

**Sound Design Project (SDP) of Chicago Arts Partnerships in Education
An Integrative 3-year Project Involving
Sound Teaching Artists, Music Teaching Artists, and Classroom Teachers**

**Preliminary Evaluation: Year 2
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December 2014**

The Sound Design Project (SDP) preliminary program evaluation was designed as a small case study. This approach provides an ideal opportunity to see and hear about the impact of this kind of work from teachers and teaching artists. If arts integration is ever to make a profound impact on students, then it is necessary to hear from their teachers—those who are directly charged with increasing and developing students’ knowledge, capacities, and thinking skills.

Three evaluation questions were identified and addressed in this preliminary evaluation.

These inquiry questions were:

1. In what ways are teachers impacted by the arts integrated project taught by a collaborative team of a music teaching artist, a sound teaching artist, and a classroom teacher?
2. In what ways are students impacted by the arts integrated project taught by a collaborative team of a music teaching artist, a sound teaching artist, and a classroom teacher?
3. How does the combined teaching of sound and music in an arts integrated project impact the classroom environment?

In the second year of program implementation, the SDP involved four schools in the Chicago Public Schools, six teaching artists, and six classroom teachers. All 12 teaching artists and teachers in the SDP participated in this program evaluation (see Table 1).

Table 1

Sound Design Project Survey Collection, Year 2: Number of Classroom Teachers and Teaching Artists Participants

Name	Number of Respondents
Classroom Teacher	6
Music Teaching Artist	3
Sound Teaching Artist	3
Total	12

The data collected for this program evaluation included qualitative data from several sources obtained during Year 1 and Year 2 of the SDP. These data sets include:

- Professional Development Agendas (Years 1 and 2)
- Notes from Professional Development Sessions (Years 1 and 2)
- Teacher and Teaching Artist Surveys from Professional Development Sessions (Years 1 and 2)
- Teacher and Teaching Artist Planning Forms (Year 2)
- Teacher and Teaching Artist Demographic Data (Year 2)
- Teacher and Teaching Artist Surveys and Reflection Questions (Year 2)
- SDP On-Line Templates of Project Planning, Implementation, Student Learning, and Reflections (Year 2)

A combination of data sources were used to address each research question in this evaluation of the SDP. The data used to support research question #1, about the program’s impact on teachers, came from the on-line templates, professional development (PD) surveys, planning forms, and surveys. Research Question #2, about the program’s impact on students, was addressed using data collected from the on-line templates, planning forms, and surveys. Finally, the surveys were

the main source of the data used in addressing Research Question #3, which dealt with the program’s impact on the classroom environment.

CAPE offered four professional development sessions in each of the two years of the SDP. Agendas, notes, and PD surveys from these professional development sessions were gathered as data for this evaluation. A total of ten planning forms were collected from year 1 and year 2 (five in each year) and data from six on-line templates from year 1 were collected. Tables 2, 3, and 4 provide a summary of the data sets collected for this program evaluation.

Table 2

Sound Design Project Professional Development Data Collection by Project Year, Type of Data Set, and Date of Origin

Year	Agenda	Notes	Survey
1	11.15.12		
1	12.10.12	12.10.12	12.10.12
1	1.23.13	1.23.13	1.23.13
1	6.3.13	6.3.13	
<i>Total Year 1</i>	<i>4</i>	<i>3</i>	<i>2</i>
2	10.8.13		10.8.13
2	11.13.13	11.13.13	11.13.13
2	12.17.13	12.17.13	
2	5.14.14	5.14.14	5.14.14
<i>Total Year 2</i>	<i>4</i>	<i>3</i>	<i>3</i>
Total Both Years	8	6	5

Table 3

Sound Design Project On-Line Templates by Project Year, School, Grade Level, and

Collaborative Team

SDP Year	School Name	Grade Level	Sound Design Project Name	Classroom Teacher	Teaching Artist (music)	Teaching Artist (sound)
2	Alcott College Prep	11 th , 12 th	Music and Culture	X		X
2	Alcott College Prep	9 th	Sound and Conflict	X	X	
2	Alice L. Barnard Elementary	3 rd	Cultural Influences	X, X	X	X
2	Hamilton Elementary	2 nd , 3 rd	Audio Amazon	X		X
2	Hamilton Elementary	1 st	Material Sound	X	X	
2	Inter-American Magnet	K	Composition	X, X	X	X

Table 4

Sound Design Project Teacher and Teaching Artist Planning Forms by Project Year, School, Grade Level, and Collaborative Team

SDP Year	School Name	Grade Level	Sound Design Project Name	Classroom Teacher	Teaching Artist (music)	Teaching Artist (sound)
2	*Alcott College Prep	11 th , 12 th	Music and Culture	X		X
1	*Alcott College Prep	HS	Sound and Social Conflict	X	X	
1	*Alcott College Prep	HS	Sound: Math and Fine Arts	X		X
2	Alice L. Barnard Elementary	3 rd	Cultural Influences	X, X	X	X
1	Alice L. Barnard Elementary	3 rd	Indigenous Art and Culture	X, X	X	X
2	Hamilton Elementary	2 nd , 3 rd	Audio Amazon	X		X
2	Hamilton Elementary	1 st	Material Sound	X	X	
1	Hamilton Elementary	1 st , 2 nd	Chicago Soundscapes	X, X	X	X
2	Inter-American Magnet	K	Composition	X, X	X	X
1	Inter-American Magnet	K	Class Themes and Sound Variations	X, X	X	X

*Alcott teachers worked with one sound artist and one music artist in year 1. In the second year, these teachers worked with different artists. Of these two artists, both worked in sound, but the one who worked with the Social Conflict unit was also a classically trained artist.

Research Question #1: In what ways are teachers impacted by the arts integrated project taught by a collaborative team of a music teaching artist, a sound teaching artist, and a classroom teacher?

Generally, the teacher/artist teams met 2-3 times throughout the first year for planning. At one school, the classroom teachers met with each other on a weekly basis. However, the teacher/artist team communication occurred more regularly by e-mail rather than at actual meetings at the school during an agreed upon time. During the 2nd year of the program, teacher/artist teams met, on average, 3 times throughout the year, with more consistent communication made through e-mail correspondence.

Each teacher and teaching artist attended between 3 – 16 professional development sessions while working in the SDP. Regarding the eight professional development sessions provided by CAPE during the two years of the SDP, teachers and teaching artists reported that the majority of those sessions provided them the opportunity to plan their arts integration project with their teaching team; they believed this to be most useful and of great benefit.

Two of CAPE's goals are to build teacher and teaching artist capacity and to contribute to the knowledge in the field. The organization achieves these goals through four key components: Inquiry, Documentation, Professional Development, and Collaborative Research. This research methodology strongly contributed to the impact of the SDP on teachers. The SDP has given classroom teachers and teaching artists the opportunity to experience how the arts and non-arts disciplines can be and are interconnected. Through the program, teachers became more aware of how sound and sound experiences can be a learning tool for students in their own classrooms. Table 5 provides a summary of the three main areas of impact that the SDP had on teachers, as reported by the teachers and teaching artists themselves.

Table 5

Summary of Impact of Sound Design Project on Teachers (Data Collected From On-Line Templates, PD Surveys, Planning Forms, and Survey/Reflection Questions)

Teacher Impact Theme

1. Knowing and Learning the Implications of Integration as a Learning Tool for Student Learning
 2. Understanding and Appreciation of Sound and Music Integration
 3. Collaborating, Sharing, and Listening as a Result of Professional Development Workshops
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Knowing and Learning the Implications of Integration as a Learning Tool for Student

Learning. Teachers indicated that they have learned to more fully understand how to integrate sound and music (and other disciplines) into their classrooms/curriculum; i.e., how to connect academic content to arts content. Several of them mentioned that they began to think about “sound” differently and that this unique perspective on sound and integration has helped them to understand how sound can be used as a learning tool or strategy for student learning in their classrooms. Teachers began to see the implications for integrating the arts (more specifically sound and music) into their curriculum and to notice the positive impact this integration had on student learning. While working in the SDP, teachers felt that they learned how to release some control and power by allowing the students or teaching artist to lead student learning and the creative process. As a result, some teachers incorporated new methods of teaching within their own classrooms during the school day by allowing for greater freedom and flexibility as well as by providing students the opportunity to demonstrate their learning creatively. Several teachers and teaching artists described their most vivid experiences as follows:

- *Both experiences have offered me great opportunity to integrate the arts into academic units (both years)....Working with the artist provided me with a great resource to brainstorm activities and ways to simplify the concepts without losing rigor and content.*

- *I realized through this project that it [is] so important to look at different ways of teaching and to bring different mediums into your classroom, because it can be extremely enriching for the students.*
- *Through this sound and music experimentation I realized, especially this year, that sometimes you have to let go of the plan and let the kids take you along their own exploring, experimenting, and discovering path....It has made me realize the big importance in creating more opportunities in my classroom for my students to do the experimenting and discovering in their learning.*
- *Before the Sound Design Project, I had always used my classical music training to teach music. My students would start by studying theory and music standards before ever trying to compose on their own. The study and practice was about the rules of music, not personal choices or preferences. This project has shown me a new approach, one that I found to be much more successful, particularly with younger students.... I used to think that you had to know all of the rules before you could break them or make your own. After see[ing] the success of working “backwards,” I now believe students should explore their musical intuitions before and while they learn traditional theory and fundamentals.*

Teaching integration through the collaborative process of a teaching team provided much useful insight to the teaching artists as well as the classroom teachers. Through the teacher/artist partnership, teachers have learned first-hand the value of using arts integration as a tool for student learning, and they saw evidence to support the notion that arts integration provides more successful learning gains for their students. Teachers have experienced the three-step process necessary for change to occur in their teaching praxis: change in classroom practices, change in learning outcomes of students, and change in teacher attitudes and beliefs (Guskey, 2002). They have learned about music/sound integration and how to use it, they have implemented it in their SDP unit, and they have seen the results of using it in their teaching. When teachers see improvement in the learning outcomes of students as a result of implementing a particular teaching approach, their attitudes and beliefs are more likely to change and they are more likely to continue to use that approach.

Understanding and Appreciation of Sound and Music Integration. Through their involvement in the SDP, teachers seemed to have deepened their appreciation and knowledge of sound and music. They have experimented with and learned more about sound and music, just as their students did, by engaging in hands-on activities that were intentionally scheduled during

CAPE professional development sessions. These activities helped teachers think beyond traditional classroom teaching methods and gave them opportunities to experience, as learners, how the arts and non-arts disciplines can be and are interconnected. The following are a sample of comments from teachers and teaching artists regarding their reactions to these experiences:

- *I have always believed that sound art and/or music was listening to all types of music and playing instruments. I enjoyed very much doing both on a personal level as well as exposing my students to it. This program and the collaboration with the music artist has deepened my appreciation for sound and music.*
- *Since working in the sound project and collaborating with the artists, I have had the opportunity to appreciate music a lot more..*
- *This idea [the integration of arts education as integral to the enhancement of learning other subjects] was new to me and has had a positive impact on my teaching in a fundamental way. I have a much broader appreciation and perspective on the fundamental importance of music and art as a multidisciplinary tool. Arts integration has provided me with a much richer understanding of the importance of art and music in the lives of students.*
- *[T]hrough the hands-on process—the material is easier to comprehend/wrap your head around.*

In order for teachers to want to change their way of teaching or to use a new teaching methodology, they must see the value of the new approach and believe it to be worthwhile. Through the SDP and CAPE's professional development, teachers were introduced to arts integration, they learned how to use it, they actually used it in their teaching, and they saw the results of using it; this sequence enabled them to grasp how it works and understanding its impact. In the second year of the SDP, teachers began to feel that they more deeply understood and appreciated the interdisciplinary connections between music/sound and other subject areas—this change in teacher attitudes and beliefs represents the critical last step in Guskey's (2002) three-step process for ensuring that teachers will continue to use music/sound integration in future curricula.

Collaborating, Sharing, and Listening as a Result of Professional Development Workshops.

Teachers were provided with opportunities to share, reflect on, and listen to each other's projects during CAPE professional development workshops throughout the two years of the SDP.

Because teachers had time to collaborate and communicate with other teachers and teaching artists across schools and SDP units where they saw and heard about different models and examples of interdisciplinary curricula, teachers gained not only new ideas for curricular connections but ideas for teaching music in non-traditional ways. Teachers learned to collaborate—to share, discuss, brainstorm, reflect, and document—with their teams and across schools. During CAPE professional development sessions and in the teacher/artist team planning sessions, teachers learned to develop and identify big ideas and inquiry questions for student learning and for the goals of the individual projects. In addition, teachers learned to develop their own reflection/inquiry questions intended to help them think more critically about their teaching, curriculum development, integrating academic topics with sound/music, and student learning. Most of the data that supported this result came from the surveys completed by teachers and teaching artists after each CAPE professional development workshop. Their feedback included the following comments:

- *It has given me more opportunities to approach teaching music in a different manner. I have gained more ideas, working with my partners, and seeing how the students respond. Working in a group, we have to find a common denominator, as far as what to teach and how to teach it.*
- *I realized through this project that it [is] so important to look at different ways of teaching and to bring different mediums into your classroom because it can be extremely enriching for the students.*
- *...I have become more aware of integrating across multiple subjects and arts when designing lesson and unit plans.*
- *Understanding how to listen to others in order to collaborate; managing limitations/expectations [is what I learned.]*
- *This project allowed me to experiment with inquiry in the classroom.*

CAPE's goal of building teacher and teaching artist capacity is most evident in the data that support this impact theme: Collaborating, sharing, and listening as a result of professional development workshops. The professional development provided by CAPE is a critical component in enabling teachers and teaching artists to learn how to work collaboratively in order to plan and develop arts integration projects and to implement them with their students. CAPE's

regular and on-going professional development provided teachers and teaching artists with opportunities for collaborative discussion, learning, reflection, sharing, and listening, the combination of which makes up a necessary component of teacher professional development (Darling-Hammond & McLaughlin, 1995). High quality, sustainable professional development is key for supporting teachers in their future arts integration curricular planning.

Research Question #2: In what ways are students impacted by the arts integrated project taught by a collaborative team of a music teaching artist, a sound teaching artist, and a classroom teacher?

Prior to addressing Research Question #2 based on the data collected in this evaluation, it is important to identify the inquiry questions or big ideas in each of the SDP units. This identification will provide a foundation for understanding the context in which each SDP unit planned and implemented their integrated curriculum. Table 6 provides an overview of the inquiry questions for each SDP unit in years 1 and 2.

Table 6

Overview of SDP Unit Inquiry Questions: Year 1 and Year 2

SDP Year	School Name SDP Unit Name Grade Level	Inquiry Questions
2	Alcott College Prep Music and Culture 11th, 12th Grades	How does context inform the experience of an artwork—the context of where the music is heard, where it was composed, who listens to it—and how can students recognize their upbringings, lifestyles, preferences, in order to channel them creatively?
2	Alcott College Prep 9th Grade	How can a sound piece relate the story of a historical or modern international conflict? How can we use abstract sounds, music and original text to create a piece that extends outside of the students’ personal experiences?
1	Alcott College Prep Sound: Math and Fine Arts High School	How do social conflicts and communication misunderstandings, small scale (gossip) and large scale (war), happen? How do they get resolved? What can protest songs accomplish?
1	Alcott College Prep Sound and Social Conflict High School	In what ways do mathematics and fine art intersect, and how is this relevant to the students within Chicago Public Schools?

2	Barnard Elem Cultural Influences 3rd Grade	How do sounds of the environment influence culture through language and music? How can third grade students connect their communities to the history of the city and write songs that reflect their understanding of the relationship between the music of migrant cultures and what they experience in their communities?
1	Barnard Elem Indigenous Art and Culture 3rd Grade	Can third grade students understand their communities as tied to the history of the city and write songs that reflect their understanding of the relationship between the music of migrant cultures and what they experience in their communities?
2	Hamilton Elem Audio Amazon 2nd, 3rd Grades	How do insects use a variety of sounds to communicate within their environment? How do insects produce sounds and for what purpose?
2	Hamilton Elem Material Sound 1st Grade	How can we use discarded/recycled material to create a chamber music ensemble? How can we use reclaimed/recycled materials to create instruments?
1	Hamilton Elem Chicago Soundscapes 1st, 2nd Grades	How does a changing landscape affect the sonic environment?
2	Inter-American Magnet Composition Kindergarten	What are the roles of people involved in creating and performing music?
1	Inter-American Magnet Class Themes and Sound Variations Kindergarten	How do our listening skills affect how we process sound? What varieties of listening do shared sound activities make us aware of? What varieties of sounds do shared listening activities make us aware of?

The SDP more powerfully impacted students’ social and emotional gains, many of which are essential skills for work and life today. These critical skills, as identified by 21st Century Skills, include Core Subjects and 21st Century Themes; Learning and Innovation Skills; Information, Media, and Technology Skills; and Life and Career Skills (Partnership for 21st Century Skills, 2010). The individual units in the SDP explicitly emphasized particular 21st

Century Learning Skills. Table 7 provides a summary of the skills most emphasized in each of the six SDP units in year 2. What teachers and teaching artists said about the impact of the SDP on students is shown in Table 8.

Table 7

Impact of SDP Year 2 on Students: Summary of Emphasized 21st Century Learning Skills (Data Collected From On-Line Templates, Planning Forms, and Survey/Reflection Questions)

Emphasized Learning / Skills	Alcott College Prep 11th, 12th Grades	Alcott College Prep 9th Grade	Barnard Elem 3rd Grade	Hamilton Elem 2nd, 3rd Grades	Hamilton Elem 1st Grade	Inter-American Magnet Kinder.
Core Subjects Learning (English/reading/language arts, world languages, arts, mathematics, science, geography, history, government/civics)	Governmt/ Civics	English/ Reading/ Writing History	History World Languages	Science	Science	Language Arts Science
Innovation and Critical Thinking Skills (Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration)			X	X	X	X
Media and Technology Skills (Information Literacy, Media Literacy, ICT [Information, Communications and Technology] Literacy)		X				
Life and Career Skills (Flexibility and Adaptability, Initiative and Self-Direction, Social and Cross-Cultural Skills, Productivity and Accountability, Leadership and Responsibility)	X					

Table 8

Teachers' and Teaching Artists' Comments on the Impact of SDP on Students in Regard to 21st Century Learning Skills (Data Collected From On-Line Templates, Planning Forms, and Survey/Reflection Questions)

Core Subjects Learning

(English/reading/language arts, world languages, arts, mathematics, science, geography, history, government/civics)

- *I think it was a very positive experience for the students. First of all, it made them very interested to learn about the subject, because they were actually experiencing it firsthand, not just reading about it in a book or watching a video.... They were able to learn about certain aspects of music, different cultures, and the history of Chicago all at the same time.*
- *The students in my classroom became much more curious about the subject being taught when I would integrate sound into the unit. A genuine curiosity arose when I would make a sound and/or perform an improvisation in the class. This led to many questions from the students as well as a more focused learning environment. In my "Audio Amazon" project we integrated art/sound/film into a science curriculum by teaching the students about four insects living in the Amazon rainforest. The students acted out a reader's theater style play that was filmed and then screened in the Hamilton Elementary Gymnasium for three other classrooms as well as parents.*
- *We based our lesson plan on the existing academic unit and found places where music overlapped with the sound concepts. We framed the physics concepts through music.*
- *Students were able to learn the concepts that were part of the science curriculum while collaborating with a musician to create a symphony.*
- *We focused on fairy tales, oceans, plants, and insects.*

Innovation and Critical Thinking Skills

(Creativity and Innovation, Critical Thinking and Problem Solving, Communication and Collaboration)

- *Students worked together and were able to solve problems together. During our first year the students seemed very interested in the instruments and playing them. They embraced the idea of illustrating what they heard and making the connection to what we were learning in the classroom. They were able to share ideas and take turns with instruments.*
- *Students quickly learned the importance of keeping an open mind and listening to the ideas of others. Everyone was always making creative decisions and sharing with each other, and taking turns being a composer/musician/audience member.*
- *These students are creative and love to be given choice. Through the opportunities this program brought, students have learned greater independence. They are encouraged to show their learning in a way of their choosing. It has allowed for greater critical thinking and reflection.*
- *This project gave them a chance to be creative, so it made them very excited to learn....When they worked in their small groups, they worked very well together, helping and supporting each other.*
- *Students are encouraged to use all their senses in their learning, bringing another layer in their learning which increases understanding. It caters to the different learning styles and encourages students to think outside of the box, leading the students to think critically about the academic subject. Students were able to express what they have learned about the different cultures in different ways.*
- *This project also was driven by the students' questions and wonders. They were able to drive the instruction by using their prior knowledge.*

Media and Technology Skills

(Information Literacy, Media Literacy, ICT [Information, Communications and Technology] Literacy)

- *For the "Audio Amazon," students used our class blog to identify insects from the Amazon Rainforest that*

produced sound....Students spent 3-4 hours on iPads over the course of 2-3 days searching for any information that would assist in the creation of our documentary.... [N]ot only did students learn about each insect in detail, they also learned a great deal about how to use Internet search engines to find the best information.

- *It offered real computer based work (editing and file transferring) not only the type of consumer experience we often find in the classroom such as iPad apps.*
- *Not only sound and music but all of the skills involved in the project resulted in progressive learning: the seeking and recording of sounds, the manipulation of digital files from device to computer, editing and modifying the sounds into composition, the research involved in composing a text, performing a reading of the text. All of these tasks challenged students in new ways.*
- *Incorporating various forms of media, either sound or video-based, enhances the unit and assist in keeping students' attention, focus, and interest on the unit.*

Life and Career Skills

(Flexibility and Adaptability, Initiative and Self-Direction, Social and Cross-Cultural Skills, Productivity and Accountability, Leadership and Responsibility)

- *It was a true amazing experience watching their faces as they met with artists or as we talked about the connection of cultures and actually going to location in the cities. Students got to experience what they were learning in a real life setting and share with family and friends from our community. It was Amazing!*
 - *Students were very engaged and I observed them “playing” musician during their free choice time at the end of the school day. They were also observed creating instruments during this time as well - they were excited to use various classroom materials during the creation or engineering (as they called it) to create their instruments for their own bands.*
 - *Once we laid the ground work, the students really took off with the project and to ownership.*
 - *It was amazing to see the students really sit and listen during “listening” moments and then really take charge during the production of creative pieces....They take ownership of their learning and that is much more valuable for them.*
 - *[T]he students were challenged to make creative and independent decisions. It was wonderful to see how comfortable many of the students were with those challenges, and how other students grew comfortable after feeling empowered by the ability to make their own creative choices. I noticed the students became very interested in what each other had to say and share with the class.*
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The subject areas most frequently addressed in the SDP were science, language arts, and history. It is not surprising that the most emphasized 21st century learning skills in the SDP units were innovation and critical thinking. Although several different learning skills were addressed in each SDP unit, the most emphasized in four of the six units in year 2 specifically related to creativity, critical thinking/problem solving, and communication and collaboration—essential skills for working with others in small business as well as in global settings.

The strongest evidence of student musical learning was in five of the nine National Standards for Music Education (National Association for Music Education, 2014), including two of the least addressed music standards: #3 and #4 (Orman, 2002). All six SDP units engaged

students in activities that connected music/sound with other disciplines of study in and outside the arts, addressing standard #8. Particularly emphasized in the SDP units were the connections made to history and culture through the study of music and sound. See Table 8 for information on the impact of the SDP on student arts learning skills and Table 9 to sample what teachers and teaching artists said about the arts learning skills gained by students as a result of the SDP.

Table 8

Impact of SDP Year 2 on Students: Summary of Emphasized Arts Learning Skills (Data Collected From On-Line Templates, Planning Forms, and Survey/Reflection Questions)

National Core Arts Standards CAPE Mission National Standard for Music Education	Alcott College Prep 11th, 12th Grades	Alcott College Prep 9th Grade	Barnard Elem 3rd Grade	Hamilton Elem 2nd, 3rd Grades	Hamilton Elem 1st Grade	Inter- American Magnet Kinder.
Creating / Performing						
<i>Increase Students' Creativity</i>						
#3 Improvising melodies, variations, and Accompaniments (Creative)	X			X	X	X
#4 Composing and arranging music within specified Guidelines (Creative)						
Responding						
<i>Increase Students' Critical Thinking</i>						
#6 Listening to, analyzing, and describing music (Evaluative)	X		X			X
Connecting						
<i>Increase Arts Driven Education</i>						
#8 Understanding relationships between music, the other arts, and disciplines outside the arts (Integrative)		X	X		X	
#9 Understanding music in relation to history and Culture (Integrative)						

Table 9

Teachers' and Teaching Artists' Comments on the Impact of SDP on Students in Regard to Arts Learning Skills Related to National Core Arts Standards, CAPE Mission, and National Standards for Music Education (Data Collected From On-Line Templates, Planning Forms, and Survey/Reflection Questions)

Creating / Performing

Increase Students' Creativity

#3 Improvising melodies, variations, and Accompaniments (Creative)

#4 Composing and arranging music within specified Guidelines (Creative)

- *[The students] thought more deeply about how music is made and created, and for what purpose.*
- *[S]tudents would become a conductor, composer, musician, and/or audience member. They used the academic topic and their imagination to inspire the music they were creating and performing.*
- *Students had to process what was making the sound, how it made the sound, and how it could be imitated using only the human body, small percussion instruments, or classroom supplies such as paper.*
- *They performed for each other and were very pleased with the outcome.*

Responding

Increase Students' Critical Thinking

#6 Listening to, analyzing, and describing music (Evaluative)

- *By broadening the definition of both sound and music, children were displayed freedom to explore their own experiences as listeners of objects, people, locations, recordings, themselves, etc.*
- *Many of the students struggled at the beginning to analyze different types of music, but as the semester progressed, I could see that they felt more and more comfortable analyzing.*
- *We would start each class by playing a recording and asking students to close their eyes and imagine something related to the recording and academic topic of the day.*
- *Students were exposed to recordings of a variety of sounds made by humans, plants, insects, instruments and electronics. They were asked to listen carefully and mimic the sounds they heard.*

Connecting

Increase Arts Driven Education

#8 Understanding relationships between music, the other arts, and disciplines outside the arts (Integrative)

#9 Understanding music in relation to history and Culture (Integrative)

- *Almost all of the students [did] not realize that the music they listen to today mostly originated from different cultures and time periods. If not the entire song, some of the components came from a different place or time.*
 - *[I]t was clear that [the students] were making connections of their own not only about the music that they gravitate towards, but of the relevance of that music to their lives and their own – perhaps untapped – creativity. The students discovered the connection between their experienced feelings and those expressed in the music they enjoy. This understanding led them to imagining music of their own making that would reflect their inner worlds.*
 - *We learned about foods, sounds, art work, music, etc....It was also great that they had that connection to their teachers and their culture. This makes it more personable.*
 - *It was helpful to be able to teach a concept (such as vibration) and then immediately experiment with building instruments that created low and high pitches, and in some instances, to actually see the vibration.*
 - *[The students] also thought about what music could do and how making music could affect a community.*
-

Because the SDP units were principally integrative, all units addressed in some fashion the *Connecting* standard, consisting of #8: Understanding relationships between music, the other arts, and disciplines outside the arts; and/or #9: Understanding music in relation to history and culture. Additionally, four of the six SDP units in year 2 more strongly emphasized *Creating/Performing* by having students compose, improvise, and perform music as the main focus of the unit; this is significant because National Standards for Music Education #3 and #4 are considered the two least addressed standards in general elementary music classrooms (Orman, 2002).

Research Question #3: How does the combined teaching of sound and music in an arts integrated project impact the classroom environment?

The skills learned by the students in the SDP crossed over into other areas of their schools, outside of the SDP environment. The classroom environment developed within the SDP extended into other classrooms and areas of the schools, not only as a result of the SDP program’s impact on the students, but also as a result of the program’s impact on the teachers involved in the project. The teacher/artist partnership required a set of skills that also had a positive impact on the school environment. The data collected in this study to address RQ#3 included the impact of the project that was carried over into the school environment by both teachers and students. Table 10 provides a summary of these shared skills that impacted the school environment.

Table 10

Summary of Shared Skills That Have Impacted the School Environment (Data Collected From Survey/Reflection Questions)

Central Theme	Extended Skill Areas
Listening and Hearing	Listening / Focused Hearing
Collaborating and Sharing	Teamwork / Working Together, Community Building, Collaborating, Sharing / Reflecting
Connecting and Creating	Connecting, Creative Thinking, Choice / Freedom
Leading and Facilitating	Facilitating / Guiding, Leading / Teaching

As part of the evaluation, teachers and teaching artists provided their thoughts and observations about how the SDP impacted the school environment; Table 11 shows some of their comments.

Table 11

Reflections by Teachers and Teaching Artists on the Impact of the SDP on the School

Environment (Data Collected From Survey/Reflection Questions)

**Listening and Hearing
(Focused Hearing, Listening)**

- *I found a strong response to the class materials by witnessing the kids become more 'loose' and involved with each other in group activities, closely paying attention to each other and listening. Their discovered sense of listening – of focus of attention – impacted them throughout their classes, as I have heard from their teachers after the class ended, how role playing “Conductor” and “Performer” exemplified model behavior of attentiveness and respect in “Teacher” and “Student” situations, as well as interacting with other kids.*
- *[T]he teachers have told me they’ve noticed a positive difference in the way the students listen to things around them, including the teacher and other students.*
- *I think as a whole the classroom environment became a bit more focused when I brought in sound making devices or when I introduced the students to making sounds using classroom materials. In addition, I feel that presenting the “sound walk” for the students, having them sit quietly in various locations outside the school and write down sounds they heard, has had an important impact on the classroom as a whole. Giving the class a new way of focusing their hearing.*
- *[T]he children learned appreciation for silence and sound-making alike. Consequently, they have developed vital listening skills beyond artistic forms. Their listening of instructions and spoken class content was sharpened with each session, as they expected to use their ears through their newly discovered self and group awareness through sound.*

**Collaboration and Sharing
(Collaborating, Teamwork, Working Together, Community Building, Sharing, Reflecting)**

- *The performance really taught the students how to collaborate better as a group. In the beginning of the year my students didn’t work so well in groups, fighting over roles or arguing/disagreeing. I really feel that having to work together to create their musical pieces my students learned how to collaborate as a group better. They realized that each of their parts in the piece was important and worked together to create their pieces.*
- *Teamwork is essential in our classroom. This project further encouraged and promoted that. Because of students' excitement to have music incorporated into our curriculum, collaborating became easier.*
- *Students learned to work well in groups throughout and after [the CAPE project].*
- *Not only did students learn about sound and music but they also put into place what working together is all about.*

**Connecting and Creating
(Connecting, Creative Thinking, Choice, Freedom)**

- *I can honestly say that CAPE has taught all of us to think a bit more creatively about sound and its constant existence in our environment.*
- *Overall, the classroom environment has begun to change. With choice being given, allowing students to express themselves through music and sound, there's a sense of freedom. Students went from showing hesitation to the writing of the music, to asking if they can work with others to come up with their original pieces even after the project was done.*
- *They learned to make those meaningful “connections”.*
- *Having music and the arts incorporated in the classroom changes the learning environment for the better....It has enhanced our learning experience by allowing the students to communicate their readings, understandings, explorations in a creative way.*

Leading Facilitating
(Leading, Teaching, Facilitating, Guiding)

- *Students were given new perspective on one another by being allowed to lead and teach each other in a creative rather than strictly academic context. Students who may have seemed distracted and disruptive at first meeting were able to focus and engage in creative exercises more so than in the context of our lectures.*
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BACKGROUND ON SDP AND CAPE FROM WEBSITE

The Sound Design Project supports **teachers, sound artists, and musicians** as they experiment with the roles of sound and music in the classroom. At each of four schools, a team of two artists and two teachers all work together to integrate sound and music into academic units in ways that engage students, improve learning, and spark new ideas for teaching.

The Sound Design Project is a two-year program that brings together teachers, sound artists, and musicians to investigate the roles sound and music in academic classrooms. At each of four schools, a team of two artists and two teachers all work together to integrate sound and music into academic units in ways that engage students, improve learning, and spark new ideas for teaching. The schools participating in the Sound Design Project are

- Barnard Computer, Math, & Science Center Elementary
- Hamilton Elementary
- Inter-American Elementary Magnet School
- Alcott High School for the Humanities

As with all CAPE programs, the teachers and artists in the Sound Design Project spend 12 hours per school year participating in professional development sessions throughout each school year. These sessions give classroom teachers their artists time learn more about CAPE's arts integration methodology and to brainstorm and plan integrated units while collaborating and sharing with their peers in the program.

Vision

CAPE works toward a future in which young people are empowered, through education and the arts, to fully realize their academic, creative and personal potential.

Mission

CAPE increases students' academic success, critical thinking and creativity through research-based, arts driven education.

Goals:

- Increase student achievement
- Build teacher and teaching artist capacity
- Improve school effectiveness
- Contribute to the knowledge in the field

CAPE's research methodology is built around four key components: **Inquiry, Documentation, Professional Development, and Collaborative Research.**

Collaborative Research

CAPE's approach—where teachers, artists, and students engage in developing inquiry questions and documenting their work to answer those questions—is called action research. CAPE partners learn much from their action research, and it has a direct impact on how they teach. To develop a bigger picture of what is happening in multiple CAPE schools, we work directly with external, university-based researchers. These research professionals work with CAPE program staff in order to create research plans and tools, and ways to analyze CAPE data. They report back to CAPE staff and teachers and artists what they are seeing in terms of teacher and student impact across schools.

Professional Development

Bringing together teacher/artist teams from schools across the city is central to how CAPE forms and sustains partnerships. It is also central to research. In these meetings, teachers and artists offer valuable input on researcher inquiry questions and tools. They also discuss research findings, and reflect on how these findings can impact their work at the schools.

Inquiry

For teachers and artists working together in the classroom, inquiry guides their curricular planning. What do they want to know about their teaching? Their students' learning? About art? What questions are open-ended, critical, and lead to more than one answer, or even more questions? Teachers and artists form what they teach in response to their inquiry question, and revisit their question frequently during their arts integration partnership as they reflect on what their students are learning through arts integrated curriculum.

Documentation

CAPE teachers and artists train in documentation methods and theory as to why documentation has a positive impact. The curriculum from our teacher/artist partners working with students is documented throughout the process, beginning, middle, and end. The teachers and artists use different mediums and methods to document (video, photography, interviews, journals, etc.), and different ways to organize, understand and present their documentation, including portfolios, documentation panels, and on-line digital documentation. All these rich documentation sources provide extensive data for teachers, artists, and external researchers to access a broader and deeper understanding of what is happening in CAPE classrooms.