                  | 1%                  | 1%                   | 1%                 | 6%                  |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction

**Table A8: What type of performance is depicted in the illustration?**

|                     | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|---------------------|---------------------|----------------------|--------------------|---------------------|
| N                   | 182                 | 182                  | 505                | 505                 |
| Dance               | 10%                 | 14%                  | 17%                | 15%                 |
| Theater             | 7%                  | 15%                  | 13%                | 12%                 |
| Puppetry            | 1%                  | 2%                   | <1%                | <1%                 |
| Singing             | 6%                  | 9%                   | 5%                 | 4%                  |
| Musical instruments | 4%                  | 10%                  | 4%                 | 5%                  |
| Cannot tell         | 65%                 | 45%                  | 53%                | 55%                 |
| Other               | 4%                  | 10%                  | 7%                 | 14%                 |

**Table A9: What elements of stage and stagecraft are depicted in the illustration?**

|                            | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|----------------------------|---------------------|----------------------|--------------------|---------------------|
| N                          | 182                 | 182                  | 505                | 505                 |
| Curtains                   | 19%                 | 25%                  | 25%                | 29%                 |
| Platform                   | 36%                 | 33%                  | 42%                | 37%                 |
| Scenery                    | 19%                 | 21%                  | 20%                | 14%                 |
| Audience space             | 2%                  | 3%                   | 5%                 | 2%                  |
| Music boombox/ radio notes | 7%                  | 10%                  | 7%                 | 8%                  |
| Craft lighting             | 7%                  | 7%                   | 8%                 | 9%                  |
| Stagecraft microphone      | 9%                  | 7%                   | 4%                 | 3%                  |
| Stagecraft using flies     | 1%                  | 1%                   | 3%                 | 1%                  |
| Other                      | 10%                 | 12%                  | 15%                | 15%                 |

**Table A10: What performance theme elements are depicted?**

|                    | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|--------------------|---------------------|----------------------|--------------------|---------------------|
| N                  | 182                 | 182                  | 505                | 505                 |
| Has title          | 5%                  | 12%                  | 12%                | 8%                  |
| Theme is indicated | 3%                  | 9%                   | 9%                 | 7%                  |
| Involves conflict+ | 1%                  | 2%                   | 4%                 | 4%                  |
| Culture            | 0%                  | 0%                   | <1%                | <1%                 |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction

**Table A11: What composition skills are included in the illustration?**

|   | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|---|---------------------|----------------------|--------------------|---------------------|
| N   | 182                 | 182                  | 505                | 505                 |
| Vocalizing  | 21%                 | 24%                  | 27%                | 23%                 |
| Choreography  | 4%                  | 11%                  | 13%                | 12%                 |
| Playing musical instruments-                            | 2%                  | 9%                   | 3%                 | 4%                  |
| Practicing  | 0%                  | 0%                   | 1%                 | 1%                  |
| Use of multiple levels+                                 | 7%                  | 6%                   | 14%                | 15%                 |
| Use of multiple body shapes+                            | 7%                  | 9%                   | 19%                | 18%                 |
| Performers touching                                     | 3%                  | 5%                   | 4%                 | 4%                  |
| Making eye contact                                      | 7%                  | 6%                   | 8%                 | 7%                  |
| Use of theatre space                                    | 4%                  | 3%                   | 4%                 | 4%                  |
| Details of body, face, and words associate with feeling | 4%                  | 7%                   | 13%                | 11%                 |
| Smiles  | 57%                 | 63%                  | 65%                | 59%                 |
| Singing   | 3%                  | 8%                   | 4%                 | 4%                  |
| Dialogue+   | 9%                  | 10%                  | 10%                | 17%                 |
| Other   | 5%                  | 8%                   | 7%                 | 9%                  |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction

**Table A12: What elements of character are depicted?**

|                  | Comparison pre-test | Comparison post-test | Treatment pre-test | Treatment post-test |
|------------------|---------------------|----------------------|--------------------|---------------------|
| N                | 182                 | 182                  | 505                | 505                 |
| Costume          | 12%                 | 11%                  | 12%                | 7%                  |
| Named Roles      | 1%                  | 2%                   | 2%                 | 2%                  |
| Hair and Make-up | 2%                  | 1%                   | 1%                 | 2%                  |
| Other            | 2%                  | 2%                   | 3%                 | 1%                  |





## Teacher Survey Results

**Table A13: Teacher survey results in treatment (n = 54) and comparison (n = 24) classrooms**

| Survey item   | Treatment v. Comparison | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|---|-------------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| The performing arts have a positive impact on my students' overall classroom behavior       | Treatment               | 5.46          | 1.997                       | 7.26           | 2.076                        | 0.088  |
|   | Comparison              | 5.91          | 3.450                       | 6.96           | 3.097                        |        |
| The performing arts have a positive impact on my students' overall attitude toward learning | Treatment               | 5.89          | 1.997                       | 7.81           | 1.851                        | 0.148  |
|   | Comparison              | 5.68          | 3.358                       | 6.86           | 3.152                        |        |
| I am comfortable assessing the quality of my students' dance or theater work+               | Treatment               | 5.39          | 2.498                       | 6.94           | 1.975                        | 0.000  |
|   | Comparison              | 4.43          | 3.102                       | 4.78           | 3.316                        |        |
| I am comfortable trying new techniques in the classroom+                                    | Treatment               | 6.50          | 2.117                       | 8.00           | 1.346                        | 0.000  |
|   | Comparison              | 6.35          | 2.773                       | 6.57           | 2.826                        |        |
| My students are respectful of their classmates  | Treatment               | 6.07          | 1.941                       | 7.67           | 1.374                        | 0.556  |
|   | Comparison              | 6.54          | 2.284                       | 7.83           | 1.606                        |        |
| My students are respectful of the adults in our school                                      | Treatment               | 7.09          | 1.821                       | 8.15           | 1.393                        | 0.827  |
|   | Comparison              | 7.46          | 1.933                       | 8.42           | 1.472                        |        |
| My students are rarely disruptive during class+   | Treatment               | 5.37          | 2.115                       | 6.80           | 1.826                        | 0.024  |
|   | Comparison              | 7.00          | 2.043                       | 7.38           | 2.039                        |        |
| My students rarely fight in my classroom  | Treatment               | 7.51          | 2.584                       | 8.43           | 2.098                        | 0.556  |
|   | Comparison              | 7.67          | 2.599                       | 8.75           | 1.700                        |        |
| My students care about the quality of their work  | Treatment               | 5.98          | 1.918                       | 7.79           | 1.321                        | 0.155  |
|   | Comparison              | 6.71          | 1.654                       | 8.00           | 1.063                        |        |
| My students participate in class discussions  | Treatment               | 5.41          | 1.765                       | 7.63           | 1.483                        | 0.183  |
|   | Comparison              | 6.21          | 1.817                       | 7.92           | 2.145                        |        |
| My students are engaged learners  | Treatment               | 5.87          | 1.904                       | 7.93           | 1.528                        | 0.056  |
|   | Comparison              | 6.71          | 1.829                       | 8.04           | 1.517                        |        |
| My students learn new information quickly   | Treatment               | 5.23          | 2.383                       | 6.58           | 2.282                        | 0.840  |
|   | Comparison              | 5.88          | 2.232                       | 7.17           | 2.461                        |        |
| My students are reflective about their work   | Treatment               | 4.74          | 1.925                       | 6.59           | 1.868                        | 0.162  |
|   | Comparison              | 5.21          | 2.245                       | 6.54           | 2.431                        |        |
| My students are receptive to feedback   | Treatment               | 5.72          | 1.966                       | 7.56           | 1.449                        | 0.315  |
|   | Comparison              | 6.54          | 2.431                       | 8.00           | 2.022                        |        |
| My students work well in teams  | Treatment               | 5.07          | 1.960                       | 7.33           | 1.637                        | 0.127  |
|   | Comparison              | 5.50          | 2.147                       | 7.21           | 2.359                        |        |



| Survey item  | Treatment v. Comparison | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|--|-------------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| About how often is dance/creative movement used in your lesson plans?+       | Treatment               | 2.58          | 1.926                       | 3.92           | 2.217                        | 0.018  |
|  | Comparison              | 3.54          | 2.702                       | 3.71           | 2.458                        |        |
| About how often is theater used in your lesson plans?                        | Treatment               | 2.73          | 1.739                       | 4.40           | 2.303                        | 0.292  |
|  | Comparison              | 3.58          | 2.104                       | 4.79           | 2.126                        |        |
| How comfortable do you feel using dance/creative movement in your classroom? | Treatment               | 4.17          | 2.793                       | 5.67           | 2.307                        | 0.165  |
|  | Comparison              | 4.29          | 2.694                       | 5.25           | 2.863                        |        |
| How comfortable do you feel using theater in your classroom?                 | Treatment               | 4.70          | 2.654                       | 6.48           | 2.255                        | 0.072  |
|  | Comparison              | 5.04          | 2.422                       | 6.04           | 2.579                        |        |

+Statistically significant in the desired direction

| -Statistically significant in the unwanted direction



**Table A14: Teacher survey results on individual students from treatment (n=851) and comparison (n=277) classrooms**

| Survey item                                 | Treatment v. Comparison | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|---|-------------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| Approaches Problems Creatively              | Treatment               | 5.98          | 2.029                       | 7.05           | 1.876                        | 0.068  |
|   | Comparison              | 5.84          | 2.159                       | 7.07           | 2.124                        |        |
| Adapts to new situations with ease          | Treatment               | 6.13          | 1.999                       | 7.17           | 1.788                        | 0.365  |
|   | Comparison              | 6.22          | 2.244                       | 7.33           | 1.957                        |        |
| Respects cultural differences               | Treatment               | 6.90          | 1.702                       | 7.69           | 1.524                        | 0.247  |
|   | Comparison              | 7.38          | 2.027                       | 8.26           | 1.635                        |        |
| Considers the pros/cons of ideas-           | Treatment               | 6.10          | 1.946                       | 7.05           | 1.866                        | 0.003  |
|   | Comparison              | 5.95          | 2.107                       | 7.14           | 2.028                        |        |
| Appreciate the work of others               | Treatment               | 6.57          | 1.913                       | 7.53           | 1.708                        | 0.885  |
|   | Comparison              | 7.08          | 2.091                       | 8.04           | 1.759                        |        |
| Is enthusiastic about learning              | Treatment               | 6.75          | 2.087                       | 7.72           | 1.819                        | 0.196  |
|   | Comparison              | 6.75          | 2.147                       | 7.83           | 1.910                        |        |
| Volunteers to answer questions during class | Treatment               | 5.89          | 2.304                       | 7.04           | 2.158                        | 0.138  |
|   | Comparison              | 5.49          | 2.750                       | 6.83           | 2.641                        |        |
| Shows comfort with expressing ideas         | Treatment               | 5.82          | 2.230                       | 6.93           | 2.102                        | 0.493  |
|   | Comparison              | 5.77          | 2.488                       | 6.94           | 2.449                        |        |
| Stays on task                               | Treatment               | 6.61          | 2.233                       | 7.51           | 1.933                        | 0.277  |
|   | Comparison              | 6.48          | 2.639                       | 7.50           | 2.239                        |        |
| Perseveres through challenges               | Treatment               | 6.36          | 2.078                       | 7.32           | 1.882                        | 0.145  |
|   | Comparison              | 6.33          | 2.359                       | 7.43           | 2.012                        |        |
| Displays feelings of success                | Treatment               | 6.31          | 1.932                       | 7.37           | 1.769                        | 0.440  |
|   | Comparison              | 6.69          | 2.217                       | 7.86           | 1.880                        |        |
| Is respectful of others' ideas              | Treatment               | 6.92          | 2.055                       | 7.75           | 1.842                        | 0.586  |
|   | Comparison              | 7.32          | 2.249                       | 8.18           | 1.713                        |        |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction



**Table A15: Teacher survey results for Special Day Class (n=14) and General Education classrooms (n=40) in treatment classrooms**

| Survey item   |                   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|---|-------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| The performing arts have a positive impact on my students' overall classroom behavior+      | Special Day Class | 4.07          | 1.385                       | 6.71           | 2.016                        | 0.016  |
|   | General Education | 5.95          | 1.961                       | 7.45           | 2.087                        |        |
| The performing arts have a positive impact on my students' overall attitude toward learning | Special Day Class | 4.71          | 1.541                       | 6.93           | 2.303                        | 0.570  |
|   | General Education | 6.31          | 1.989                       | 8.13           | 1.576                        |        |
| I am comfortable assessing the quality of my students' dance or theater work                | Special Day Class | 3.86          | 2.070                       | 6.00           | 1.961                        | 0.116  |
|   | General Education | 5.93          | 2.433                       | 7.28           | 1.894                        |        |
| I am comfortable trying new techniques in the classroom                                     | Special Day Class | 5.57          | 2.243                       | 7.50           | .941                         | 0.293  |
|   | General Education | 6.83          | 1.999                       | 8.18           | 1.430                        |        |
| My students are respectful of their classmates+   | Special Day Class | 4.71          | 1.684                       | 7.07           | 1.328                        | 0.023  |
|   | General Education | 6.55          | 1.811                       | 7.88           | 1.343                        |        |
| My students are respectful of the adults in our school                                      | Special Day Class | 5.36          | 1.737                       | 7.21           | 1.477                        | 0.063  |
|   | General Education | 7.72          | 1.413                       | 8.48           | 1.219                        |        |
| My students are rarely disruptive during class  | Special Day Class | 3.77          | 1.363                       | 5.71           | 1.069                        | 0.126  |
|   | General Education | 5.90          | 2.062                       | 7.18           | 1.893                        |        |
| My students rarely fight in my classroom  | Special Day Class | 6.43          | 2.848                       | 7.79           | 1.805                        | 0.167  |
|   | General Education | 7.90          | 2.404                       | 8.65           | 2.167                        |        |
| My students care about the quality of their work  | Special Day Class | 4.64          | 1.692                       | 6.93           | 1.269                        | 0.196  |
|   | General Education | 6.45          | 1.782                       | 8.10           | 1.209                        |        |
| My students participate in class discussions  | Special Day Class | 4.21          | 1.477                       | 6.64           | 2.023                        | 0.577  |
|   | General Education | 5.83          | 1.678                       | 7.98           | 1.074                        |        |
| My students are engaged learners  | Special Day Class | 4.50          | 1.557                       | 6.79           | 1.762                        | 0.523  |
|   | General Education | 6.35          | 1.791                       | 8.33           | 1.228                        |        |
| My students learn new information quickly   | Special Day Class | 2.43          | 1.089                       | 3.93           | 2.129                        | 0.632  |
|   | General Education | 6.23          | 1.856                       | 7.54           | 1.430                        |        |
| My students are reflective about their work   | Special Day Class | 3.07          | 1.072                       | 4.64           | 1.598                        | 0.417  |
|   | General Education | 5.33          | 1.817                       | 7.28           | 1.432                        |        |
| My students are receptive to feedback   | Special Day Class | 4.93          | 2.401                       | 6.50           | 2.066                        | 0.438  |
|   | General Education | 6.00          | 1.739                       | 7.93           | .944                         |        |
| My students work well in teams  | Special Day Class | 3.29          | 1.383                       | 5.57           | 1.016                        | 0.936  |
|   | General Education | 5.70          | 1.742                       | 7.95           | 1.339                        |        |



| Survey item  |                   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|--|-------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| About how often is dance/creative movement used in your lesson plans?        | Special Day Class | 2.64          | 2.098                       | 4.07           | 2.269                        | 0.792  |
|  | General Education | 2.56          | 1.889                       | 3.87           | 2.226                        |        |
| About how often is theater used in your lesson plans?                        | Special Day Class | 2.29          | 1.069                       | 4.07           | 1.542                        | 0.766  |
|  | General Education | 2.89          | 1.914                       | 4.53           | 2.533                        |        |
| How comfortable do you feel using dance/creative movement in your classroom? | Special Day Class | 3.64          | 2.530                       | 5.71           | 1.816                        | 0.118  |
|  | General Education | 4.35          | 2.887                       | 5.65           | 2.476                        |        |
| How comfortable do you feel using theater in your classroom?                 | Special Day Class | 3.57          | 2.102                       | 5.71           | 1.490                        | 0.393  |
|  | General Education | 5.10          | 2.734                       | 6.75           | 2.426                        |        |

+Statistically significant in the desired direction

|

-Statistically significant in the unwanted direction



**Table A16: Teacher survey results for Special Day Class (n=9) and General Education classrooms (n=15) in comparison classrooms**

| Survey item   |                   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|---|-------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| The performing arts have a positive impact on my students' overall classroom behavior       | Special Day Class | 6.89          | 2.571                       | 7.22           | 2.587                        | 0.135  |
|   | General Education | 5.29          | 3.872                       | 6.79           | 3.468                        |        |
| The performing arts have a positive impact on my students' overall attitude toward learning | Special Day Class | 6.22          | 2.587                       | 7.11           | 2.713                        | 0.648  |
|   | General Education | 5.31          | 3.860                       | 6.69           | 3.521                        |        |
| I am comfortable assessing the quality of my students' dance or theater work                | Special Day Class | 3.78          | 2.863                       | 4.00           | 3.122                        | 0.579  |
|   | General Education | 4.86          | 3.278                       | 5.29           | 3.451                        |        |
| I am comfortable trying new techniques in the classroom                                     | Special Day Class | 7.33          | 2.646                       | 7.33           | 2.550                        | 0.304  |
|   | General Education | 5.71          | 2.758                       | 6.07           | 2.973                        |        |
| My students are respectful of their classmates  | Special Day Class | 6.22          | 2.539                       | 7.44           | 1.944                        | 0.911  |
|   | General Education | 6.73          | 2.187                       | 8.07           | 1.387                        |        |
| My students are respectful of the adults in our school                                      | Special Day Class | 7.11          | 1.764                       | 8.22           | 1.716                        | 0.738  |
|   | General Education | 7.67          | 2.059                       | 8.53           | 1.356                        |        |
| My students are rarely disruptive during class  | Special Day Class | 7.00          | 2.179                       | 6.89           | 2.713                        | 0.415  |
|   | General Education | 7.00          | 2.035                       | 7.67           | 1.543                        |        |
| My students rarely fight in my classroom  | Special Day Class | 6.89          | 2.804                       | 8.33           | 1.871                        | 0.430  |
|   | General Education | 8.13          | 2.446                       | 9.00           | 1.604                        |        |
| My students care about the quality of their work  | Special Day Class | 5.89          | 1.833                       | 7.78           | 1.202                        | 0.139  |
|   | General Education | 7.20          | 1.373                       | 8.13           | .990                         |        |
| My students participate in class discussions  | Special Day Class | 5.33          | 2.179                       | 7.22           | 2.949                        | 0.655  |
|   | General Education | 6.73          | 1.387                       | 8.33           | 1.447                        |        |
| My students are engaged learners  | Special Day Class | 6.00          | 1.936                       | 7.33           | 2.000                        | 1.000  |
|   | General Education | 7.13          | 1.685                       | 8.47           | .990                         |        |
| My students learn new information quickly   | Special Day Class | 3.89          | 1.900                       | 5.00           | 2.784                        | 0.655  |
|   | General Education | 7.07          | 1.438                       | 8.47           | .834                         |        |
| My students are reflective about their work   | Special Day Class | 3.44          | 1.424                       | 4.44           | 2.404                        | 0.418  |
|   | General Education | 6.27          | 1.981                       | 7.80           | 1.373                        |        |
| My students are receptive to feedback   | Special Day Class | 6.44          | 3.321                       | 7.56           | 3.087                        | 0.434  |
|   | General Education | 6.60          | 1.844                       | 8.27           | 1.033                        |        |
| My students work well in teams  | Special Day Class | 3.67          | 1.500                       | 5.22           | 2.438                        | 0.721  |
|   | General Education | 6.60          | 1.682                       | 8.40           | 1.298                        |        |
| About how often is  | Special Day Class | 2.89          | 1.965                       | 3.56           | 2.351                        | 0.511  |



| Survey item  |                   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|--|-------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| dance/creative movement used in your lesson plans?                           | General Education | 3.93          | 3.058                       | 3.80           | 2.597                        |        |
| About how often is theater used in your lesson plans?                        | Special Day Class | 3.78          | 1.302                       | 4.78           | 2.167                        | 0.711  |
|  | General Education | 3.47          | 2.503                       | 4.80           | 2.178                        |        |
| How comfortable do you feel using dance/creative movement in your classroom? | Special Day Class | 5.33          | 2.291                       | 6.11           | 2.421                        | 0.668  |
|  | General Education | 3.67          | 2.795                       | 4.73           | 3.058                        |        |
| How comfortable do you feel using theater in your classroom?                 | Special Day Class | 5.44          | 2.186                       | 6.33           | 2.398                        | 0.782  |
|  | General Education | 4.80          | 2.597                       | 5.87           | 2.748                        |        |





**Table A17: Treatment teacher survey results on individual students from Special Day Classrooms (n=75) and General Education classrooms (with inclusion students and students with no special needs; n=776)**

| Survey item                                 |                    | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|---|--------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| Approaches Problems Creatively              | Special Day Class+ | 3.54          | 1.867                       | 4.58           | 2.081                        | 0.862  |
|   | General Education  | 6.21          | 1.888                       | 7.28           | 1.677                        |        |
| Adapts to new situations with ease          | Special Day Class+ | 4.23          | 2.252                       | 5.27           | 2.043                        | 0.871  |
|   | General Education  | 6.32          | 1.875                       | 7.35           | 1.653                        |        |
| Respects cultural differences               | Special Day Class+ | 6.12          | 1.966                       | 6.68           | 1.784                        | 0.251  |
|   | General Education  | 6.97          | 1.656                       | 7.79           | 1.461                        |        |
| Considers the pros/cons of ideas            | Special Day Class+ | 3.85          | 1.915                       | 4.53           | 2.115                        | 0.170  |
|   | General Education  | 6.32          | 1.807                       | 7.29           | 1.651                        |        |
| Appreciate the work of others               | Special Day Class  | 4.13          | 1.941                       | 4.97           | 2.126                        | 0.658  |
|   | General Education  | 6.81          | 1.738                       | 7.77           | 1.445                        |        |
| Is enthusiastic about learning              | Special Day Class  | 4.63          | 2.012                       | 5.69           | 2.040                        | 0.630  |
|   | General Education  | 6.95          | 1.978                       | 7.91           | 1.673                        |        |
| Volunteers to answer questions during class | Special Day Class  | 3.99          | 2.523                       | 5.22           | 2.771                        | 0.564  |
|   | General Education  | 6.07          | 2.198                       | 7.21           | 2.008                        |        |
| Shows comfort with expressing ideas         | Special Day Class+ | 3.60          | 2.193                       | 4.78           | 2.634                        | 0.543  |
|   | General Education  | 6.04          | 2.114                       | 7.13           | 1.925                        |        |
| Stays on task                               | Special Day Class  | 4.48          | 2.214                       | 5.45           | 2.075                        | 0.515  |
|   | General Education  | 6.81          | 2.126                       | 7.71           | 1.800                        |        |
| Perseveres through challenges               | Special Day Class  | 4.16          | 1.875                       | 5.18           | 2.050                        | 0.677  |
|   | General Education  | 6.58          | 1.971                       | 7.53           | 1.732                        |        |
| Displays feelings of success                | Special Day Class+ | 4.73          | 1.891                       | 5.99           | 2.003                        | 0.274  |
|   | General Education  | 6.46          | 1.868                       | 7.50           | 1.688                        |        |
| Is respectful of others' ideas              | Special Day Class+ | 4.29          | 1.978                       | 5.00           | 2.118                        | 0.713  |
|   | General Education  | 7.18          | 1.877                       | 8.02           | 1.578                        |        |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction





**Table A18: Comparison teacher survey results on individual students from Special Day Classrooms (n=38) and General Education classrooms (with inclusion students and students with no special needs; n=239)**

| Survey item                                 |                   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|---|-------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| Approaches Problems Creatively              | Special Day Class | 4.74          | 2.648                       | 5.45           | 2.648                        | 0.007  |
|   | General Education | 6.01          | 2.022                       | 7.33           | 1.913                        |        |
| Adapts to new situations with ease          | Special Day Class | 5.92          | 2.898                       | 6.50           | 2.689                        | 0.004  |
|   | General Education | 6.27          | 2.124                       | 7.46           | 1.786                        |        |
| Respects cultural differences-              | Special Day Class | 6.61          | 2.526                       | 6.97           | 2.787                        | 0.015  |
|   | General Education | 7.48          | 1.937                       | 8.42           | 1.342                        |        |
| Considers the pros/cons of ideas-           | Special Day Class | 4.34          | 2.633                       | 5.11           | 2.659                        | 0.019  |
|   | General Education | 6.21          | 1.892                       | 7.47           | 1.703                        |        |
| Appreciate the work of others+              | Special Day Class | 5.89          | 2.534                       | 6.61           | 2.411                        | 0.183  |
|   | General Education | 7.27          | 1.951                       | 8.26           | 1.518                        |        |
| Is enthusiastic about learning+             | Special Day Class | 6.34          | 2.812                       | 7.13           | 2.772                        | 0.138  |
|   | General Education | 6.82          | 2.020                       | 7.95           | 1.715                        |        |
| Volunteers to answer questions during class | Special Day Class | 5.18          | 3.237                       | 6.03           | 3.053                        | 0.063  |
|   | General Education | 5.54          | 2.669                       | 6.96           | 2.553                        |        |
| Shows comfort with expressing ideas         | Special Day Class | 4.82          | 3.066                       | 5.45           | 3.038                        | 0.007  |
|   | General Education | 5.92          | 2.355                       | 7.17           | 2.260                        |        |
| Stays on task+                              | Special Day Class | 5.29          | 3.066                       | 6.00           | 2.819                        | 0.170  |
|   | General Education | 6.67          | 2.520                       | 7.74           | 2.040                        |        |
| Perseveres through challenges               | Special Day Class | 5.63          | 2.686                       | 6.28           | 2.514                        | 0.022  |
|   | General Education | 6.44          | 2.289                       | 7.61           | 1.870                        |        |
| Displays feelings of success+               | Special Day Class | 6.71          | 2.818                       | 7.32           | 2.527                        | 0.010  |
|   | General Education | 6.69          | 2.112                       | 7.95           | 1.746                        |        |
| Is respectful of others' ideas              | Special Day Class | 6.76          | 2.562                       | 7.16           | 2.455                        | 0.024  |
|   | General Education | 7.41          | 2.187                       | 8.35           | 1.507                        |        |

+Statistically significant in the desired direction

-Statistically significant in the unwanted direction



## Artist survey results

**Table A19: Artist survey results in Special Day Class (n= 68) and General Education classrooms (with inclusion students and students with no special needs; n=547)**

| Survey item                                 |                   | Pre-test Mean | Pre-test Standard Deviation | Post-test Mean | Post-test standard deviation | T-test |
|---|-------------------|---------------|-----------------------------|----------------|------------------------------|--------|
| Approaches Problems Creatively              | Special Day Class | 4.10          | 2.161                       | 5.88           | 2.508                        | 0.379  |
|   | General Education | 5.51          | 1.671                       | 7.42           | 1.612                        |        |
| Adapts to new situations with ease          | Special Day Class | 3.97          | 2.116                       | 5.75           | 2.314                        | 0.671  |
|   | General Education | 5.44          | 1.666                       | 7.16           | 1.564                        |        |
| Respects cultural differences               | Special Day Class | 5.18          | 2.726                       | 6.00           | 2.934                        | 0.049  |
|   | General Education | 6.67          | 1.631                       | 7.77           | 1.517                        |        |
| Considers the pros/cons of ideas            | Special Day Class | 3.48          | 2.079                       | 4.64           | 2.345                        | 0.010  |
|   | General Education | 5.73          | 1.637                       | 7.27           | 1.625                        |        |
| Appreciate the work of others               | Special Day Class | 4.15          | 1.822                       | 5.97           | 2.123                        | 0.005  |
|   | General Education | 5.95          | 1.521                       | 7.43           | 1.486                        |        |
| Is enthusiastic about learning              | Special Day Class | 4.66          | 1.997                       | 6.71           | 2.165                        | 0.030  |
|   | General Education | 6.05          | 1.738                       | 7.77           | 1.644                        |        |
| Volunteers to answer questions during class | Special Day Class | 3.54          | 2.238                       | 5.18           | 2.871                        | 0.878  |
|   | General Education | 5.27          | 2.007                       | 6.95           | 2.103                        |        |
| Shows comfort with expressing ideas         | Special Day Class | 3.48          | 2.357                       | 5.04           | 2.760                        | 0.544  |
|   | General Education | 5.18          | 1.996                       | 6.85           | 2.085                        |        |
| Stays on task                               | Special Day Class | 3.69          | 1.855                       | 5.50           | 2.141                        | 0.009  |
|   | General Education | 5.84          | 1.851                       | 7.27           | 1.784                        |        |
| Perseveres through challenges               | Special Day Class | 3.70          | 1.771                       | 5.47           | 2.047                        | 0.062  |
|   | General Education | 5.56          | 1.769                       | 7.04           | 1.789                        |        |
| Displays feelings of success                | Special Day Class | 4.38          | 1.955                       | 6.32           | 2.275                        | 0.026  |
|   | General Education | 5.47          | 1.690                       | 7.05           | 1.617                        |        |
| Is respectful of others' ideas              | Special Day Class | 4.56          | 2.178                       | 6.11           | 2.308                        | 0.080  |
|   | General Education | 6.22          | 1.653                       | 7.49           | 1.700                        |        |



## Residency observation results

**Table A20: Residency observation results at beginning (n=9), mid-year (n=10) and year-end (n=11) of residency**

| In the classroom...  | Time in residency | Strongly displayed | Somewhat displayed | Somewhat not displayed | Not at all displayed | N/A    |
|--|-------------------|--------------------|--------------------|------------------------|----------------------|--------|
| Students used vocalization to express emotion and feelings.  | Beginning         | 22.2%              | 44.4%              | 0.0%                   | 11.1%                | 22.2%  |
|  | Middle            | 0.0%               | 60.0%              | 0.0%                   | 30.0%                | 10.0%  |
|  | End               | 36.4%              | 54.5%              | 9.1%                   | 0.0%                 | 0.0%   |
| Students used facial expression to express emotion and feelings.   | Beginning         | 44.4%              | 44.4%              | 0.0%                   | 11.1%                | 0.0%   |
|  | Middle            | 10.0%              | 60.0%              | 0.0%                   | 20.0%                | 10.0%  |
|  | End               | 36.4%              | 54.5%              | 9.1%                   | 0.0%                 | 0.0%   |
| Students used body poses/gestures/movements to express emotion and feelings.   | Beginning         | 44.4%              | 22.2%              | 0.0%                   | 33.3%                | 0.0%   |
|  | Middle            | 10.0%              | 70.0%              | 0.0%                   | 20.0%                | 0.0%   |
|  | End               | 27.3%              | 63.6%              | 0.0%                   | 0.0%                 | 9.1%   |
| Students demonstrated different scales/ranges of performance (large/small movements, varied intensity, high/low space).    | Beginning         | 33.3%              | 55.6%              | 0.0%                   | 11.1%                | 0.0%   |
|  | Middle            | 22.2%              | 77.8%              | 0.0%                   | 0.0%                 | 0.0%   |
|  | End               | 27.3%              | 54.5%              | 0.0%                   | 9.1%                 | 9.1%   |
| Artist gave students instruction on good audience behaviors.   | Beginning         | 55.6%              | 22.2%              | 0.0%                   | 11.1%                | 11.1%  |
|  | Middle            | 44.4%              | 33.3%              | 11.1%                  | 11.1%                | 0.0%   |
|  | End               | 30.0%              | 30.0%              | 30.0%                  | 0.0%                 | 10.0%  |
| Students displayed appropriate audience behaviors (sitting still, paying attention, etc.).                                 | Beginning         | 62.5%              | 37.5%              | 0.0%                   | 0.0%                 | 0.0%   |
|  | Middle            | 44.4%              | 55.6%              | 0.0%                   | 0.0%                 | 0.0%   |
|  | End               | 36.4%              | 45.5%              | 9.1%                   | 0.0%                 | 9.1%   |
| Artist used/taught cultural perspectives within their lesson.  | Beginning         | 12.5%              | 12.5%              | 0.0%                   | 0.0%                 | 75.0%  |
|  | Middle            | 0.0%               | 0.0%               | 0.0%                   | 0.0%                 | 100.0% |
|  | End               | 9.1%               | 0.0%               | 0.0%                   | 0.0%                 | 90.9%  |
| Artist encouraged taking creative risks and making non-stereotypic choices.  | Beginning         | 11.1%              | 11.1%              | 11.1%                  | 55.6%                | 11.1%  |
|  | Middle            | 10.0%              | 0.0%               | 0.0%                   | 90.0%                | 0.0%   |
|  | End               | 18.2%              | 18.2%              | 0.0%                   | 36.4%                | 27.3%  |
| Students took creative risks and made non-stereotypic choices.   | Beginning         | 11.1%              | 33.3%              | 0.0%                   | 44.4%                | 11.1%  |
|  | Middle            | 10.0%              | 30.0%              | 0.0%                   | 60.0%                | 0.0%   |
|  | End               | 18.2%              | 0.0%               | 0.0%                   | 54.5%                | 27.3%  |
| Artist taught students aspects/skills of preparation (physical and vocal warm-ups, how to project, facing audience, etc.). | Beginning         | 44.4%              | 22.2%              | 0.0%                   | 22.2%                | 11.1%  |
|  | Middle            | 10.0%              | 60.0%              | 0.0%                   | 30.0%                | 0.0%   |
|  | End               | 30.0%              | 60.0%              | 0.0%                   | 10.0%                | 0.0%   |
| Students verbalized or demonstrated examples of the  | Beginning         | 44.4%              | 44.4%              | 0.0%                   | 11.1%                | 0.0%   |
|  | Middle            | 33.3%              | 55.6%              | 0.0%                   | 11.1%                | 0.0%   |



| In the classroom...   | Time in residency | Strongly displayed | Somewhat displayed | Somewhat not displayed | Not at all displayed | N/A   |
|---|-------------------|--------------------|--------------------|------------------------|----------------------|-------|
| concepts being taught.  | End               | 70.0%              | 30.0%              | 0.0%                   | 0.0%                 | 0.0%  |
| Artist reflected with students on the activities and lessons learned.   | Beginning         | 44.4%              | 22.2%              | 0.0%                   | 22.2%                | 11.1% |
|   | Middle            | 10.0%              | 50.0%              | 0.0%                   | 40.0%                | 0.0%  |
|   | End               | 45.5%              | 18.2%              | 0.0%                   | 27.3%                | 9.1%  |
| Students reflected on what worked and what could be improved in their performance.                              | Beginning         | 37.5%              | 25.0%              | 0.0%                   | 25.0%                | 12.5% |
|   | Middle            | 10.0%              | 60.0%              | 0.0%                   | 30.0%                | 0.0%  |
|   | End               | 18.2%              | 36.4%              | 9.1%                   | 18.2%                | 18.2% |
| Students made revisions to their work based on reflections.   | Beginning         | 22.2%              | 22.2%              | 0.0%                   | 44.4%                | 11.1% |
|   | Middle            | 0.0%               | 50.0%              | 0.0%                   | 50.0%                | 0.0%  |
|   | End               | 0.0%               | 36.4%              | 0.0%                   | 45.5%                | 18.2% |
| Artist used drum, clapping, modulated voice and/or other sound cue to begin, end or change tempo of activities. | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | Middle            | 80.0%              | 20.0%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | End               | 81.8%              | 9.1%               | 0.0%                   | 9.1%                 | 0.0%  |
| Artist modeled activities/movements for students.   | Beginning         | 25.0%              | 50.0%              | 0.0%                   | 25.0%                | 0.0%  |
|   | Middle            | 40.0%              | 10.0%              | 10.0%                  | 40.0%                | 0.0%  |
|   | End               | 27.3%              | 54.5%              | 9.1%                   | 0.0%                 | 9.1%  |
| Students modeled activities/movements for their peers.  | Beginning         | 66.7%              | 22.2%              | 0.0%                   | 11.1%                | 0.0%  |
|   | Middle            | 40.0%              | 40.0%              | 0.0%                   | 20.0%                | 0.0%  |
|   | End               | 63.6%              | 27.3%              | 0.0%                   | 0.0%                 | 9.1%  |
| Classroom teacher/aides helped to model lesson activities.  | Beginning         | 22.2%              | 0.0%               | 11.1%                  | 66.7%                | 0.0%  |
|   | Middle            | 10.0%              | 10.0%              | 0.0%                   | 80.0%                | 0.0%  |
|   | End               | 27.3%              | 18.2%              | 0.0%                   | 45.5%                | 9.1%  |
| Artist connected one activity or exercise to the next to expand on the lesson being taught.                     | Beginning         | 55.6%              | 11.1%              | 0.0%                   | 33.3%                | 0.0%  |
|   | Middle            | 0.0%               | 90.0%              | 0.0%                   | 10.0%                | 0.0%  |
|   | End               | 27.3%              | 27.3%              | 9.1%                   | 27.3%                | 9.1%  |
| The artist used teaching methods appropriate to age and ability levels of students.                             | Beginning         | 55.6%              | 44.4%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | Middle            | 50.0%              | 30.0%              | 0.0%                   | 20.0%                | 0.0%  |
|   | End               | 54.5%              | 27.3%              | 0.0%                   | 18.2%                | 0.0%  |
| The lesson had sufficient content for the time allowed.   | Beginning         | 44.4%              | 44.4%              | 0.0%                   | 11.1%                | 0.0%  |
|   | Middle            | 70.0%              | 30.0%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | End               | 54.5%              | 18.2%              | 0.0%                   | 27.3%                | 0.0%  |
| Students participated fully in group activities.  | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | Middle            | 70.0%              | 20.0%              | 10.0%                  | 0.0%                 | 0.0%  |
|   | End               | 63.6%              | 36.4%              | 0.0%                   | 0.0%                 | 0.0%  |



| In the classroom...   | Time in residency | Strongly displayed | Somewhat displayed | Somewhat not displayed | Not at all displayed | N/A   |
|---|-------------------|--------------------|--------------------|------------------------|----------------------|-------|
| Students participated fully in individual activities  | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | Middle            | 40.0%              | 20.0%              | 0.0%                   | 10.0%                | 30.0% |
|   | End               | 54.5%              | 9.1%               | 0.0%                   | 0.0%                 | 36.4% |
| Students displayed enthusiasm through smiling, volunteering, clapping, etc.                             | Beginning         | 44.4%              | 55.6%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | Middle            | 30.0%              | 60.0%              | 10.0%                  | 0.0%                 | 0.0%  |
|   | End               | 50.0%              | 40.0%              | 0.0%                   | 0.0%                 | 10.0% |
| Students could adapt to changing activities and tempos.   | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | Middle            | 12.5%              | 87.5%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | End               | 27.3%              | 27.3%              | 18.2%                  | 0.0%                 | 27.3% |
| Students remained focused on the teaching artist throughout the lesson.                                 | Beginning         | 66.7%              | 22.2%              | 0.0%                   | 11.1%                | 0.0%  |
|   | Middle            | 10.0%              | 40.0%              | 20.0%                  | 30.0%                | 0.0%  |
|   | End               | 27.3%              | 45.5%              | 18.2%                  | 9.1%                 | 0.0%  |
| Students showed support for each other's work (Clapping, positive words, etc.).                         | Beginning         | 66.7%              | 11.1%              | 0.0%                   | 22.2%                | 0.0%  |
|   | Middle            | 44.4%              | 55.6%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | End               | 45.5%              | 36.4%              | 9.1%                   | 0.0%                 | 9.1%  |
| Artist and classroom teacher showed support for students' work (clapping, positive words, etc.).        | Beginning         | 55.6%              | 33.3%              | 0.0%                   | 11.1%                | 0.0%  |
|   | Middle            | 40.0%              | 30.0%              | 10.0%                  | 20.0%                | 0.0%  |
|   | End               | 54.5%              | 9.1%               | 9.1%                   | 18.2%                | 9.1%  |
| Artist and classroom teacher/aides worked as a team to monitor and correct student behavior.            | Beginning         | 44.4%              | 33.3%              | 0.0%                   | 22.2%                | 0.0%  |
|   | Middle            | 20.0%              | 10.0%              | 0.0%                   | 70.0%                | 0.0%  |
|   | End               | 18.2%              | 36.4%              | 0.0%                   | 45.5%                | 0.0%  |
| The artist alone monitored and corrected class behavior.  | Beginning         | 33.3%              | 11.1%              | 0.0%                   | 55.6%                | 0.0%  |
|   | Middle            | 40.0%              | 30.0%              | 0.0%                   | 30.0%                | 0.0%  |
|   | End               | 36.4%              | 9.1%               | 9.1%                   | 45.5%                | 0.0%  |
| The classroom teacher/aides alone monitored and corrected class behavior.                               | Beginning         | 0.0%               | 0.0%               | 0.0%                   | 100.0%               | 0.0%  |
|   | Middle            | 10.0%              | 0.0%               | 0.0%                   | 90.0%                | 0.0%  |
|   | End               | 0.0%               | 0.0%               | 0.0%                   | 100.0%               | 0.0%  |
| Artist or classroom teacher/aides gave individual instruction to students who struggled with the lesson | Beginning         | 66.7%              | 33.3%              | 0.0%                   | 0.0%                 | 0.0%  |
|   | Middle            | 50.0%              | 40.0%              | 0.0%                   | 10.0%                | 0.0%  |
|   | End               | 54.5%              | 27.3%              | 0.0%                   | 9.1%                 | 9.1%  |

Note: Percentages may not add up to 100% due to rounding.





**Table A21: Residency observation results (excluding not applicable ratings) at beginning (n=9), mid-year (n=10) and year-end (n=11) of residency**

| In the classroom...  | Time in residency | Strongly displayed | Somewhat displayed | Somewhat not displayed | Not at all displayed |
|--|-------------------|--------------------|--------------------|------------------------|----------------------|
| Students used vocalization to express emotion and feelings.  | Beginning         | 28.6%              | 57.1%              | 0.0%                   | 14.3%                |
|  | Middle            | 0.0%               | 66.7%              | 0.0%                   | 33.3%                |
|  | End               | 36.4%              | 54.5%              | 9.1%                   | 0.0%                 |
| Students used facial expression to express emotion and feelings.   | Beginning         | 44.4%              | 44.4%              | 0.0%                   | 11.1%                |
|  | Middle            | 11.1%              | 66.7%              | 0.0%                   | 22.2%                |
|  | End               | 36.4%              | 54.5%              | 9.1%                   | 0.0%                 |
| Students used body poses/gestures/movements to express emotion and feelings.   | Beginning         | 44.4%              | 22.2%              | 0.0%                   | 33.3%                |
|  | Middle            | 10.0%              | 70.0%              | 0.0%                   | 20.0%                |
|  | End               | 30.0%              | 70.0%              | 0.0%                   | 0.0%                 |
| Students demonstrated different scales/ranges of performance (large/small movements, varied intensity, high/low space).    | Beginning         | 33.3%              | 55.6%              | 0.0%                   | 11.1%                |
|  | Middle            | 22.2%              | 77.8%              | 0.0%                   | 0.0%                 |
|  | End               | 30.0%              | 60.0%              | 0.0%                   | 10.0%                |
| Artist gave students instruction on good audience behaviors.   | Beginning         | 62.5%              | 25.0%              | 0.0%                   | 12.5%                |
|  | Middle            | 44.4%              | 33.3%              | 11.1%                  | 11.1%                |
|  | End               | 33.3%              | 33.3%              | 33.3%                  | 0.0%                 |
| Students displayed appropriate audience behaviors (sitting still, paying attention, etc.).                                 | Beginning         | 62.5%              | 37.5%              | 0.0%                   | 0.0%                 |
|  | Middle            | 44.4%              | 55.6%              | 0.0%                   | 0.0%                 |
|  | End               | 40.0%              | 50.0%              | 10.0%                  | 0.0%                 |
| Artist used/taught cultural perspectives within their lesson. <sup>+</sup>   | Beginning         | 50.0%              | 50.0%              | 0.0%                   | 0.0%                 |
|  | Middle            | -                  | -                  | -                      | -                    |
|  | End               | 100.0%             | 0.0%               | 0.0%                   | 0.0%                 |
| Artist encouraged taking creative risks and making non-stereotypic choices.  | Beginning         | 12.5%              | 37.5%              | 0.0%                   | 50.0%                |
|  | Middle            | 10.0%              | 30.0%              | 0.0%                   | 60.0%                |
|  | End               | 25.0%              | 0.0%               | 0.0%                   | 75.0%                |
| Students took creative risks and made non-stereotypic choices.   | Beginning         | 50.0%              | 25.0%              | 0.0%                   | 25.0%                |
|  | Middle            | 10.0%              | 60.0%              | 0.0%                   | 30.0%                |
|  | End               | 30.0%              | 60.0%              | 0.0%                   | 10.0%                |
| Artist taught students aspects/skills of preparation (physical and vocal warm-ups, how to project, facing audience, etc.). | Beginning         | 44.4%              | 44.4%              | 0.0%                   | 11.1%                |
|  | Middle            | 33.3%              | 55.6%              | 0.0%                   | 11.1%                |
|  | End               | 70.0%              | 30.0%              | 0.0%                   | 0.0%                 |
| Students verbalized or demonstrated  | Beginning         | 50.0%              | 25.0%              | 0.0%                   | 25.0%                |

<sup>+</sup> Using cultural perspectives within their lesson was rated as not applicable for all mid-year residency observations.



| In the classroom...   | Time in residency | Strongly displayed | Somewhat displayed | Somewhat not displayed | Not at all displayed |
|---|-------------------|--------------------|--------------------|------------------------|----------------------|
| examples of the concepts being taught.  | Middle            | 10.0%              | 50.0%              | 0.0%                   | 40.0%                |
|   | End               | 50.0%              | 20.0%              | 0.0%                   | 30.0%                |
| Artist reflected with students on the activities and lessons learned.   | Beginning         | 42.9%              | 28.6%              | 0.0%                   | 28.6%                |
|   | Middle            | 10.0%              | 60.0%              | 0.0%                   | 30.0%                |
|   | End               | 22.2%              | 44.4%              | 11.1%                  | 22.2%                |
| Students reflected on what worked and what could be improved in their performance.                              | Beginning         | 25.0%              | 25.0%              | 0.0%                   | 50.0%                |
|   | Middle            | 0.0%               | 50.0%              | 0.0%                   | 50.0%                |
|   | End               | 0.0%               | 44.4%              | 0.0%                   | 55.6%                |
| Students made revisions to their work based on reflections.   | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 |
|   | Middle            | 80.0%              | 20.0%              | 0.0%                   | 0.0%                 |
|   | End               | 81.8%              | 9.1%               | 0.0%                   | 9.1%                 |
| Artist used drum, clapping, modulated voice and/or other sound cue to begin, end or change tempo of activities. | Beginning         | 25.0%              | 50.0%              | 0.0%                   | 25.0%                |
|   | Middle            | 40.0%              | 10.0%              | 10.0%                  | 40.0%                |
|   | End               | 30.0%              | 60.0%              | 10.0%                  | 0.0%                 |
| Artist modeled activities/movements for students.   | Beginning         | 66.7%              | 22.2%              | 0.0%                   | 11.1%                |
|   | Middle            | 40.0%              | 40.0%              | 0.0%                   | 20.0%                |
|   | End               | 70.0%              | 30.0%              | 0.0%                   | 0.0%                 |
| Students modeled activities/movements for their peers.  | Beginning         | 22.2%              | 0.0%               | 11.1%                  | 66.7%                |
|   | Middle            | 10.0%              | 10.0%              | 0.0%                   | 80.0%                |
|   | End               | 30.0%              | 20.0%              | 0.0%                   | 50.0%                |
| Classroom teacher/aides helped to model lesson activities.  | Beginning         | 55.6%              | 11.1%              | 0.0%                   | 33.3%                |
|   | Middle            | 0.0%               | 90.0%              | 0.0%                   | 10.0%                |
|   | End               | 30.0%              | 30.0%              | 10.0%                  | 30.0%                |
| Artist connected one activity or exercise to the next to expand on the lesson being taught.                     | Beginning         | 55.6%              | 44.4%              | 0.0%                   | 0.0%                 |
|   | Middle            | 50.0%              | 30.0%              | 0.0%                   | 20.0%                |
|   | End               | 54.5%              | 27.3%              | 0.0%                   | 18.2%                |
| The artist used teaching methods appropriate to age and ability levels of students.                             | Beginning         | 44.4%              | 44.4%              | 0.0%                   | 11.1%                |
|   | Middle            | 70.0%              | 30.0%              | 0.0%                   | 0.0%                 |
|   | End               | 54.5%              | 18.2%              | 0.0%                   | 27.3%                |
| The lesson had sufficient content for the time allowed.   | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 |
|   | Middle            | 70.0%              | 20.0%              | 10.0%                  | 0.0%                 |
|   | End               | 63.6%              | 36.4%              | 0.0%                   | 0.0%                 |
| Students participated fully in group activities.  | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 |
|   | Middle            | 57.1%              | 28.6%              | 0.0%                   | 14.3%                |
|   | End               | 85.7%              | 14.3%              | 0.0%                   | 0.0%                 |



| In the classroom...   | Time in residency | Strongly displayed | Somewhat displayed | Somewhat not displayed | Not at all displayed |
|---|-------------------|--------------------|--------------------|------------------------|----------------------|
| Students participated fully in individual activities.   | Beginning         | 44.4%              | 55.6%              | 0.0%                   | 0.0%                 |
|   | Middle            | 30.0%              | 60.0%              | 10.0%                  | 0.0%                 |
|   | End               | 55.6%              | 44.4%              | 0.0%                   | 0.0%                 |
| Students displayed enthusiasm through smiling, volunteering, clapping, etc.                     | Beginning         | 77.8%              | 22.2%              | 0.0%                   | 0.0%                 |
|   | Middle            | 12.5%              | 87.5%              | 0.0%                   | 0.0%                 |
|   | End               | 37.5%              | 37.5%              | 25.0%                  | 0.0%                 |
| Students could adapt to changing activities and tempos.   | Beginning         | 66.7%              | 22.2%              | 0.0%                   | 11.1%                |
|   | Middle            | 10.0%              | 40.0%              | 20.0%                  | 30.0%                |
|   | End               | 27.3%              | 45.5%              | 18.2%                  | 9.1%                 |
| Students remained focused on the teaching artist throughout the lesson.                         | Beginning         | 66.7%              | 11.1%              | 0.0%                   | 22.2%                |
|   | Middle            | 44.4%              | 55.6%              | 0.0%                   | 0.0%                 |
|   | End               | 50.0%              | 40.0%              | 10.0%                  | 0.0%                 |
| Students showed support for each other's work (Clapping, positive words, etc.).                 | Beginning         | 55.6%              | 33.3%              | 0.0%                   | 11.1%                |
|   | Middle            | 40.0%              | 30.0%              | 10.0%                  | 20.0%                |
|   | End               | 60.0%              | 10.0%              | 10.0%                  | 20.0%                |
| Artist and classroom teacher showed support for students' work (clapping, positive words, etc.) | Beginning         | 44.4%              | 33.3%              | 0.0%                   | 22.2%                |
|   | Middle            | 20.0%              | 10.0%              | 0.0%                   | 70.0%                |
|   | End               | 18.2%              | 36.4%              | 0.0%                   | 45.5%                |
| Artist and classroom teacher/aides worked as a team to monitor and correct student behavior.    | Beginning         | 33.3%              | 11.1%              | 0.0%                   | 55.6%                |
|   | Middle            | 40.0%              | 30.0%              | 0.0%                   | 30.0%                |
|   | End               | 36.4%              | 9.1%               | 9.1%                   | 45.5%                |
| The artist alone monitored and corrected class behavior.  | Beginning         | 0.0%               | 0.0%               | 0.0%                   | 90.0%                |
|   | Middle            | 10.0%              | 0.0%               | 0.0%                   | 100.0%               |
|   | End               | 0.0%               | 0.0%               | 0.0%                   | 96.6%                |
| The classroom teacher/aides alone monitored and corrected class behavior.                       | Beginning         | 66.7%              | 33.3%              | 0.0%                   | 0.0%                 |
|   | Middle            | 50.0%              | 40.0%              | 0.0%                   | 10.0%                |
|   | End               | 60.0%              | 30.0%              | 0.0%                   | 10.0%                |

Note: Percentages may not add up to 100% due to rounding.





## California Standards Test results

**Table A22: California Standards Test (CST) results in English Language Arts, by treatment and comparison classrooms**

|                     | Comparison before program | Comparison after program | Treatment before program | Treatment after program |
|---------------------|---------------------------|--------------------------|--------------------------|-------------------------|
| N                   | 303                       | 303                      | 664                      | 664                     |
| Far below basic (1) | 13 (4%)                   | 9 (3%)                   | 19 (3%)                  | 9 (1%)                  |
| Below basic (2)     | 32 (11%)                  | 24 (8%)                  | 60 (9%)                  | 28 (4%)                 |
| Basic (3)           | 86 (28%)                  | 71 (23%)                 | 154 (23%)                | 118 (18%)               |
| Proficient (4)      | 91 (30%)                  | 91 (30%)                 | 214 (32%)                | 204 (31%)               |
| Advanced (5)        | 81 (27%)                  | 108 (36%)                | 217 (33%)                | 305 (46%)               |

**Table A23: California Standards Test (CST) results in English Language Arts, by treatment and comparison classrooms**

|                         | Comparison students |               |                                     | Treatment students |               |                                     | Chi-square test   |
|-------------------------|---------------------|---------------|-------------------------------------|--------------------|---------------|-------------------------------------|---|
|                         | Before program      | After program | Change from before to after program | Before program     | After program | Change from before to after program |   |
| N                       | 303                 | 303           | -                                   | 664                | 664           | -                                   | Chi-square= 1.729 <sup>9</sup><br>Degrees of freedom = 1<br>P-value = 0.189 |
| Passing (4 or 5)        | 172 (57%)           | 199 (66%)     | +9%                                 | 431 (65%)          | 509 (77%)     | +12%                                |   |
| Not passing (1, 2 or 3) | 131 (43%)           | 104 (34%)     | -9%                                 | 233 (35%)          | 155 (23%)     | -12%                                |   |

**Table A24: California Standards Test (CST) results in Mathematics, by treatment and comparison classrooms**

|                     | Comparison before program | Comparison after program | Treatment before program | Treatment after program |
|---------------------|---------------------------|--------------------------|--------------------------|-------------------------|
| N                   | 308                       | 308                      | 668                      | 668                     |
| Far below basic (1) | 6 (2%)                    | 8 (3%)                   | 5 (1%)                   | 5 (1%)                  |
| Below basic (2)     | 25 (8%)                   | 26 (8%)                  | 42 (6%)                  | 38 (6%)                 |
| Basic (3)           | 56 (18%)                  | 56 (18%)                 | 61 (9%)                  | 50 (7%)                 |
| Proficient (4)      | 70 (23%)                  | 71 (23%)                 | 122 (18%)                | 161 (24%)               |
| Advanced (5)        | 151 (49%)                 | 147 (48%)                | 438 (66%)                | 414 (62%)               |

<sup>9</sup> Preacher, K. J. (2001, April). Calculation for the chi-square test: An interactive calculation tool for chi-square tests of goodness of fit and independence [Computer software]. Available from <http://quantpsy.org>.



**Table A25: California Standards Test (CST) results in Mathematics, by treatment and comparison classrooms**

|  | Comparison students |               |                                     | Treatment students  |               |                                     | Chi-square test  |
|--|---------------------|---------------|-------------------------------------|---|---------------|-------------------------------------|--|
|  | Before program      | After program | Change from before to after program | Before program  | After program | Change from before to after program | Chi-square=<br>4.824 <sup>10</sup><br>Degrees of freedom = 1<br>P-value = 0.028+ |
| N  | 308                 | 308           | -                                   | 668   | 668           | -                                   |  |
| Passing (4 or 5)   | 221 (72%)           | 218 (71%)     | -1%                                 | 560 (84%)   | 575 (86%)     | +2%                                 |  |
| Not passing (1, 2 or 3)                                    | 87 (28%)            | 90 (29%)      | +1%                                 | 108 (16%)   | 93 (14%)      | -2%                                 |  |
| <b>+Statistically significant in the desired direction</b> |                     |               |                                     | <b>-Statistically significant in the unwanted direction</b> |               |                                     |  |

<sup>10</sup> Preacher, K. J. (2001, April). Calculation for the chi-square test: An interactive calculation tool for chi-square tests of goodness of fit and independence [Computer software]. Available from <http://quantpsy.org>.



## Attendance data

**Table A26: Attendance data, by treatment and comparison classrooms**

|                              | Comparison students | Treatment students+ |
|------------------------------|---------------------|---------------------|
| Absences per 100 school days | 3.6                 | 2.9                 |
| Tardies per 100 school days  | 4.0                 | 1.3                 |

+Statistically significant in the desired direction

| -Statistically significant in the unwanted direction

**Table A27: Attendance data, by treatment and comparison classrooms**

|  | Comparison students | Treatment students | Chi-square test  |
|--|---------------------|--------------------|--|
| Total number of days students were absent out of all student days            | 3,065               | 5,896              | Chi-square= 94.434 <sup>11</sup><br>Degrees of freedom = 1 |
| Total number of days students were <u>not</u> absent out of all student days | 82,736              | 199,170            | P-value = 0.000  |

**Table A28: Attendance data, by treatment and comparison classrooms**

|   | Comparison students | Treatment students | Chi-square test   |
|---|---------------------|--------------------|---|
| Total number of days students were tardy out of all student days            | 3,409               | 2,743              | Chi-square= 2,029.502 <sup>12</sup><br>Degrees of freedom = 1 |
| Total number of days students were <u>not</u> tardy out of all student days | 82,392              | 202,323            | P-value = 0.000   |

<sup>11</sup> Preacher, K. J. (2001, April). Calculation for the chi-square test: An interactive calculation tool for chi-square tests of goodness of fit and independence [Computer software]. Available from <http://quantpsy.org>.

<sup>12</sup> Preacher, K. J. (2001, April). Calculation for the chi-square test: An interactive calculation tool for chi-square tests of goodness of fit and independence [Computer software]. Available from <http://quantpsy.org>.