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The Collaborative Residency Project: The Influence of Co-Teaching on Professional Development in Arts Integration

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Abstract

Many classroom teachers turn to arts integration as a method for meeting multiple learning objectives but are less than prepared to do so. The *Collaborative Residency* program offered classroom teachers an intensive course of study through collaborative work with teaching artists as they co-planned and co-taught arts integrated units together. Consistent with the literature, participants in this study experienced the educational advantages of teaching through the arts to help students gain, acquire, and construct understanding. The results of this study highlight the interdependence of classroom teachers' personal beliefs, behaviors and their environment, as well as the need for better institutional support to provide classroom teachers a ground on which they can continue their arts integration endeavors.

Introduction

Following years of academic testing associated with accountability measures, many classroom teachers are looking to arts integration to resuscitate the social and emotional spirit of learning. However, pedagogical change can be difficult for these classroom teachers, especially if practices have been institutionalized over time (Bridwell-Mitchell, 2015). While they turn to arts integration as a method to meet multiple and intersecting learning objectives, they may be less than prepared to do so (Purnell, 2004); it is common to see the arts used as decorative frills in the elementary classroom (LaJevic, 2013). In addition, classroom teachers may value the arts, yet lack the self-efficacy to provide regular instruction in the arts (Oreck, 2004). LaJevic (2013) calls for closer attention to teacher education in arts integration to ensure integrity and quality of practice.

To this end, Honolulu Theatre for Youth developed the *Collaborative Residency* (CR) program to provide an intense professional development experience in which individual classroom teachers partnered with a teaching artist to practice arts integration. *Classroom teachers* were K-6 certified teachers responsible as generalists for planning, instruction, and assessment in all subject areas. The CR program's definition of a *teaching artist* was "a practicing professional artist with the complementary skills and sensibilities of an educator, who engages people in learning experiences in, through, and about the arts" (Booth, 2003, p. 5). Although not certified as arts specialists, the teaching artists were well versed in arts integration and active in school residencies throughout the state of Hawai'i. In this state, elementary schools rarely employed *arts specialists*, or full time, certified arts teachers. Nonetheless, the CR program intended to support classroom teachers with daily classroom practices and content instruction amplified by arts integration, not to supplant expert arts instruction provided by certified elementary arts specialist. The Kennedy Center's definition of *arts integration* anchored the CR program: "Arts integration is an approach to teaching in which students construct and demonstrate understanding through an art form. Students engage in a creative process which connects an art form and another subject area and meets evolving objectives in both" (Silverstein & Layne, 2010). Rabkin and Redmond (2006) further this definition by suggesting arts integration is best demonstrated when teaching artists and teachers work together. According to this perspective, collaboration is an essential component of cognitively powerful arts integration. The purpose of this study was to explore influences on classroom teacher change as a result of their collaborations with teaching artists.

Professional Development

Workshop style training—typically three-hour, one-time, lecture/demonstration—is the dominant professional development structure for classroom teachers (Darling-Hammond & Richardson, 2009). One-off workshops and short learning courses are generally not connected

to classroom teacher work settings and rarely offer opportunities to experience, practice, and reflect. These workshops may offer useful input but will often be superficial (Fullan, 2014). In addition, literature about teaching practices suggests that classroom teachers frequently need to observe student learning progress in order to manifest and adopt a practice change (Guskey, 1985; Oreck, 2004). Some contend focus should be on student learning and not on classroom teachers' behaviors (Supovitz & Turner, 2000) because change in the classroom teacher's practice is contingent on students' development (Guskey, 2014).

Experts in the field suggest many factors contribute to meaningful professional development that will ultimately improve student learning (Guskey 1985, 2002; Supovitz & Turner, 2000; Thomas et al., 2012). They agree that effective professional development occurs over a period of time because classroom teachers generally master new methods after 50 hours of professional development (Gulamhussein, 2013). Next, classroom teachers need support during the implementation of a new teaching approach. In one study, Gulamhussein (2013) revealed that only 10% of classroom teachers implemented a new technique without support. However, with support in the form of coaching, nearly 95% of the classroom teachers implemented new strategies.

In addition, professional development needs to expose classroom teachers to active participation. Supovitz and Turner (2000) contended classroom teachers must be engaged in concrete tasks and be immersed in inquiry, questioning, and experimenting. Effective professional development also includes modeling, in which experts demonstrate the proposed teaching behavior. Ideally, professional development occurs within the context of a subject area, incorporating both standards as well as deeper content skills. Finally, powerful professional development connects with school and district reforms, as staff and school development cannot be separated (Guskey, 2014).

Collaboration can have a positive impact on a classroom teachers' professional development (Powell-Moman & Brown-Schild, 2011). Universities and other professional organizations have engaged classroom teachers in partnerships to guide professional development or to support school life (Rice, 2002; Thomas et al., 2002). When classroom teachers interact with professionals in a discipline, it provides students with authentic opportunities to engage with the tools, discourse, and behaviors of that discipline (Siegel, Mlynarczyk-Evans, Brenner, & Nielsen, 2005). At the same time, classroom teachers gain self-efficacy to take on new teaching techniques themselves (Powell-Moman & Brown-Schild, 2011).

Context of the Study

For eight consecutive years, Honolulu Theatre for Youth (HTY) conducted the Collaborative

Residency (CR) project annually with support and funding from Hawai'i Community Foundation (HCF), Hawai'i State Foundation on Culture and the Arts (HSFCA), Hawai'i Arts Alliance (HAA), and in cooperation with the Hawai'i Department of Education (HIDOE).

Each summer, classroom teachers and their teaching artist partners engaged in twelve hours of instruction to develop common understandings about intersections between content and the arts, practiced co-teaching structures, and devised essential questions and enduring understandings to guide their lesson planning. They subsequently engaged in 24 hours of additional professional development during the ARTS FIRST Institute to learn specific methodologies in arts integration. These two experiences provided classroom teachers and teaching artists with a foundation to jumpstart their collaborations, which consisted of ten sessions of co-planning time and a unit of ten co-taught lessons in the classroom. Finally, classroom teachers and teaching artists engaged in a six-hour session to share, reflect, assess student work, and to draw the project to closure. The minimum expectation for active engagement in this professional development was 50 hours.

At the time of this study, Hawai'i was in the process of adopting the Next Generation Science Standards (Achieve, 2013) therefore, the partners developed arts integrated curriculum constructed on cross cutting principles in science. These cross cutting concepts—such as patterns, stability and change, or cause and effect—can be found across school subjects. Plus, common processes in the arts and sciences foster valuable inter-disciplinary skills. Observation in the arts is like data collection in science, both require systematic scrutiny of phenomena. Artists wonder about these phenomena through acts of the imagination, whereas scientists call this curiosity. Rehearsal in the arts is similar to experimentation in the sciences, both are explorations of the unknown. The composition of a piece of art is similar to the design of a scientific study, and in both disciplines this requires visualization. Finally, artists communicate their conclusions via performance or exhibition, and scientists do so through dialogue in conference presentations or papers (Fulton & Simpson Steele, 2016).

Root-Bernstein and Root-Bernstein (2013) identified important scientists for whom the arts played an integral role in life. Albert Einstein attributed his scientific discoveries to his musical perception from playing the violin, and Nobel Prize winner Euler-Chelpin's interest in chemistry was born from his experiments with color theory. Skills developed through the arts—such as observation, visual thinking, the ability to recognize and form patterns, and manipulative abilities—are valuable in the sciences. Practice, perseverance and problem solving are essential in both disciplines. Extant literature often describes and seeks to better understand how the integration of arts and sciences can engage students with meaningful learning (Gershon & Ben-Horin, 2014; Ghanbari, 2015; Simpson Steele, Fulton & Fanning, 2016). The CR program focused on these natural commonalities and intersections between the

arts and sciences.

Theoretical Framework

The social cognitive theory is a model in which human thought, behavior and the environment “operate as interacting determinants” (Evans, 1989, p. 10). Their reciprocal influence encompasses change and development of the individual (Bandura, 1995). In order to illuminate the significant changes occurring throughout the CR program, we employed Banduras’ social cognitive theory and focused on its reciprocal factors of personal perception, behavior and environment as a framework.

According to Bandura, it is important to offer situations in which people can “acquire new competencies and gain mastery experience” (Evans, 1989, p. 9). New behavior can be learned from the environment through the process of observation. A person might observe others’ behaviors or learn through a modeling action. The reflective process on these observed experiences influences the observer and leads to a revision of the behavior. Bandura (1995) characterized this as vicarious learning. This social interaction can affect an individual’s approach to perform a task and also his or her social behaviors. From Bandura’s perspective, the social dimension cannot be separated from a cognitive process; they are interdependent.

Self-efficacy is an integral part in an individuals’ development, directly affecting behavior and cognition (Bandura, 1995). Self-efficacy is the belief, “I can do that!” This belief is developed through positive learning situations and is based on past performances, vicarious experiences, verbal persuasion and psychological cues. People with a high sense of self-efficacy tend to approach more difficult tasks, develop an intrinsic interest and become deeply engaged in activities. They attribute failure to insufficient effort and take on tasks with confidence (Bandura, 1995). Studies by Powell-Moman and Brown-Schild (2011) and Oreck (2004) indicated that a higher degree of self-efficacy increased classroom teachers’ positive attitudes as they incorporated new teaching strategies.

As a result of this study, we explain how collaboration with a teaching artist influenced the classroom teacher’s competence and confidence to integrate the arts. We ask the following questions: (a) What are classroom teachers’ personal perspectives on student learning? (b) What are classroom teachers’ behavioral changes? (c) How did the environment support or restrict classroom teachers’ development in regards to integrating the arts in science curriculum?

Method

This bounded multiple case study employed narrative analysis to elucidate classroom teachers' ongoing arts integration in day-to-day classroom practice (Stake, 2000). The individual cases of classroom teachers are bounded by their experience in the *Collaborative Residency* (CR) and their experiences collaborating with teaching artists. The increased use of narrative inquiry in educational research helps to make meaning of classroom teachers' experiences and by exploring personal stories and framing them in the collective, researchers are able to reflect on these personal stories (Merriam, 2009). By identifying what classroom teachers find meaningful, sharing and comparing their stories, and potentially generalizing that meaning to a larger context, researchers make recommendations for changes in practice or policy (Stake, 2000; Yin, 2013).

Participants and Setting

Six public school, elementary classroom teachers, and 24 of their students consented to participate in this research. Classroom teachers each practiced with their teaching artist partners in the art forms of visual arts, dance, or creative writing. Teaching artists functioned as coaches, models, and co-teachers as they supported implementation of arts integration. Although they were not certified art teachers, an HSFCA panel vetted and approved the teaching artist as experts in their artistic disciplines, with demonstrated skill in classroom instruction, a thorough base of knowledge in arts education, and a commitment to their own ongoing professional development. While the teaching artists were key to the CR model, the majority of our research activities took place after they had completed their work with the classroom teachers.

We selected six out of the 15 classroom teachers in the CR program using purposeful sampling to ensure variety among grade levels, art forms, and prior teacher experience collaborating with a teaching artist (Table 1). All participants were female and taught at public schools located on three different islands. Each of the classroom teachers selected four of their students to participate in a focus group—a total of 24 student participants, four in each of six focus groups. The student participants represented equal distributions of gender and ethnicity within each focus group. Classroom teachers and their students all agreed to participate through informed consent and assent as required by the Institutional Review Board (IRB) and the Hawai'i Department of Education (HIDOE), who approved this study.

Table 1

Key Participant Demographics (all names are pseudonyms)

Classroom Teacher	Ethnicity	Grade	School	Art Form	Prior Collaboration
Abby	Mixed/Part-Hawaiian	4	HIDOE	Visual Arts	3 years
Fumiko	Japanese American	1	HIDOE	Visual Arts	None
Heather	Caucasian	5	Public Arts Integration	Dance	None
Kaila	Caucasian	1	Public Charter	Dance	1 year
Monica	Caucasian	6	Public Charter	Dance	None
Samantha	Caucasian	1	HIDOE	Creative Writing	None

Abby

Abby was a fourth grade classroom teacher at a traditional HIDOE school in a rural setting. This was her fourth consecutive year of partnering with the same visual arts teaching artist. She believed they worked well together as a team and valued the support she received to incorporate art standards in her classroom. Abby expressed a high value for arts in education in general, wishing for its stronger presence in HIDOE schools. She stated,

If they [HIDOE] saw the results that we get [from] these kids and the engagement and how it makes learning that much more internally at a deeper level [then] I think they would ... push more for arts to come back as a regular part of the curriculum (Abby Interview, 2015, March 24).

During our observation, Abby introduced an arts integrated science project; students used informational text to research food chains of different ecosystems. The final product was a diagram reflecting the interaction between various factors presented in the food chain. The essential question that Abby developed during the collaboration in the fall was still alive throughout the curriculum in the spring: How does questioning help observation?

Fumiko

Fumiko was a first grade classroom teacher at a suburban, Title I, traditional public school with a focus on standards-based education in reading, math, and writing. This was Fumiko's first time participating in the CR program, and her primary objective was to become more comfortable facilitating visual arts experiences with her students. She felt she was a novice who needed support: "My initial goal, what I wanted to gain from the Collaborative Residency, was how confident I would feel, how comfortable I would feel to teach arts, teaching the students to draw something" (Fumiko Interview, 2015, February 27).

Throughout the residency in the fall, Fumiko focused on how animals survive—the interdependence between living and non-living things in the Hawaiian coral reef environment. She and her teaching artist partner guided students through a process culminating with a realistic mural of an underwater seascape. Later, Fumiko applied her new skills integrating art and science to a folding book project depicting various states of matter.

Heather

Heather taught fifth grade at a "Blue Ribbon" public elementary school where all classroom teachers were trained and supported in arts integration throughout the year. Heather had many years of experience partnering with teaching artists in various art forms across various subjects, but this was her first year participating in the CR program. She wanted to develop specific facilitation skills in dance, using exemplars from professional dancers to introduce her students to various ways of using space.

For her CR project, Heather and her teaching artist partner taught a semester-long inquiry: How does energy transform? Her students focused on the properties of wind and how its energy could be stored, transformed and transferred for use. In the spring semester, Heather endeavored to replicate the form of her unit, shifting her focus from wind to water, but with a similar enduring understanding that human activity impacts our environment.

Kaila

Kaila's public charter school nurtured a flexible environment in which classroom teachers had some autonomy over schedule and curriculum. Additionally, her school had a designated music and dance room, which Kaila used weekly to lead her first grade students in integrated arts experiences. It was in the school's agenda to help students explore creative ways for learning, and Kaila was proud to be able to support this vision through this professional development. Kaila enjoyed the CR program in the previous year, so she enrolled again, and recruited her colleague, Monica, to join.

At the beginning of the school year, Kaila established an enduring understanding: cycles move our world. She worked with the students on life cycles of the moon, plants, the cycles

of daily life, and cycles in dance. In March, students explored the life cycle of a mealworm through dance.

Monica

Monica taught sixth grade at the same public charter school as Kaila. She also used the spacious music and dance room once a week. The CR program was Monica's first experience integrating creative movement into the curriculum, and she had no prior experience in teaching any kind of dance. Her motivation to participate in this program was her desire to grow into a more effective classroom teacher and encourage students' creative risk taking attitude.

In the fall, Monica and her teaching artist partner introduced students to creative movement by exploring the nature of energy. In the spring, Monica facilitated a coral polyp dance and the influences of biotic and abiotic factors forming its life. The task was: "Take your knowledge today and show what is happening in the coral polyps. Start in frozen shape, move, move, move, and finish in another frozen shape" (Monica Observation Note, 2015, March 25).

Samantha

Samantha was a first grade classroom teacher at a HDOE school centrally located in a relatively urban area. An experienced classroom teacher who had been highly active in arts integration professional development course offerings throughout her career, Samantha valued the arts as one of "many ways to access and express information" (Samantha Interview, 2015, March 23). Because her school was focusing on how classroom teachers promote higher level thinking, Samantha set a goal to ignite curiosity and creativity in children through questioning.

She worked with a creative writer during the CR process, integrating both writing and drama in her unit about the life cycle of a caterpillar. She facilitated a process through which each child created one page in the story of a butterfly's metamorphosis and published a book. During the spring classroom observation, Samantha applied similar questioning and pantomime strategies to facilitate learning about sea turtles.

Data Collection

By comparing different sources of data, we were able to identify evolving patterns (McMillan & Schumacher, 2010). Yin (2013) referred to the importance of diverse sources of evidence in order to address problems of validity and reliability. Therefore, we triangulated data through a variety of instruments including observations, interviews and artifacts. We audio-recorded and fully transcribed all focus groups and interviews.

The team of two researchers, Nicole Schlaack and Jamie Simpson Steele, shared responsibility for data collection and analysis. Both attended the ARTS FIRST Institute in the summer of 2014 to develop an understanding of the program's expectations. Jamie Simpson Steele was also one of the presenters at this institute. The CR project completed in winter 2014, and we conducted one focus group with all participants at that time. Soon after, we visited each classroom teacher at her own school, in the spring semester. In order to establish the procedure and ensure consistency in the data collection we collaboratively co-conducted the observation, interview, and focus group at the first research site. We then took responsibilities for collecting data independently at the remaining five sites. Data sources included:

- **Classroom Teacher Focus Group:** We audio-recorded classroom teachers' perspectives on the CR program at the completion of the PD in December 2014. The focus group lasted 1 hour.
- **Classroom observation and artifacts:** We video-recorded and took ethnographic field notes documenting how classroom teachers employed art strategies and interacted with students in the spring of 2015. Classroom teachers agreed to demonstrate integrated science and arts concepts including strategies they learned with their teaching artist partners. We also examined the artwork students produced during class.
- **Classroom teacher interview:** We audio-recorded each teacher's personal, behavioral and environmental perspectives of their practice on arts integration. Each interview lasted approximately 60 minutes.
- **Student focus group interview:** We audio-recorded narratives of students' perspectives of the arts and science integrated classes. Each group consisted of four students and lasted approximately 45 minutes.
- **Classroom teacher portfolios:** The classroom teachers' portfolios included written reflections, three of their ten lesson plans, samples of student work, and analysis of student learning through performance rubric design and scoring.

Data Analysis

We began by analyzing the cases separately in order to represent the particularities of each case. Each narrative analysis followed the steps of examining, categorizing, tabulating, creating data displays, testing, and combining the evidence to address the initial research questions (Stake, 2000). A first step in this content analysis was open coding. We coded the case we conducted collaboratively and reached an agreement on emerging themes. Following an analytical strategy proposed by Yin (2013), we compared the themes with the proposition of the theoretical framework and refined them.

We articulated three dominant categories that were broad enough to incorporate both Bandura's framework and other important factors of professional development present in the literature: (a) student learning, (b) classroom teacher change, and (c) influencing factors. Although these three themes functioned as a framework to code the subsequent five cases, there was flexibility for differences. After this initial coding, we cross-coded to diminish bias and strengthen the trustworthiness of our analyses.

The final step was the cross case analysis. Stake (2000) referred to the analytical work in a case study to be observational and reflective. Through repeated readings and dialogue we unfolded patterns and unveiled threads embedded within each classroom teacher's individual context and experience (McMillan & Schumacher, 2010). We explored meanings by relating the cases to each other and to the context of the whole. Every case tells a different story, and it is through the cross-case analysis that we identified patterns across the six different cases. These patterns included matching similarities and contrasting rival interpretations.

As collaborators, we shared all transcripts through software called Dedoose, which also supported the collaborative coding process. To establish trustworthiness of the data, we sent participants their individual case descriptions via email. The classroom teachers had the opportunity to make corrections, clarify meanings, and check the veracity of their own cases. In order to validate the alignment of the classroom teachers' practice with the goals of the CR program, we interviewed the programs' director. He observed each collaborating team and provided us with feedback, indicating each team participating in this research was faithfully implementing strategies and practicing collaboration as defined during the summer workshops.

Findings

The theoretical framework of Bandura's reciprocal determinism provides the organizational structure for the findings and includes the reciprocal factors of personal perception, behavior, and environment. The factors integrate classroom teachers' perception of student learning, classroom teacher change, and influencing factors emanating from the environment across the six cases. We provide an overview of the major themes and subthemes emergent across the different data sources in *Figure 1*. The graphical depiction illustrates the interdependence of the factors; the co-teaching experience influenced the classroom teachers' personal perspective, their behavior, and their teaching environment.

It must be noted that classroom teachers came into the program with individual teaching styles, personal assets, and with different goals. In addition to these distinctions, arts integration is an approach to teaching and not a curriculum, with room for individualization. Nonetheless, several commonalities occurred between the multiple cases as a result of this

model for professional development.

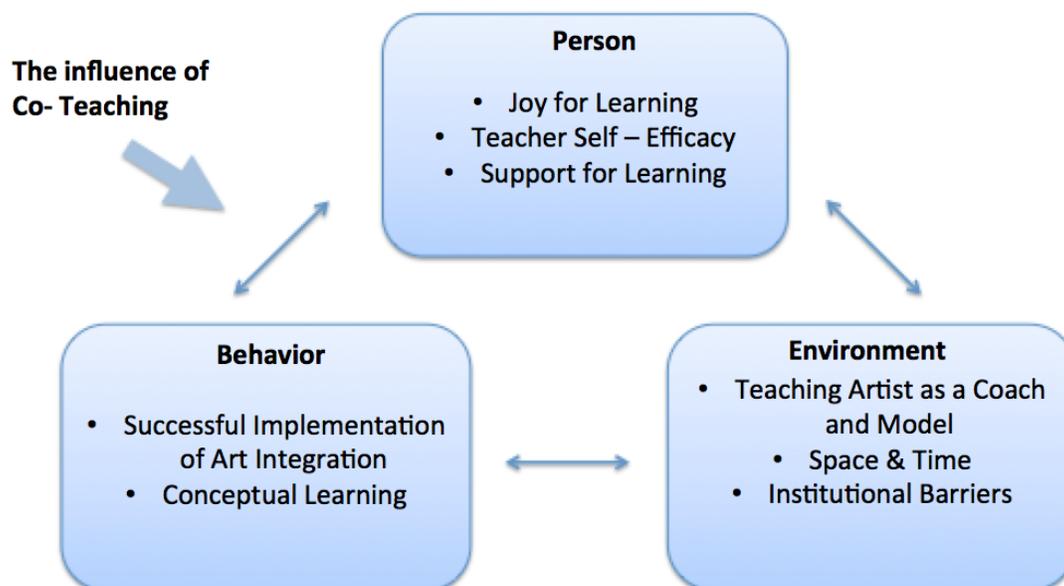


Figure 1. Interdependence of Findings. Themes and subthemes illustrated according to Bandura's (1995) social cognitive theory.

Classroom Teachers' Personal Perceptions

Monica succinctly summarized a fundamental belief shared by the participants of this study: "The art seems to open the door to enthusiasm in learning and discovery" (Monica Interview, 2015, March 25). Overall, the classroom teachers had a positive perception for arts integration in their science curriculum. In particular, they expressed value for student engagement, felt increased self-efficacy, and appreciated the arts as an equalizer among students with learning variabilities.

Engagement: Students were Enthusiastic to Learn

All six classroom teachers stated that student excitement for the arts had a powerful influence on their value for arts integration. During our visits to the classrooms, we observed students actively listening by focusing attention on and responding to classroom teachers, engaging in working with each other, problem solving, and decision-making. Students showed enjoyment and laughter during arts integrated instruction. Classroom teachers also discussed students' enthusiasm when kinesthetically involved in their learning. Samantha stated,

The most successful aspect of this unit was student engagement and their excitement to learn more. Any time we see a butterfly or caterpillar around our

school, in a book, or in a picture, the students break out in conversation. (Samantha Portfolio, 2014)

Abby suggested engagement occurred as a result of students taking more ownership over their ideas and learning through artistic practice. Classroom teachers found that arts integration made school more interesting for students. Students discovered that exploring multiple right answers and investing effort to combine skills was a joyful endeavor. One of Heather's students verified this perception by saying: "If I do something fun, I usually remember that and I will remember how to do it and all. Like if I have fun doing it, I'll enjoy it and I'll remember it" (Student Focus Group, 2015, March). Just as their students demonstrated enjoyment in learning through the arts, Kaila, Monica, and Heather also expressed a sense of deep satisfaction and enjoyment when teaching through the arts.

Self-Efficacy: Classroom Teachers Felt Capable

Five of the six classroom teachers explicitly stated that they "feel more confident" using the arts in their science lessons. The one classroom teacher who did not indicate increased confidence already felt self-assured as an arts integrator prior to the CR program.

The ten collaboratively taught lessons, along with the ten collaborative planning sessions offered multiple occasions for vicarious learning and raised teachers' self-efficacy. Classroom teachers experienced positive examples for arts integration, received constructive feedback, and were able to try arts integrated teaching instructions with the support of the teaching artist expert. The classroom teachers felt empowered to continue this approach to arts and science integration, intrigued by success in student learning, and higher levels of student engagement: "Through the collaboration, I have gained the skills, vocabulary, confidence, insight, and knowledge into how incorporating movement into the content area looks like and feels" (Monica Portfolio, 2015, January).

Although Abby and Kaila expressed increased self-efficacy, they also articulated some trepidation about continuing to teach in the art form without the teaching artists by their sides. Both worried about how students would perceive differences between their facilitation styles and the teaching artists'. This dynamic was particularly interesting because these two classroom teachers had repeated the CR program for multiple years. Alternatively, Monica transparently told her students how she was learning right along with the students, taking risks, and experimenting in the process. Samantha and Kaila chose to demonstrate an arts integrated lesson for their annual assessment, to be observed by an administrator. This indicated a strong degree of self-efficacy. During the classroom teacher focus group, participants agreed with Samantha, "I feel that the greatest thing that I got from my collaboration experience was more confidence in the classroom" (Classroom Teacher Focus Group, 2014, December 6).

Diverse Learners: The Arts Functioned as an Equalizer

Fumiko, Samantha, Heather and Abby referred to ways arts integration supported their struggling students. Students were able to access and express understanding in content according to their abilities. For the two classroom teachers who worked with large ELL student populations, the arts helped provide a common ground for communication through physical expression and imagery. Fumiko explained,

I have a big population of ELL students in my class, and students can understand contents or vocabulary much easier by drawing something, like observing closely instead of just flipping the pages: “Okay, this is shelter, this is what they need.” They really understand what they meant. (Classroom Teacher Focus, 2014, December 6)

Similarly, Samantha was excited about how arts integration helped her language learners express themselves,

All students, including ELL students, benefit from drama activities because there is less talking and more showing. This can help students make meaning of new or unknown vocabulary and content, allow students to have both freedom and structure; this allows me as the teacher to create a non-limiting project. I can give students an opportunity to learn at different levels. (Samantha Portfolio, 2014)

Heather’s teaching helped meet the needs of students at both ends of the learning spectrum—those who struggled as well as those who easily and quickly grasped concepts but then became bored by the classroom tasks. During a student focus group, one of Heather’s struggling readers who received special education services confided, “I don’t think—without arts and integrations, I don’t think I would be in fifth grade right now” (Student Focus Group, 2015, March 24). Another expressed appreciation for being challenged when he wrote in his science notebook: “This probably was the most interactive science lesson I’ve ever done and it made you think harder than usually” (Heather Portfolio, 2014). Heather’s arts integration provided both supports and challenges to the variety of learners in her class.

Classroom teachers who incorporated dance and drama felt the kinesthetic learning experience provided opportunities for all of their students to explore ideas more deeply. Many classroom teachers experienced what Heather expressed,

We could have just built the turbine or we could have just read about it. If they read

about it, only a third of them maybe would have been able to explain. If you built it, maybe still a third, maybe two-thirds...But when they put it in their minds and bodies and showed me that they were dancing the process of wind transformation. (Heather Interview, 2015, March 24)

Several students supported their classroom teachers' perceptions by explaining how arts integration benefitted them. For example, one of Monica's sixth graders said,

First we learn about it, like actual on paper we study it, and then up here we'll do something with it. And up here, I visualize it pretty well, because sometimes when we're in class I don't get something. ... but then my friends will help explain it to me. But I won't exactly get it until I move around. It's in movement I learn a lot more, like I can visually see. (Monica Student Focus Group, 2015, March 24)

Classroom Teachers' Instructional Behaviors

In all cases, classroom teachers demonstrated changes in their instructional behaviors in response to their collaborations with teaching artists. They increased frequency of arts integrated instruction and used a broader range of integration strategies. Classroom teachers also became more skilled at delivering arts instruction, especially with scaffolding, assessment and classroom collaboration. Finally, participants focused more on facilitating conceptual understandings with their students.

Classroom Teachers Integrated the Arts More Often

The classroom teachers in this study continued integration practices after the completion of the program, increasing the frequency of their overall use of arts integration. Their applications ranged from daily integration of creative movement or pantomime and weekly scheduled dance lessons, to occasional visual arts integrated projects. Samantha began incorporating spontaneous drama activities into her instruction to clarify ideas while energizing her students. Fumiko demonstrated a variety of arts instructional strategies and use of arts language in her instruction after the residency. Monica, Samantha and Fumiko claimed to have expanded their repertoire of subjects into which they integrated the arts.

There seems to be no relationship between the number of times a classroom teacher participated in the CR program and frequency of application. This was a surprise. Literature suggested that more exposure would result in higher skills and confidence integrating the arts, which would result in higher frequency of implementation. Abby, who had the most experience with the project, integrated the least often. It is possible that other environmental factors we will discuss in a later section supported or hindered classroom teachers' arts integration behaviors.

Classroom Teachers Developed Skill in Arts Instruction

Across all six cases, classroom teachers demonstrated newly developed skills in teaching through the arts including scaffolding, formative assessment, and student collaboration. All classroom teachers voiced that they learned “how to break things down” from observing and collaborating with the teaching artist. For example, Fumiko realized how “chunking” could provide small steps of instruction to support her first graders. This was a marked difference for her,

If I had to do it before, I’d say, “Okay, look at this picture, and then try to do your best to copy,” and they get lost. And then I think, “Why can’t you do it?” That was my struggle before, like, “This is so simple. Draw like this, draw like that.” But I learned from [my teaching artist] that every step has to be broken down so students that are six years old would understand what they have to do to grasp the shape and draw. (Fumiko Interview, 2015, February 27)

Fumiko was skilled with scaffolding instruction in other content areas (for example, in reading and writing) but needed a concrete model for how to do so with her arts instruction.

Formative assessment became an important part of each classroom teacher’s skill set. In the dance lessons, they coached by verbally describing student movement as immediate feedback. For example, Monica’s teaching artist partner modeled how to observe and describe movements demonstrated by students. As a result, Monica began to see how to assess student understanding in their movement, coaching them for ongoing improvement in the moment, and collect information for subsequent lesson planning.

Classroom teachers also began to use a larger assessment repertoire. For example, with two people in the classroom, Heather was physically able to capture a wider variety of assessment evidence, more often. She came to value the richness of instructional conversations because “I know that the students have amazing things to say and don’t just come out in writing” (Classroom Teacher Focus Group, 2014, December 6). She used dance maps as an instructional tool to help make connections between the concrete and the abstract but also as a tangible record of these understandings. She gathered photographs, video, captured audio recordings of conversations and used these along with written reflections to help students share their learning with their larger community. Heather developed the multiple formative assessment strategies to help make students’ learning visible.

Participants in this study agreed that increased student collaborations occurred as a result of

the CR project. For example, Samantha explicitly taught her students how to support each other during their arts learning and as a result observed them demonstrate kinder, caring behaviors toward each other. Samantha found this was essential for supporting arts learning “Building a strong community that's helped us use the arts and integrate it and be more successful, and it's also helped make our classroom more of a collaborative culture” (Samantha Portfolio, 2014). Heather also stressed the importance of grouping and collaboration. One of Heather’s students explained, “When you work with other students, it’s a trust thing, and my class has a lot of trust with each other” (Student Focus Group, 2015, March 24). In the end, Heather decided,

The most successful aspect of this unit was the group work. The students did everything in this group from reading, questioning, researching, dancing and drawing. They all had creative ideas and thoughts, but when they shared them and built upon those ideas was when the great things occurred. (Heather Portfolio, 2014)

For classroom teachers like Heather, increased classroom collaboration among students was a major part of quality arts instruction.

Classroom Teachers Facilitated Conceptual Learning

The CR’s emphasis on conceptual learning included the principles of backward design based on essential questions and enduring understandings (Wiggins & McTighe, 1998). The professional development required partners to set meaningful learning goals before choosing the instructional methods and assessments. This approach was an interdisciplinary process; students would construct understandings they could transfer to other situations in life.

When we observed the classroom teachers in the spring, we noticed they continued to facilitate conceptual learning. They generally chose to replicate the unit they had taught with the teaching artist rather than apply a strategy with a narrow learning focus. Kayla continued to pursue her same essential question about cycles by replacing mealworms with beetles. Monica adapted her dance instruction about energy to the life of a polyp, Samantha exchanged her caterpillar for a sea turtle, and Abby continued to emphasize observation skills by creating art about predators. Their previous successes functioned as models as they continued to plan integrated units to include essential questions and enduring understandings.

Students suggested their classroom teachers were constantly challenging them with open-ended questions. For example, in a student focus group, one of Fumiko’s first graders acknowledged, “[My teacher] wants to pretty much make us think very hard, and it’s very—sometimes there’s hard questions that you have to think hard, so I think that thinking is

important to me” (Student Focus Group, 2015, February 27.) Fumiko’s students made global statements to demonstrate enduring understandings about the science content, “If there is no more air, water, food and shelter the fish is going to die” (Fumiko Portfolio, 2014). After the completion of the CR project, Monica continued to work with dance to help support cross-cutting concepts in science. She stated,

The benefit of focus on the EU [Enduring Understanding] and EQ [Essential Questions] has been a direct link to what the students are doing. I am pretty excited about that, as students’ engagement is high, along with seeing deeper understandings of the science concept through the movement... The students’ reflections have grown and shown knowledge gained in science and movement. (Monica Interview, 2015, March 24)

The Teaching Environment

The addition of the teaching artist to the classroom environment had a profound influence on the classroom teachers’ learning. The teaching artists provided ongoing modeling and coaching within the contexts of the classroom teachers’ real world practice. Additional environmental factors, including time, space, and administrative support, either supported or hindered classroom teacher change depending on the specific ways they played out for each case.

The Teaching Artist was a Model and a Coach

Monica expressed a sentiment shared by the other classroom teachers in this study, “Through the collaboration, I have gained the skills, vocabulary, confidence, insight, and knowledge into how incorporating movement into the content area looks like and feels” (Monica Reflection, 2015, January). Across the cases, teachers found their partnerships worked because their teaching artists provided modeling and coaching.

Teaching artists worked directly with students to model how they approach arts integration, and the impression of these models remained long after the completion of the project. Kaila explained, “Every time I teach movement, [the teaching artist’s] voice is in my head. Like literally, I hear her in my head. So I probably am kind of copying her style almost” (Kaila Interview, 2015, March 25). Similarly, Samantha emulated her teaching artist’s facilitation skills, “Watching him put word choice, pestering, and editing all to work at the same time was amazing. I do not have the same gift for words, but I can lead my students through this process again” (Samantha Reflection, 2014). The modeling each teaching artists provided was like a template for the classroom teachers to follow as they began to take on the complexities of facilitating arts instruction. In another example, Fumiko mostly observed and supported her teaching artist partner, but she taught mini-lessons and used a co-teaching parallel

structure as her confidence grew. In her case, modeling was particularly effective because Fumiko started with low self-efficacy. She was especially careful to observe, record and analyze all that her teaching artist partner said and did. At the conclusion of the project, Fumiko decided she would repeat the CR program and asked her partner to coach more and model less for the subsequent year's project.

The teaching artists coached throughout planning, instruction, and assessment. For many of the classroom teachers who were returning to the project for the second and third years, this coaching was essential because they were teaching more and observing less. As Kaila took the reins, her teaching artist was still present coaching and challenging her, "I am learning what to look for in the movements just by listening to her feedback." Similarly, Abby benefitted from coaching during collaborative planning, "So it's nice to see that we could bounce ideas off to each other or just, like, 'Oh, I know that's not going to work,' so just being able to change" (Abby Interview, 2015, March 24). The teaching artists also coached like cheerleaders. Monica described how her partner provided her with positive messages,

[My teaching artist's] attitude is "this is a can-do thing, this is how it's gonna go." Because even during the collaboration when I took over more, she was just so supportive. And having her to follow up and then say, "That was really good. How about this or think about that?" and the way she did it was just—it was good. (Monica, Classroom Teacher Interview, 2015, March 25)

The relationships the classroom teachers built with their teaching artists were defined by support and mutual appreciation—without these fundamentals, the modeling and coaching may have been less effective.

Space can Restrict or Support

In Monica and Kaila's school, there was a spacious music and movement room that allowed students to move freely and explore space individually or in small groups. Monica's students noticed a change in the way their classroom teacher approached learning with an open and creative mind in this space that had a special status in their minds. This space, physically separated from the traditional classroom, created an aura of unique privilege. Classroom teachers and students referred to the movement room as, "up here," a space with the distinct purpose of fostering creativity.

Heather's classroom physically looked unlike other traditional HIDEOE classrooms. Tables of various shapes and sizes stood around the perimeter of the room with an open space permanently front and center, making group work and movement easy. Students also had the freedom to decide where they wanted to sit and with whom they would work—at a round

table with others, on a couch, on the floor with a clipboard, or at an independent desk. This fluid physical structure was the norm in Heather's classroom because of the centrality of arts integration in her practice. Heather had access to a dance room, but she seemed to prefer the conversion of her own classroom into a permanent dance space. She removed the special status of dance integration and made it a thorough part of the fabric for learning in her classroom.

Alternatively, Samantha and Fumiko's classrooms were extremely small and hot. With a prescribed curriculum occurring in the morning hours, they were left to teach art and science one afternoon a week, during the hottest time of the day. Samantha acknowledged the tight space as a problem for engaging children in quality arts experiences,

They were able to revise their positions and make changes but I think when they can see all of their classmates and build off of each other's ideas we would have even better quality pantomime. This is a hard problem to deal with. If I move furniture and we just lose more time, and if we leave the desk off to the side, all of the students cannot get into their chairs to continue the lesson or to move to the next lesson. (Samantha Portfolio, 2014)

Samantha repeatedly recognized how more space would allow better observation, better opportunity for movement with a fuller range of motion, and more chances to observe and respond to the work of peers.

Not Enough Time at the Right Time

Kaila and Monica, the charter school teachers, felt the least restricted by time because the school provided them flexibility in structuring and scheduling the learning content. Kaila did voice a concern that integrating the arts and science required more time, which took time away from other subjects like social studies, "Art and science do take time especially when you need to reflect and revise before you share or present your performance or your findings" (Kaila, Interview, 2015, March 25). However, she ultimately felt that integrating the arts supported her standards based instruction.

Abby mentioned that if time was scarce, she would cut out the arts. Abby quoted herself with a familiar phrase, "Oh, sorry, we ran out of time today. We can't do it" (Abby Interview, 2015, March 24). Samantha was caught in a conundrum because she wanted to teach her unit to completion but had difficulty fitting it all in during the allotted time periods. She created space in her curriculum by integrating multiple subjects, "How do you fit arts and science integration? Well, I do it during writing time" (Samantha Interview, 2015, March 23). As the CR played out, the few opportunities for co-teaching were even more limited by school

assemblies, fire drills, and overflow of the morning's scripted reading curriculum into the afternoon. Samantha felt pressured by her administration to stay within her parameters for instructional time blocks, and clearly expressed a frustration about the dearth of time for arts integration in the face of other curricular priorities.

For Fumiko, time was a strong theme that reoccurred in her portfolio as she noticed how materials preparation could save time, wondered how much time her students needed to practice on their drafts, and bemoaned the amount of time a first grader needs to write a reflection. She struggled to balance her school's expectation to teach breadth over the depth, and she yearned for it in this project,

Although this mural making with a teaching artist was a priceless experience for the students and myself as a teacher, there was an issue with time. I adjusted other learning lessons such as the writing timeframe to complete this mural. With current school wide learning goals with the same grade level assessment, modifying the lessons for the deeper learning was not easy. I have to teach knowledge based content, breadth, along with this unit with much more depth of understanding. (Fumiko Portfolio, 2014)

With the morning instructional hours off-limits to arts integration, Fumiko worked to create the time she needed for her unit. She integrated with writing, cut physical education occasionally, and rushed the social studies. Part of this pressure came from grade level expectations to keep pace on the same timeline as the other first grade classrooms in reading and math.

Even in her school-wide arts integration environment, Heather was frustrated by how much time it took for her students to demonstrate the goals she set forth in dance, such as the development of abstract movement. She had concerns about how technique exercises, warm ups, and instructional conversations took too long, and found herself constantly adapting her plans to accommodate the creative process. She found herself sacrificing some of the integrated units in social studies she had done in the past to make room for the science. She also felt the limitation of time on the planning process, which for her was far more intense and explicit than if she had taught the unit alone. With all that being said, Heather was adamant: "I would never give back any of the moments we did on that wind unit for anything" (Heather Interview, 2015, March 24).

Institutional Influences

Most classroom teachers revealed that there was little exposure to, interest in, or support from their administrations and colleagues with respect to this project. The classroom teachers

received credits for their professional development activities therefore the administration needed to give consent for their participation. Most responded like Monica’s administrator, “They’re not unsupportive, but they’re not super supportive.” Their schools neither discouraged them (they were allowed to attend arts integration courses) nor encouraged them by creating a flexible schedule, individualized curriculum, or platform to share. Those in traditional HIDEOE settings experienced the most difficulty because of the emphasis their administrators had on uniformity of practice. Fumiko explained,

Well, to me, my current principal, the aim is: Everybody do the same thing. That’s his thing. So it’s hard for me to come to our institute or other courses and learn new things and implement in my classroom... So I wish we had more freedom. (Fumiko Interview, 2014, February 27)

Both Fumiko and Samantha had to be inventive about how and when they made space for arts integration within the expectations of their schools.

Alternatively, Heather was expected to produce learning results through the arts and supported by her administration to develop her practice as an arts integrator. Her administration did much more than tolerate arts integration, instead they insisted upon it. As Heather explained, “This is our classroom responsibility. We are observed on arts integration lessons from our curriculum coordinator and we’re given a lot of professional development in this area, so it’s a requirement and I enjoy it” (Classroom Teacher Focus Group, 2014, December 6). The relationship between school structure, administrative support, space and time suggests classroom teachers with more environmental flexibility feel they can grow more and influence student learning better through arts integration (Table 2).

Table 2

Arts Integration Environment

Classroom Teacher	School type	Administrative support	Separate space for the arts	Flexible time
Abby	Traditional	Low	No	Low
Fumiko	Traditional	Low	No	Low

Heather	Arts integrated	High	Adapted Classroom	Moderate
Kaila	Charter	Moderate	Yes	High
Monica	Charter	Moderate	Yes	High
Samantha	Traditional	Low	No	Low

Discussion

Our findings suggest the teachers in this study observed the impacts of their arts integration efforts specifically on their students' behaviors. They witnessed how arts integration heightened student engagement (Gazzaniga, 2008; Eisner, 1999) and supported social and emotional learning such as social skills and interpersonal behaviors (Simpson Steele, 2016). They experienced how the arts activated other ways of thinking and communicating, vital ways of seeing, imagining, inventing, and engaging in creative problem solving (Winner & Hetland, 2007). When the participants in this study experienced these shifts in their students, their self-efficacy grew. Our observations support the premise that when classroom teachers see an impact on their students, they are more likely to embrace changes in their practice (Orek, 2004; Guskey, 1985).

The classroom teachers' perception of student learning through the arts had a reciprocal effect on teachers' behaviors as they implemented a pedagogy focused on constructivist learning, supported by scaffolding and formative assessment (Orek, 2004; Guskey, 1985; Bandura, 1995). Teaching through the arts respected the diversity in student learning and accommodated students' individual strengths and abilities (Orek, 2004). Without naming it as such, classroom teachers demonstrated the principles of Universal Design for Learning (Glass, Meyer & Rose, 2013) as they implemented multiple means for representation, expression, and engagement through the arts.

The introduction of the teaching artist into the environment was the strongest positive influence on classroom teachers' beliefs and behaviors. The collaborations provided active participation within specific integrated content, curriculum planning, modeling of teaching techniques, coaching, and feedback on student learning outcomes—all attributes of meaningful professional development consistent with the literature (Guskey, 1985, 2002; Supovitz & Turner, 2000; Thomas et al., 2012). The professional development occurred over an extended period of time and included long term mentoring. The CR provided classroom teachers with time and space to exercise newly acquired techniques while receiving support,

guidance, and feedback (Gulamhussein, 2013). These factors all contributed to the classroom teacher's growing self-efficacy as arts integrators.

Other influencing aspects in the environment served as barriers. Classroom teachers experienced difficulties of the restricted time and space for implementing the arts, especially if school policy did not support classroom teachers' individuality. Such limitations could potentially place a cog in the reciprocal cycle of change, lessen beliefs about the positive effects of arts integration, and restrict teaching behaviors. Therefore, a stronger emphasis might be placed on institutional support for classroom teachers. Simple approval by the administration is not enough. Principals need to get involved in order to be recognized as key stakeholders for arts integration practices to flourish. Administration needs to defend the time needed for arts integration and allow for flexibility in the classroom schedule and organization. An optimal solution involves a stronger integration of the arts in all school subjects and arts integration professional development within the schools' agenda (Supovitz & Turner, 2000; Thomas et al., 2012).

Though arts integration cannot replace valuable arts instruction in discrete disciplines, it can support student understandings of other content areas through artistic expression. In order to do so, arts integration must receive status beyond that of "fun" and "frill," and capable classroom teachers must practice their pedagogy with rigor. In times of limited resources, we need to analyze outcomes from professional development to determine how to best equip classroom teachers with structures to sustain lasting pedagogical shifts. The CR model offered multiple situations in which classroom teachers engaged reciprocal transformation of personal beliefs, behaviors, and environment to become better arts integrators. Yet, quality professional development alone may not be enough to support these transformations. Research suggests that institutional supports contribute to classroom teacher's professional development (Supovitz & Turner, 2000).

Future studies might compare the practices of classroom teachers who have engaged with quality arts integration professional development in multiple iterations, with those who participated only once. From this study, we can propose the hypothesis that repeated engagement is less important than self-efficacy or environmental factors. In addition, a longitudinal investigation regarding classroom teachers' reasons for ongoing professional development in arts integration or reasons for discarding the practices would provide further insight into the factors that support or hinder change over time. Another question that developed from this study is whether the transfer of arts integration pedagogy might influence other areas of teaching. As this body of research and knowledge grows, patterns of findings among multiple case studies will become increasingly generalizable.

Bandura's reciprocal model proved a useful framework to make meaning of classroom teachers' experiences in this study. Modeling and coaching were the most powerful influences on change and underlined the importance of social interaction in professional development. Furthermore, the results demonstrated that reciprocal interactions of classroom teacher's beliefs, behaviors, and their environment affected the successful implementation of arts integration.

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