

Collaborative Learning:
An Analysis of Responses to Tension in Collaboration Laboratory Partnerships
Program Evaluation Report 2016 - 2017
Erin Preston
Chicago Arts Partnerships in Education

ABSTRACT

This Chicago Arts Partnerships in Education (CAPE) Collaboration Laboratory (Co-Lab) program evaluation will explore how collaborative teaching skills are developed in arts-integration partnerships. Engaging tension and conflict are opportunities for partners to construct their own practices for collaborative teaching—leading to better teaching, learning, and arts integration. This study will investigate the following questions: (1) How does CAPE staff define and understand the construct of collaboration?, (2) How do partners respond to conflict?, and (3) How do tensions of disclosure, trust, and uncertainty impact participant learning and arts integration practices. First, CAPE program staff were interviewed and their ideas established the theoretical framework to drive analytical attention. Using a descriptive case study approach, I comparatively analyze two Co-Lab partnerships using data from primary interviews, direct observations, and physical artifacts. I describe how the two partnerships responded to tension and how their responses affected the design and implementation of arts-integrated curricula. I conclude by recommending issues and ideas for CAPE staff as they consider the role of tension in arts integration partnerships.

Introduction

Since 1993, Chicago Arts Partnerships in Education (CAPE) has improved the quality and access of arts education in Chicago Public Schools through arts integration. Since 2003, the Co-Lab program (previously Design Seminar) has established a model for arts-integration partnerships. Over the course of two years, teachers and teaching artists are partnered to design and implement arts integrated curricula. Professional development is structured to follow CAPE methodology. CAPE's methodology focuses on inquiry, partnerships, professional development, and collaborative research (capeweb.org). CAPE trains Co-Lab participants through four, three hour-long professional development sessions each year. The first year focuses on training partners to develop curriculum grounded in an interdisciplinary Inquiry Question. Participants are guided to use the intersection of their goals and interests to locate an authentic context of inquiry. Development of the curriculum is supported with planning forms to facilitate mutual expectations. The second year emphasizes documentation and assessment practices. Each year, partners implement one unit of curriculum. Teacher-artist partners are asked to plan for approximately 12 hours of instructional time in the classroom for each unit. CAPE suggests approximately 5 hours of planning time outside of professional development. Partners document their project using an online, digital portfolio platform consisting of reflections and artifacts. Together, partners learn the CAPE methodology over time and in action. Teachers and teaching artists increase their capacity to integrate the arts into academic content areas in tandem with growing their ability to collaborate.

Amongst Co-Lab's programmatic goals, and one that ties them together, is collaboration. Specifically, the goal is for teachers and teaching artists to develop collaborative teaching skills. Collaboration is an undercurrent of CAPE methodology: (1) collective vision bridges art and academic content areas through arts integration, the core of CAPE work; (2) shared inquiry drives the development of curriculum, instruction, and assessment practices; and, (3) collective

documentation allows partners to make sense of their process and capture how teaching and learning unfold (capeweb.org). This approach views partnership work as action research; the teacher, artist, and students are engaged in collaborative research (capeweb.org). Given how collaboration is embedded into all strands of CAPE methodology, the purpose of this study is to bring it to the forefront by focusing on how tensions drive learning. This study looks closely at how partners describe and perform collaboration by asking:

- (1) How does CAPE staff define and understand the construct of collaboration?
- (2) How do partners respond to conflict?
- (3) How does tension of disclosure, trust, and uncertainty affect participant learning and qualities of collaboration.

By looking at how partners respond to tension and conflict, this study can begin to uncover how particular practices lead to better collaboration, shared inquiry, and arts integration. First, this study presents a synthesis of CAPE staff interviews and research that informs the analytical framework of this report. Then, a section on methods describes my approach to case study research and data collection. A data analysis section then summarizes key findings from the data and is organized by emergent themes. This report presents the findings with examples from interviews and observations while incorporating the analytical framework. A section on recommendations will conclude this report.

Methods

I began this research by choosing foundational articles to discuss at a CAPE staff retreat. These articles were chosen based on findings from my 2015 -2016 and their thematic connection to conflict in collaborative learning. During the retreat, CAPE staff discussed the articles in relation to collaboration, CAPE as an organization, education, CAPE's Artist/Researcher model, and contemporary art. Retreat discussions were notated as field notes and later typed, and these notes informed subsequent CAPE staff interviews. Four members of CAPE staff were interviewed once. Data analysis from these interviews drove the focus of the literature review and, in turn, was used as a data reduction strategy for the remainder of the study.

Next, I conducted research using a case study approach with two Co-Lab partnerships for one cycle of project implementation. Members from two Co-Lab partnerships in their second year of the program were selected by CAPE staff to participate. Qualitative data collection was conducted with primary, ethnographic methods including ongoing interviews (seven in total), classroom observations, professional development observations, and analysis of current and archived project documentation. All interviews were semi-structured, recorded with audio tape, and transcribed verbatim—with re-punctuations to remove repetitive hesitations. Field notes from classroom observations were typed. Case Reports were prepared for both partnerships for thematic and comparative analysis. To retain fidelity to the complexity of collaborations, I

attempted to present progressions in thinking, behavior, and learning with thematic focus while including inconsistencies.

Theoretical Frame: Perspectives From Cape Staff & Theoretical Literature

This program evaluation combines literatures from multiple fields of research, previous CAPE research, as well as primary interviews with CAPE staff to explore the role of conflict in collaboration and learning. In this section, I report how CAPE staff define and understand the construct of collaboration woven with research from the fields of organizational learning, social science, education, and studies CAPE has conducted with external partners. Together, these ideas will establish an analytical framework for describing collaboration. This section uses the conceptual patterns applied to this report as an organizing principle.

Collaboration

In 2014, CAPE's Education Director began an exploration into what it means to become a CAPE learner (Sikkema, 2016). Through ongoing conversations with CAPE staff, teachers, and artists, the organization created language to describe a CAPE learner as an Artist/Researcher. Amongst five qualities, an Artist/Researcher is "A Critical Collaborator" wherein they "explore together their intersections, conflicts and contradictions, in order to expand their artistic dialogue and learning possibilities." (Sikkema, 2016, p. 5). This definition captures the distinct methodology for how CAPE conceives collaboration and arts integration pedagogy. Learning is a social activity conducted through inquiry and dialogue. Intersections and divergences bear equal weight and are central to inquiry. The goal of the collaboration is not static and concrete, rather it is expansive and aimed at discovering potentials for further inquiry and artmaking. CAPE staff conceives the phenomena of collaboration as a process of "continual redefining" and in a "constant state of becoming" (FN, 011717). This conception is echoed in broader research: collaboration should be considered an evolving and developmental activity collectively constructed by its members (Barron, 2000; Burnaford, 2006; Catterall & Waldorf, 1999; Cranton, 1996; Hackman, 2002; Perkins, 2003). As such, CAPE's programmatic supports for collaboration are deliberately open-ended and require participant ownership:

We as a staff, when we design professional development... we try to be very clear and straightforward about the things that we want everybody to be doing or understanding, and the things we want people to struggle through or work out on their own, we make those things very elusive and vague and that they have to figure it out and we're very intentional about that. (Interview, 050817)

I think because CAPE's strength is we allow a lot of freedom of choice in terms of how a teaching artist and teacher work together: how they conduct class, how they design the curriculum. That's a huge amount of freedom especially in this context... and it makes for more interesting, meaningful work. (Interview, 050817)

The second year focuses on encouraging good practice as collaborators... you really have to give these structures that have so much space in between and the structures are not too complex, they're easy to understand, but... challenging to take on long-term behaviorally because of how we learn things as a culture and society and we understand they're big and that's why it's so important for us to have this space and breathing room. (*Interview*, 041017)

Although some research has emphasized a collaboration should be bound with clear goals, measures for success, and contain a clear conceptualization of collaboration (Cranton, 1996; Donnellon, 1996; Lotan, 2003), a more evolving and emergent process has been described by Perkins (2003) and has been evidenced in CAPE partnerships by Smolin (2010) and Paradis (2011). Perkins (2003) asserts the goals and assessment criteria of a collaboration should be created by members and continually revisited throughout the process. Cognitive science and developmental research also support a self-authoring pedagogical approach with adult learners, because “they often have specific purposes and aims in mind”; as such, adult learners benefit from flexibility, self-determining goals and learning needs, creating and implementing plans, and self-assessment (Grotzer, 2013). In Co-Lab, staff invite participants to conceive of their own approaches to collaboration. Underscoring CAPE’s belief in ownership, veteran participants are regularly recruited to provide instruction. During this study, the most explicit instruction on collaborative teaching methods and arts standards were given by veterans. Further, the instruction offered an overview and, for the session on methods, emphasized how approaches shift based on content and throughout a collaboration. The deliberate approach to provide “space and breathing room” allows participants to encounter crucial questions about their practice, oftentimes in the form of artmaking activities. As a CAPE staff member describes:

A lot of our professional development activities really build buy-in and trust ... it kind of doesn't mean anything until they get into the meat of the activity and get challenged by us, and they have to think ‘This is actually something I want to go further with’, and I think we have pretty good success in terms of the quality of PDs building this level of trust, because we actually don’t sugar coat things to try to package things in a flashy way. It’s really more about the substance of the work: teaching, and curriculum design, and arts integration. There is this element of a trust paradox, because we ask them to do things that make them vulnerable... We can’t reassure them that things will be okay because that’s not part of our method... but what I’ve seen is that that’s overcome by experiential learning that happens at the PDs... (*Interview*, 050817)

The process of partners authoring their own collaboration requires trust, and CAPE carefully guides partners to consider aspects of their work through an inquiry process.

The Role of Conflict in Collaborative Learning

This study draws from Achinstein (2002) and Argyris & Schon (1996) to describe the role conflict has in partnership learning. Achinstein (2002) describes conflict as an event or process in which individuals or groups expose their diverging beliefs or actions. CAPE tasks

partners to explore the “intersections, conflicts and contradictions” of their practices and beliefs through their work together (Sikkema, 2016). As the nature of their differences is explored in order to gain a shared understanding, partners undertake a shared inquiry. Argyris & Schon (1996) define *organizational knowledge* as learning resulting from shared inquiry. Organizational knowledge is gained through new, shared understanding and from using new understandings to refine performance (Argyris & Schon, 1996; Wilson, 2012). When an inquiry results in a change in strategies while maintaining the status quo, it is called *single-loop learning* (Argyris & Schon, 1996). When values and norms are changed it is called *double loop learning*. One factor which can impact whether the outcome of an inquiry results in single or double loop learning is how one responds to conflict (Achinstein, 2002). Although some tensions may not be significant enough to require re-examining values and norms, the response to either embrace or avoid conflict determines the learning potential (Achinstein, 2002). Achinstein (2002) calls this *conflict stance* and found embracing and exploring differences is central to a sustained and ‘functional’ collaboration. This study will use the concepts of single/double loop learning and conflict stance to explore how partners respond to their differences.

CAPE staff describe the ideal learning outcome of Co-Lab to be double loop learning whereby partners re-examine the nature of learning and education. CAPE staff believe exploring differences helps both partners and students re-examine content and learning:

... If the artist and teacher are really collaborating in such a way that they are questioning how they are teaching... you can tell when people are authentically debating different social, history, math ideas if they’re up there together debating and questioning these things, it starts to help the students to think about the content not just as something that they memorize and give back, but instead the content is something that they can have ownership of and investigate in their own way. (Interview, 051617)

I see teachers and artists respond to [collaborative teaching]: ‘Oh, if we both just know what we’re supposed to obey then we’ll never have any disagreements and we’ll be able to teach happily together.’ and I don’t agree with that... I don’t think that changes your practice as a teacher or artist or makes for deeper learning... (Interview, 051617)

It’s when you empower people to realize they don’t have to just simply accept the context and construct and typical framing devices and subject matters of the debate. (Interview, 051617)

Although embracing conflict leads to learning, it can create instability, or as Little (1990) described: “heat as well as light” (p. 188 in Achinstein, 2002). CAPE staff consider this dual effect when discussing conflict amongst partners:

I wonder if maybe people don’t see when there’s conflict, because it can be very small or it can be massive... the little, tiny ones even, they keep you moving and they’re good and then bigger ones are scary and challenging and hopefully you come together and have a new idea. (Interview, 041017)

I think generative tension, the bigger the tension or conflict the bigger the advancement, but higher the risk you can break apart or fail. (Interview, 041017)

[The] CAPE style... is to kind push you little then step back, so the assumption is there's conflict happening and we just let them naturally work it out, and I can see why it's terrifying to them... you just have to let them figure it out, otherwise it's not going to permeate and be remembered; it's not going to be as fruitful of a learning experience. (Interview, 041017)

[We] have an idea that these two belong together but they're not quite right... sometimes that doesn't pan out, we do our best to pair and there are times we anticipate something to slightly break down and then we encourage them to deal with it or to reflect... this is a process of deconstruction. You have the opportunity to reframe things... it's also part of that CAPE logic or with what I think is good artmaking... (Interview, 040417)

Practices to Support Collaborative Learning. Dialogical practice and critical reflection are essential for a group to learn (Achinstein, 2002; Argyris & Schon, 1996; Cranton, 1996; Perkins, 2003). Researchers have highlighted that shared exploring of ideas and active discussion and debate are dialogical practices inherent to collaboration (Cranton, 1996). The complexity of learning in action requires careful attention as individuals monitor and revise collective knowledge (Barron, 2010). For these reasons, many researchers have focused on studying the socio-linguistic and interactional dimensions of collaboration (Barron, 2000; Donnellon, 1996; Pea, 1993). Asking for clarification, probing beliefs and goals, testing ideas, openness to critique, and constructing ideas are all generative dialogical practices (Perkins, 2003; Wilson 2005). Such practices allow groups to process their shared understanding while building strong group connectedness (Perkins, 2003). In particular, critical reflection is emphasized across research as a way to both challenge and renew beliefs and values (Achinstein, 2002; Barron, 2010; Cranton, 1996). Critical reflection enables partners to imagine new possibilities by engaging alternative perspectives, and it creates opportunity for double loop learning (Achinstein, 2002). Additionally, dialogical practices and reflective activities are developmentally appropriate for adults as they bring skepticism to their learning experiences and these activities allow them to grapple with new concepts (Bransford & Schwartz, 1999; Grotzer, 2013; Hmelo-Silver, 2004). This study directs attention on dialogical and reflective practices to describe opportunities to engage conflict towards learning.

The role of a Critical Collaborator requires dialogical practice and critical reflection, both of which have been established as fundamental to CAPE's pedagogy (Burnaford, 2006; Paradis, 2011; Scripp & Paradis, 2014; Smolin, 2010). Burnaford (2006) found in veteran partnerships, teachers reported a dialogical practice was used more than lecture about 90% of the time in arts integrated units. Further, CAPE has defined dialogical practices within the collaborative dimensions of contemporary arts practice (CAP), specifically that CAP "[facilitates] discussion and dialogue between teachers, artists, students and the surrounding community." (Smolin, 2010, p. 7). CAPE's professional development sessions are designed with a dialogical approach to

learning and interweave critical reflection. Sessions require participants to drive activities and define their work (Paradis, 2011). Together, these practices are part of the action research in CAPE's methodology and are paramount to the practices of an Artist/Researcher:

... We know an important part of having a successful collaboration is being critical of your partner and yourself, of course, and critical doesn't mean necessarily a negative. When you're critical you ask questions of the other person, so: 'Why did you make this decision?' The other person is forced to reflect back and think 'Oh, why did I make this decision?'..." (Interview, 041017)

... Critique really does play a big role on enhancing the behaviors that we want from our programming... Criticism... ensures someone is reflecting. It ensures people are actually shifting their role. I'm the artist, how does the viewer look at me.? I'm the teacher, how does the student perceive what I'm providing to them?... Critique enables people to propel their practice forward... Usually people make a decision subconsciously for the right reasons. Occasionally, they'll make a decision because it's easy, but if they're aware of that they'll know how to tackle a problem or to more boldly state: 'This is why I did this and this is why it matters'... (Interview, 041017)

Tensions of Disclosure, Trust, and Uncertainty

Three concepts can reveal how conflict allows partners to engage in critical collaboration: disclosure, trust, and uncertainty. These concepts are interrelated and can describe how partners either embrace or avoid conflict: by disclosing their perspectives, testing each other's and their own thinking, and continuing to investigate their understanding through an inquiry process.

The Paradoxes of Disclosure and Trust. Collaboration needs individuals to reveal themselves and trust each other before they have had experiences to reinforce acceptance (Donnellon, 1996; Smith & Berg, 1987). Donnellon (1996) describes the requirement for vulnerability in collaborative work using Smith & Berg's (1987) notion of paradoxes. This notion views paradoxes—a source of tension—as central to collaboration. Individuals need to disclose their abilities and limitations so the group may define itself (Smith & Berg, 1987). Individuals also need to both provide and accept critical feedback to gain self-knowledge and improve (Smith & Berg, 1987). Collaboration requires individuals to bring their unique perspective and skillset, but those differences must also be integrated into a shared approach and understanding (Donnellon, 1996). This study will use Smith & Berg's (1987) paradoxes of disclosure and trust to analyze how participants experienced this tension. Notably, these paradoxes were described as "particularly acute" in individuals from different disciplines who are working together for the first time or are integrating new members (Donnellon, 1996).

As partners undertake their inquiry into arts integration, their specialized disciplinary training and knowledge—or conventions of practice—can result in competing perceptions and interpretations. The tension between individual conventions is what creates conflict and the opportunity for growth. Moving beyond one's own conventions is central to a CAPE

collaboration, and this can be a risky and messy process; as CAPE staff explain, “I think that by definition collaboration requires a lot of yielding, which is hard for humans to do... in terms of CAPE, I think that some of the best work is a little bit messy because of that” (*Interview*, 050817). As Donnellon describes, “these conventions of practice tend to crystallize into ‘thought worlds’, systems of meaning of such intrinsic logic and coherence that professionals tend to interpret their work primarily in reference to those meanings” (p. 9). When group members practice trust, their counterpart’s disciplinary expertise and conventions of practice are accepted. This allows differences to be integrated and for increased sharing of roles. When members practice distrust, their counterpart’s expertise and conventions of practice are judged and called into question. As CAPE staff describe, the distrusting behavior can allow for an expansion of understanding and possibilities:

And then you’re dealing with an artist whose idea of material is in the non-material realm. When those things collide, I think that describes... generative frictions... In these collaborations, your expertise is question, in these collaborations, there’s a point where you kind of think ‘Do I know this or do I not know this?’ and ‘Is the point to understand this how I thought I [understood] it, or is the point to make a connection with something else?’... So, I think the way generative friction works in the transforming part of a collaboration is to... actively pursue this contestation of how things come together, because you have two people working in different ways, or understanding something similar, or trying to understand something in two different ways. (*Interview*, 040417)

Members must be willing to disclose their conventions of practice, risk judgement from counterparts, and engage in critical feedback processes. Being vulnerable allows expertise and disciplinary approaches to both be re-examined and understood by counterparts, which contributes to the development of collaborative teaching skills and refined practices. As CAPE staff describe, “...within the collaboration, with partners who work in two totally different fields... one starts to question your expertise in something and once you start doing that you can start to access a way... you access this path for learning that you will somehow, whether you’re conscious of it or not, you’ll open up that learning process with that person” (*Interview*, 040417). This study will use the potential within the paradoxes of disclosure and trust for participants to develop organizational knowledge. In CAPE, this is a continual process: “...I hope [partners are] simply just very conscious of what is co-teaching...that they just don’t take it for granted and after couple years they’ll probably settle into some kind rhythm of it, but they’re still questioning it...” (*Interview*, 051617). As such, the analytical approach will have a more positive view of distrusting behavior as it can lead to questioning and understanding, whereas trusting behavior can leave differences unexamined and maintain the status-quo.

Uncertainty. The concept of uncertainty is a simple one. Yet, the tension between certainty and uncertainty is fundamental to how collaborators negotiate whether to establish closure on a decision or maintain uncertainty to seek more knowledge (Kruglanski & Webster, 1996). Within CAPE’s pedagogical approach is a belief system respecting ownership, the

process of inquiry, and a trust in participants' ability to embrace the discomfort of uncertainty. Across CAPE staff, there is a shared belief that the most meaningful learning experiences, much like art, will be uncomfortable and require individuals to re-examine their perceptions in order to gain new understanding. The concept of uncertainty resonates throughout collaboration and within CAPE's pedagogy. Professional development guides participants to design their arts integrated units around inquiry questions worthy of deep exploration, where both the learning path and outcomes are unknown. For these reasons, "You can't decide to be uncertain together and be vulnerable and have courage... if you have to show courage it means you are taking some kind of risk, without feeling some conflicts and contradictions..." (Interview, 051617). Leavitt (2006) also asserts that the emergent nature of inquiry in collaborative teaching is a defining feature which requires vulnerability. Landy describes how collaborators must take risks in an emergent process: "It's vitally important to let ourselves be wrong, to let ourselves be challenged. We have to let ourselves get into those situations where we might fail and where maybe no one is going to come up with an answer..." (in Leavitt, 2006). Maintaining a degree of uncertainty leads to better learning and artmaking:

People who come to collaborations with no sense of doubt generally are not good collaborators... or maybe that's harsh, you've got to work harder to get them towards either a sense of doubt or comfort with doubt, same thing with mystery... the unknown, not knowing, I think you always have to work towards not knowing, or the unknown, and being comfortable with that and being comfortable with mystery, but you have a challenge if your collaborator feels like everything must be known and is known and I have no self-doubt, that's a real challenge... (Interview, 051617)

When people really, students and teachers, take this leap forward into the unknown and really try to work collaboratively it's going to make for new teaching, and I think better or deeper, but certainly new teaching. It's going to make for new learning processes, and I think deeper and more sustained and more resonant, but no matter what a new kind of learning for them. And it's going to make for a new kind of artmaking in that situation, which I think will be inherently more interesting artmaking... (Interview, 051617)

To me, there is a mix of certainty and uncertainty that each complements the other. It stimulates the thinking and, in turn, it stimulates making, both. And that in turn makes for a deeper richer product... it makes for a deeper richer process and final product... that's inherent in so much artmaking and it should be part of this collaboration, I think it should be part of teaching in general, but I think it should be part and parcel to this type of collaborative teaching. (Interview, 051617)

Research on the social phenomena of knowledge construction has shown a myriad of motivations which favor certainty, or cognitive closure and "freezing" (Kruglanski & Webster, 1996). CAPE staff and Kruglanski & Webster (1996) highlight how specific conditions (such as limited time) and larger systemic norms privileging certainty can inhibit the likelihood for

participants to embrace uncertainty. Limited time creates an urgency for closure—or *seizing* on an early idea—with decreased openness to less obvious, deviant ideas (Kruglanski & Webster, 1996). In related studies with conditions leading to a high need for closure, individuals preferred voices of confirmation and consensus (Kruglanski & Webster, 1996). However, confirmation and consensus are antithetical to the arts. As Maxine Greene (2001) reflects, “It is not uncommon for the arts to leave us somehow ill at ease, nor for them to prod us beyond acquiescence. They may, now and then, move us into spaces where we can create visions of other ways of being and ponder what it might signify to realize them” (p. 27). Greene’s description of an emancipatory pedagogy in arts education underscores the importance of allowing uncertainty and tension to drive curriculum. CAPE staff characterize how arts integration can challenge the dominant educational methodologies and systems:

I think what [arts integration] does is it brings back or pulls it away from a strictly institutional, prescriptive way of learning, because it gets at other ways of learning, other ways of accessing information, and I say that because it allows for working in different ways and different ways of thinking that one wouldn’t consider being part of different disciplines. There’s something inherently interdisciplinary that’s actually at the core of education. (Interview, 040417)

We say... take risks and you have to stop looking at things in a linear, structural, manner and abstract experiential [when] their main employer, CPS, they have all these mandates from state and those things are a little higher on priority list than what we’re trying to teach them about arts integration. (Interview, 041017)

In Summary. This study will use the following theoretical propositions as an analytical framework to describe the phenomena of conflict in collaboration:

- When an inquiry results in values and norms changing it is called *double loop learning*, and one critical factor which can impact learning is how one responds to conflict (Achinstein, 2002; Argyris & Schon, 1996).
- Dialogical practice and critical reflection are essential for a group to learn (Achinstein, 2002; Argyris & Schon, 1996; Cranton, 1996; *Interview*, 040417; *Interview*, 041017; *Interview*, 051617; Perkins, 2003).
- Disclosure, trust, and uncertainty are sources of tension within collaborations which require vulnerability and lead to learning (Donnellon, 1996; *Interview*, 040417; *Interview*, 041017; *Interview*, 050817; *Interview*, 051617; Kruglanski & Webster, 1996; Leavitt, 2006; Smith & Berg, 1987).

Analysis

Background

Baldwin Partnership¹

The School. Baldwin Elementary School serves over 300 students from Pre-Kindergarten to 8th grade. The student demographics are diverse: 57.1% Hispanic, 22.4% White, 14.9% Black, 4.3% Other, and 1.3% Asian. Over half of students are low income, over a fifth are diverse learners, 15% are limited English speaking.

The Partnership Members. The Baldwin Partnership was comprised of Liliana and Mira. Liliana had been teaching visual art for five years, three of which had been at Baldwin. In her role at the time of the study, she said she had “built [Baldwin’s arts] program, I guess from the ground up, and it’s mostly revolved around arts integration and role of artists in society, which are two very broad terms, but basically means helping guide the students to see how they can use art to transform communities, their lives, their spaces” (*Interview*, 031617). She regularly engaged other teachers in arts integration projects, worked with groups of students one hour a day on reading and math interventions, and sought out grants and collaborations with outside organizations. Liliana went to a renowned, private art school for undergraduate education, studying studio art and arts education, and describes her personal art practice as multidisciplinary. Mira was just finishing her Masters of Fine Arts at the same school. She had worked as a teaching artist in museums and community centers for ten years. Mira had experience teaching a variety of art practices to a range of ages and backgrounds. In her arts practice, she taught self-defense and movement-based art.

The Project. In this second year of their partnership, Liliana and Mira were interested in exploring ideas of strength and resistance through movement-based art. As Liliana described, “Our inquiry is... how can you document what it feels like to build strength, and for [students] strength might mean physical strength or emotional strength... that’s a question that’s very personalized...” (*Interview*, 040617). Working mainly with one third grade class, Mira led students through simple steps to construct collaborative gestures and sounds. The project culminated in collaborative performances using school objects as props in various areas of the school site, such as hallways and the playground. A final video was created using footage from performances and music tracks Mira created sampling student sound exercises.

Urban Skills School

The School. The Urban Skills School (USS) serves 265 students from 16 to 22 years old with special needs. The school demographics are 67.2% Black, 27.9% Hispanic, and 4.9% White. 91.7 % of students are low income and 10.2% speak limited English.

¹ All schools and names used are pseudonyms to protect participant confidentiality.

The Partnership. The USS Partnership was comprised of two teachers, Sara and Fiona, and two teaching artists, James and Rebecca. Sara had been teaching at USS for 13 years, and at the time of the study was in her seventh year of teaching visual art. She values social and emotional development in curriculum and views art class as a therapeutic place for students to cope with and manage their emotions through self-expression. In their first year, Sara was on leave for most of the project. Fiona had been teaching at USS for six years, four of which had been teaching science. She expressed that she has always been interested in how students communicate through art and had previously taken an intensive professional development course on arts integration. James is a multidisciplinary artist and had taught college level courses, but “working in a teaching artist context is new.” (*Interview*, 031317). Rebecca is a visual artist who had worked on developing art practices with adults who have developmental disabilities for ten years. She had collaboratively designed courses before, but had never co-taught.

The Project. The members of the USS Partnership were interested in exploring ideas of loss and community through clay sculpture. Their inquiry question was: How does one respond to an absence in a community and how does the community adapt? (*Digital Portfolio*, 2017). The partners combined a science and visual art class in one classroom. The students were guided by partners to draw personal symbols and transfer the drawings onto clay forms. Students voted on decisions about the sculpture’s size, shape, and display site.

Converging and Diverging Structures for Supporting Collaborative Learning

The Baldwin and USS Partnerships established contrasting routines for processing their collaborations. Dialogical practices and critical reflection provide opportunities for partners to monitor their shared understanding and generate new possibilities.

Converging Structures. The Baldwin Partnership developed an open dialogical and reflective practice. As Liliana described, “[Mira] and I both have a pretty quick and rapid-fire communication style so we don’t really need to sit for a really, really, really long time... We have the same style of making quick decisions... [and] being responsive and we’re on the same page a lot which is good.” (*Interview*, 040617). Their ability to coordinate attention and ideas during instruction was likely influenced by their similar backgrounds—they are both artists and were trained at the same institution. Their parallel backgrounds and related conventions of practice meant they required less disclosure and integration. During observations, the partners regularly made collaborative decisions about activities and coordinated their thoughts about how the activities were unfolding. Their generative dialogic practices and shared background likely created a foundation for strong connectedness (Perkins, 2003). The Baldwin Partnership was less encumbered by their schedules and debriefed for ten to fifteen minutes every day together. During interviews, it was clear the partners had processed high-impact moments together and tended to focus reflections on whether their decisions were responsive to students. In describing

their approach to assessment, Liliana shared that they think more about assessing their instruction and ability to offer avenues for students to find a personal connection to the content. As such, the partners adapted plans to increase relevance with activities, such as telling personal stories. The partners' communication structures served to reinforce their conventions of practice and converge their attention on student responsiveness.

Diverging Structures. The USS Partnership tended to enact similar practices in subgroups, and required the coordination of four individuals with less similar backgrounds. The learning environment was configured to increase dialogical practices and critical reflection for students, but may have reduced interaction between partners. In the art classroom, there were four large tables students sat around, with one partner supporting learning at each table. This created a grounding effect for James; he felt he was able to establish rapport with students and better understand their needs. However, it diverged their attention from one another. There were schedule changes, strategies, and specific timing decisions to coordinate. Partners reported to be “communicating and following up”, “always critical”, and “always tweaking what we’re doing.” (*Interview*, 032717). For communication beyond quotidian coordination, the partners tended to communicate in subgroups of teachers and teaching artists due to scheduling realities of the school. With these configurations, each subgroup was primarily engaging with the partner they had the most similar conventions of practice with—which meant there were less opportunities for partners to share and understand differing perspectives and conventions. CAPE professional development helps facilitate this, but as James described: “Not all for us were there for the second [PD session] that makes a huge difference because there's... no other opportunity other than the ones we create for ourselves to have a conversation. ” (*Interview*, 051917). CAPE also supports critical reflection, with emphasis on the final session of the first year and first session of the second year. Before the first session of the second year, USS partners used a digital document to process their reflections and develop new strategies. These reflections impacted their strategies—starting earlier in the year and scheduling class sessions with closer proximity to increase continuity—and resulted in single loop learning (*Digital Portfolio*, 2015-2016). However, partners held differing perspectives about the deeper values underlying their projects and were not explicitly aware of the differences; these different perspectives are explored in more detail in the following sections. Reflecting after their second project, James shared:

I think if I had been more cognizant of the position we were in last year, and understanding where... Fiona and Sara felt about that... [it] would have been ideal... What I had pitched and what I would've loved to do was to meet outside of the context of the PD and debrief on what happened last year and what we can do to improve this coming year, and we had traded a google document around, ... but it's not the same as meeting face-to-face and that it's in a comfortable, neutral environment where we can just hash it out. I wish I had been able to facilitate that better... (*Interview*, 051917)

Engaging in critical reflection is challenging; one has to solicit conflict, activate dissent, and enact mechanisms for open debate (Achinstein, 2002). With limited time and opportunities, the USS partners tended to hold an avoidant conflict stance for tensions by seeking harmony, offering low-level dissent, and compartmentalizing conflict in subgroups (Achinstein, 2002). Their avoidant conflict stance didn't mean no learning occurred—tension was generative and informed several key project changes—it simply meant partners went about decision-making without shared understanding.

Role of Conflict in Collaborative Learning: *Tensions of Disclosure, Trust, and Uncertainty*

How partners responded to tension revealed how conflict drove critical collaboration and learning. The concepts of disclosure, trust, and uncertainty are interrelated and, accordingly, there are significant thematic overlaps in the following sections. These concepts are used to describe how partners either embraced or avoided conflict by disclosing their perspectives, testing each other's' and their own thinking, and continuing to investigate their understanding through an inquiry process.

Disclosure: How Intrapersonal Conflict Can Propel Learning

To review, individuals need to disclose their distinct perspectives, limitations, and provide and accept critical feedback in order for a collaboration to define itself, improve, and attain a shared understanding (Smith & Berg, 1987). For CAPE, it is vital for partners to start their inquiry with “who you are as human being and what you believe in and what you're curious about” (*Interview*, 051617). Additionally, an inquiry continues to evolve by partners disclosing “their own struggles and mysteries with the content” (*Interview*, 051617). This study found intrapersonal conflict— or the individual questions partners were grappling with— to significantly shape projects and create a powerful context for inquiry.

Baldwin: Responsiveness. Conflict initially manifested through individual inquiry for the Baldwin Partnership. Both Liliana and Mira were undertaking inquiries into their respective practices. Liliana was continuing her investigation of how to best meet the needs of her students. Mira's inquiry was how to explore her artistic practice—which mirrored the partner's Co-Lab unit's inquiry question— in the role of a teaching artist. Both of these individual inquiries led to organizational knowledge which ultimately shaped a high quality project.

A few years ago, when Liliana told a student their art had to be perfect, this student challenged her with the simple, and familiar, question of “Why?” This began her shift away from a primary curricular focus on developing art technique. As she described:

I could get [students] to draw the most detailed, perfectly done 3D drawings or super realistic stuff. They hated it and they hated me and I basically choked this art out of them and everyone else [said] ‘This work is amazing! They’re so good at this!’, but they were miserable because they don’t want to do that. (*Interview*, 040617)

She was experiencing a conflict between the value she placed on technique and the belief that art could—and should—be transformative. Had Liliana approached the discrepancy between her intentions and her students’ experience with a closed conflict stance, she likely would have continued a rigid focus on technique. Instead, her reflection resulted in double loop learning as she began to increase student choice and cultivate personal connections between students and artmaking. Although Agyris & Schon (1996) describe double loop learning as a change in practice or belief resulting from an inquiry, they do not discuss the length of such inquiries. It is reasonable for inquiries of substantial significance, such as Liliana’s, to be sustained and continual, even lifelong. Accordingly, her inquiry into meeting student needs the year of the study resulted in another revelation underscoring the importance of student choice:

I learned something really major about the students I didn’t realize before, it flipped the script on what I thought they needed or wanted... [My student teacher] is doing a lesson on art and social change and she asked the kids ‘If you could change one thing about the school what would you change?’ and they were like, ‘Nothing, all this school has been doing is changing. We just want it to stay the same.’ And I [thought] ‘Oh my god.’ because I’m the one that repainted the entire hall, the entire school. So I was sitting there [thinking] ‘Oh my god, I thought I was doing a good thing, but the kids they’ve had so many principals in four years, they’ve seen so many teachers go, and on top of that the school looks completely different now.’ (*Interview*, 040617)

Again, Liliana maintained an open conflict stance instead of immediately defending past decisions. She considered her evolved pedagogical model begins with the students and their context. Part of Liliana’s inquiry into understanding her students included a three hour professional development session on trauma-informed practices. Liliana shared how this session impacted her practice during the Co-Lab unit: "Using situations that come up during this lesson, because it is all about strength and security [and] building a safe classroom environment, there’s a lot that I’m handling now with conversation and more restorative practices that before I would just fill out a write-up for a kid, but now if you’re asking kids to be vulnerable it could trigger past trauma...." (*Interview*, 040617). This shift in thinking enabled her to be responsive to student needs instead of perceiving their behaviors as untethered disobedience. Overall, Liliana’s individual inquiry—and trauma-informed practices—allowed her to create a safe space for students to better engage in the unit. Her inquiry also drove the partnership to attune their process to how students felt moving and responding to each other. In this respect, Liliana’s inquiry resulted in double-loop learning.

Early in their implementation, an incident occurred which led Mira to assert her role as a teaching artist with more confidence. As Liliana explained, before their class session began, “a

teacher berated this kindergartener in front of everyone” (*Interview*, 060917). Neither Liliana nor Mira confronted the teacher at the time, but the conflict between beliefs about discipline was disturbing to them and set the tone for their inquiry. For Liliana, this incident reinforced her commitment to use trauma-informed disciplinary practices. For Mira, this pushed her to critically reflect upon her role—and moral obligations—within the school as an external partner. As she described:

Having the situation with that teacher happen within the first week I was here... I was talking to someone later and they were like “If that happens again... you are in charge you have to say excuse me and even if... you are new in a school you have to have that”, and I was like “Oh, you’re right!” All these situations, whenever something came up, I had to [say] “Excuse me, excuse me.” and that’s something that’s a little bit new and sometimes uncomfortable because you’re not in your space... you’re a visitor, but you still have to command a certain amount of authority. (*Interview*, 060917)

Mira’s critical reflection on the incident enabled her to shift how she conceived her role. She began to trust herself—and her role as an external partner—to confront and manage various behavioral situations (*Interview*, 040617).

Although both Liliana and Mira individually developed knowledge through separate inquiries, their new understandings informed the larger project, because they disclosed how their perspectives were evolving and shared the beliefs to center their work on the students.

Meeting Student Needs. Both partnerships began planning their inquiries with a need currently not being met through curriculum. Partners disclosed these ideas and this resulted in centering inquiries on their students’ context. This aligns with how a member of CAPE staff views the fundamental purpose of education:

In my mind there’s multiple dimensions that address cognitive, emotional, spiritual, physical aspects of the human being and that happen at multiple life stages. And education plays a role in all those areas of human experience and all phases of the life cycle... Education’s purpose, at any one of those points of time and at any of those points of interest, education’s purposes is to... improve an individual or group’s experience. Education’s... ability to adapt to their context to... be generative and to contribute to their own life or greater good of society. (*Interview*, 050817)

For Baldwin, this manifested in ideas about strength and enabling students to feel ownership over their own bodies. For USS, this took the form of developing a sense of self and processing loss as a community.

Baldwin: “How We View Our Bodies Being Our Own” (*Interview*, 060917). The Baldwin Partnership found an intersection to explore between their individual inquiries. Liliana’s investigation into meeting student needs complemented Mira’s art practice of exploring strength—especially for communities who have been marginalized by structural oppression. This

intersection is particularly relevant in the context of a public school and for students of color—bodies and voices tend to be tightly regulated for both. This inquiry addressed tensions within larger systems impacting students, and the inquiry was, as a CAPE staff member shared, “the work being the critique of compliance...it’s implicit not explicit” (*Interview*, 051617). The partners aimed to disrupt expectations about what movement and sound could be and “[used] the term movement as resistance” (*Interview*, 060917). Mira wanted students to be able to behave in ways they were not typically allowed to in the classroom environment, as she described, “I think... gesture and dance is fine and good and important, but I also wanted there to be a connection between multiple parts of the body and multiple types of release... and I think movement in the classroom is disruptive but also talking too much is disruptive.” (*Interview*, 060917). In this sense, Mira’s aesthetics were an implicit dissension of the Cartesian mind-body dualism, which is particularly apt given the reduced time for recess and physical activity within public schools (Ramstetter, Murray, & Garner, 2010). Recess—like the free play found within Mira’s activities—have been found to promote children’s “cognitive, social, emotional, and physical functioning” (Ramstetter, Murray, & Garner, 2010). Additionally, by couching traditionally disruptive school behaviors within acts of resistance and release, Mira also challenged the purpose of compliant behavior within the larger context of structural oppression. This required Liliana to allow students freedom to engage in the content—and potentially dangerous behavior like jumping over chairs—because she did not want to be “inserting fear into their performances” (*Interview*, 060917). By being an external partner, Mira was not constrained in the same ways as Liliana; Mira perceived that her unique position allowed her to both not have fear about safety and show students a different way of being. By using movement and sound as resistance, Baldwin students were guided to better understand and be in their bodies. The project allowed both partners and students to “create visions of other ways of being and ponder what it might signify to realize them” (Greene, 1991, p. 27).

USS: Memorializing Absence as a Community. At USS, many students leave in the middle of the academic year due to graduation, aging out of education entitlement at 22 years old, or passing away. When thinking about their inquiry for year two, Fiona and Sara disclosed to their partners how strongly these losses impact them and their students. In their first year of Co-Lab a student passed away, and the teachers reflected they typically do not process loss as a staff and considered how it must feel to not process loss for students. As Sara described:

We know how we feel when [a student leaves or passes away], so we really wanted to focus in on the students having time to process and reflect and share what those people meant to them. And our focus was space— what happens with that space or emptiness you feel... we really tried to focus on when [students] graduate, when [they] age out, how do [they] want to be remembered. (*Interview*, 042117)

Building from this context, the teaching artists, James and Rebecca, layered in the conceptual underpinnings for art— including presentations and related discussions on memorials and

symbols. In the course of the project, several students aged out of the school and this created a striking opportunity to talk about presence and absence. The partnership challenged the norm of not discussing loss and normalizing absence. They were able to “miss [students who left] aloud a lot more than we do usually” (*Interview*, 042117). Students finished projects for those who had left based on remaining drawings. When they hung final pieces up, the students would say “here’s [Dulce’s] and here’s [Tim’s]” (*Interview*, 042117). Reflecting on how she viewed the outcome, Fiona shared: “To actually have [students who have left] continue to be a part of our class is what we intended to feel through the art project, but then it actually happened through the art project and that was the biggest thing to me...” (*Interview*, 042117). In exploring tension in the norms of not processing loss at the school, the USS partnership underwent double loop learning by creating a new ritual the teachers planned to continue.

Tensions in Trust

The most impactful area of trust was found in how both partnerships gave more ownership to students—creating deeper learning and more resonant art experiences. Moreover, both partnerships gave substantial thought into how to cultivate an environment where students could feel safe engaging in the content and with each other.

Baldwin: Embracing Conflict as Part of the Content. Heading into the unit, the Baldwin Partnership anticipated there would be the kind of teasing and giddiness one might expect from third graders watching one another improvise movements. This was due both to the age and the content—movement-based art is not dance and should look unexpected, or at least different. The partners trusted students would be able to engage in the content more deeply through experiencing conflicts in expectations about movement. As such, the partners considered ways they could facilitate this process and build trust in and amongst the students, or as Liliana remarked, “The activities we are doing are things they’ve never done before. If [students] don’t feel safe, if they don’t feel comfortable, then they’re not going to take that risk... there has to be a lot of trust built” (*Interview*, 040617). They provided supports and fostered an environment where students could allow themselves and one another to be vulnerable improvising movement. In order to establish a safe environment, Mira considered it to be important to for her “own body to be at risk” and for there to be a disruption in the teacher and student hierarchy by allowing students to see her be “goofy” and “do ridiculous things with [her body].” (*Interview_060917*). The partners also planned for students to mostly manage their own collaborative groups, which included experiencing the consequences of their choices. By understanding conflict as an integral catalyst for student learning—and by using restorative practices—the partners created conditions for deeper learning.

Accepting and Confronting Student Conflict. During one exercise, Mira described how "[a student] just said something and so [the other students] all started laughing, but it was not necessarily meant to be mean, but it is mean if all your friends are laughing at someone else... it's so much more complicated than these are the bad kids and these are the good kids" (*Interview*, 060917). Even though the student's intention was not malicious, the impact on the classroom environment was antithetical to the type of safe space the partners intended to create. Mira faced the incident with an embracing conflict stance; she directly confronted the idea that there is no right or wrong way to move with the entire class without defining students with a "good" and "bad" dichotomy. Liliana recalled how confronting the conflict affected both her and the students: "[Addressing the incident] was good because after that the kids were a little bit more free and open with their movements. But for me personally, it was very liberating and I learned a lot... it was all process based for that entire period of time... and it allowed me to kind of step back and reflect a lot and learn." (*Interview*, 060917). This incident gave the partners an opportunity to use trauma informed practices and led to privileging classroom dynamics. The partners and students developed a new understanding about the connection between how one feels and how they perform. Reflecting on the final performances Liliana considered student progress: "I felt very proud of the students because it felt like they totally and completely understood the movement and why it was important... Their performances were so intuitive to them ... They were comfortable, they weren't insecure, they weren't goofing off... they seemed very sophisticated..." (*Interview*, 060917).

Allowing Students to Own Their Process. The Baldwin Partnership chose the messier process of mostly allowing students to manage their own collaborative groups, and trusted the approach would lead to deeper learning about movement and communication. The partners found some students, mostly boys, tended to need more support. For the most part, the girls worked with their friends and did not have rigid ideas about technique (*Interview*, 060917). Conversely, the boys tended to exclude friends who did not meet rigid expectations about technique, because they "only wanted to be with people who had excellent skills or skillsets that were cool" (*Interview*, 060917). This led to many students either leaving a group or kicking each other out and arguing. Liliana's approach to conflict was to guide students in reasoning out their options: "you can either stay as a group, work through this, or you can split off, but you're going to have to restart" (*Interview*, 060917). Liliana perceived a lot of the conflict was due to the boys having "a really hard time being vulnerable or showing weakness" and Mira added that "they just get mad" (*Interview*, 060917). In a few instances, the partners did reconfigure groups, which challenged the pattern of students collaborating solely with friends. Mira viewed this disruption to allow for more potentials by shifting attention to questions of "Can that person that you don't like move in fascinating ways in contrast to how you're moving?" rather than if a person could perform a specific move (*Interview*, 060917). Liliana reflected that in allowing the students to self-govern, "maybe their pieces won't be super rehearsed, but they're just learning to talk to each other and that's really valuable." (*Interview*, 060917).

USS: Increasing Student Ownership. The USS Partnership considered how to develop independence and communication amongst students—two critical school-wide goals. Students tend to prefer communicating more with staff than their peers. As such, the teachers were uncertain whether students would engage in help-seeking behavior and critical feedback with each other. Months before the Co-Lab unit began, Fiona brought her students to join Sara’s class once a week to begin establishing familiarity with the ultimate goal of “students [identifying] as one community” (*Interview*, 042117). In year one, the partners used Fiona’s science classroom, but the partners all felt the art classroom was more suitable; the tables functioned better at dividing students and the open floor plan worked better for the students’ needs. As Rebecca described, “especially people who have special needs and proximity issues [being close together] creates anxiety.” (*Interview*, 032717). The partners viewed the groundwork interaction between groups of students and the room change to be critical contributors to a more dialogical culture.

The partners implemented several key opportunities for students to vote on project decisions: the size, shape, and site location. This appeared to be a significant step in trusting students to own their process. For USS teachers, conventions—and as mandated by federal law—are to support students with more structure and to change aspects of how and what they learn based on individualized learning needs. As an example, Fiona considered not having a model final piece to show students as a step into uncertainty. The students began their clay work faster than the partners had anticipated, and Rebecca voiced that it would be a good idea for the class to discuss and debate their approach (*Interview*, 032717). As Rebecca described, “[the discussion] was pretty contentious about the shape of the clay. There were some who really wanted them all to be the same and others who wanted them all to be different (*Interview*, 032717). Based on the vote, the class determined the shape would be a shield and individuals could choose their own size. James reflected on how powerful this process was:

I was surprised by how engaged the whole class was... it just showed that 1) they were engaged and 2) my voice matters, my point of view, my opinion. And then everyone at that point, everyone in the classroom, was asserting themselves in a very direct way which was powerful. (*Interview*, 032717)

During the final presentation, the partners witnessed progress in students communication both as presenters and as active audience members. Fiona perceived this both as a result of the community they had established and that the art held stronger meaning. Typically, students do not give eye contact and offer generic responses, such as “good job”, but Fiona described growth in the final presentations:

Students did have feedback and it wasn't necessarily critical feedback... but at their level, their skills level as collaborators and as communicators, I thought that we got much more of a response

than I thought... [and] we got so much insight into who they are that I've never heard verbalized before. (*Interview*, 042117).

For the teachers, it seemed leaving room for uncertainty in the project required trust in the partners *and* the students. Sara commented on how she saw students handle more uncertainty in instruction:

James would give and little example or Rebecca would show an example and [students] were kind of left to do it, and they were successful. It was really good, some here or there needed a little more guidance, but they really were able to put themselves on paper...cause when that first happened I think Fiona and I both were like "Okay, we'll see where this goes.". You don't really know and it was a good surprise to see what [students] were able to do. (*Interview*, 042117)

As a final reflection, Sara shared the project taught her that students could handle "fewer directions or not as many visuals" and to "let go more and see what happens" (*Interview*, 042117). She viewed this realization as particularly poignant given the school's goal to foster student independence. Fiona recounted how she stepped back as a student was translating her drawing onto the clay and reflected that "especially in something as individual as art is, I think it was important to leave some space." (*Interview*, 042117). In giving the student independence to explore the content, Fiona noticed that "[the student's] culminating design actually represented the prompt" and, even though there was not "continuity of thought" between the drawing and final piece, "it meant more to [the student]" (*Interview*, 042117). Although Fiona agreed that students did well with less structure, she thought the partners could prepare more visuals and add instruction on tools next time (*Interview*, 042117). This inconsistency underscores the complexity of challenging default practices; here, it was not clear what impact this experience had on the teachers trusting students to thrive with more independence and uncertainty.

Tensions of Uncertainty

In this section, tensions between certainty and uncertainty will be explored to reveal how partners negotiated which decisions would be static and which would continue to evolve. In the USS Partnership, partners experienced tension navigating which degree of uncertainty was proximal for all members. Although this tension is characteristic of partnerships (Cattarral & Waldorf, 1999; Waldorf, 2001), a closed conflict stance led to minimal disclosure of perspectives. In the Baldwin Partnership, uncertainty led to a fluid final product and increased student responsiveness. Although both partnerships ultimately found their projects to be satisfying, they had different responses to uncertainty and contrasting levels of shared understanding about their collaborations.

Certainty in the USS Partnership

The Teeter Totter Between Process & Product. The main conflict experienced by the USS Partnership was the tension of differing levels of comfort with uncertainty. This tension manifested in how they managed a primary orientation towards either the inquiry process or a final product in both years of their work together. Research has shown this to be part of a fundamental conflict in arts integration partnerships due to the differences between conventions of practice for artists and teachers (Catterall & Waldorf, 1999; Waldorf, 2001). In the Imagination Project's interviews, teachers were described as having conventions of practice oriented toward boundaries and structure while artists were described as oriented toward boundlessness and unpredictability (Catterall & Waldorf, 1999). Reflecting on this tension, James shared "the challenge obviously becomes how can we sort of do this... it's almost like a teeter totter of the artists are on one end and the teachers are on the other and you're just trying to keep it level... and that's not easy." (*Interview*, 051917). Within partnerships, Catterall & Waldorf (1999) describe how "the teacher must learn to live with some unpredictability brought by the artist; the artist must learn to accept the necessary structure brought by the teacher" (p. 60). CAPE's philosophy is to provide opportunities for participants to disclose and understand each other's conventions. Rebecca described how she perceived PD sessions to reveal the artistic process for teachers:

The content in PDs parallels the process with an artist's working process, and that's really interesting for me, and I think that's good reminder for me, and it's good for teachers. That might be a different way that they're not used to working, an artist's studio may not be collaborative. [The PD's] kind of get everyone on the same page... we're not going to just make a mural or something that's pretty, we're really trying to blend the content of the class and sharing. (*Interview*, 031317)

How partners chose to navigate the tensions between their conventions determined their ability to learn from them.

In the first project, the partners reported to have a process orientation and did not expose opinions on this position together. The partners were also trying to determine what their own arts integration practice might be in relation to perceived CAPE expectations; Rebecca shared: "CAPE just really stressed process... so, I think we erred on that side almost to a fault" (*Interview*, 042117). Tension in the first year was never explicitly addressed, as she described:

[It] was something I could sense last year a little bit, but we didn't talk about. I sort of felt it was too loosely process-oriented, and maybe I felt [the teachers] wanted something more permanent. It's not like anyone said this isn't working... it's something we sort of learned through experience we need to add more structure to this. (*Interview*, 031317)

Although Rebecca noted the partners implicitly learned their approach to arts integration required more structure, they did not discuss how a process oriented practice impacted teaching

and learning. Partners also held different perspectives about outcomes in the first project. The teaching artists viewed their first project to have had incremental, small projects with an “organically and intuitively” developed final piece (*Interview*, 051917). Whereas Fiona perceived:

Not having an end result necessarily in mind, it felt throughout the process we still didn’t get there to having a final piece and so this year we kind of amended it to say we need to have some sort of vision. (*Interview*, 042117)

Unintegrated conventions resulted in different interpretations. Moreover, experimenting with new practices—process and inquiry based learning— can be uncomfortable; or, as Fiona shared “it is just opposite of how we think, as teachers, of knowing this is where we want to be and working backwards to get there” (*Interview*, 042117). These differences are what CAPE describes as central to collaboration: “when the collaboration starts to open up that path of learning that they can start having dialogue across.” (*Interview*, 040417). To acknowledge alternative views and practices creates the opportunity for collaborative learning (Achinstein, 2002). In this instance, USS partners continued the pattern of diverging communication structures; Fiona and Sara talked about their vision for a final product and aligned their unit timelines before the first meeting. Without processing their tensions together from year one, the partners fell into a tacit product orientation in year two.

When the second project was being planned, the partners seized upon the medium and idea for a final product early in their planning—shifting their orientation away from the process and the teaching artists into a less central role. Sara’s area of expertise was clay and she felt confident sharing her knowledge, including what techniques students could manage. The other partners seemed to think using the medium of clay was successful and thought Sara skillfully shared her knowledge. However, situating Sara as the leader for teaching the medium—and facilitating the process— impacted how James viewed the role of the teaching artists. James voiced concern that they were “putting the cart before the horse” and felt predetermining the piece left the teaching artists in a marginalized role (*Interview*, 051917). With the final product already planned, James found the purpose of collaboration and inquiry to be unclear (*Interview*, 051917). This conflict captured an essential quality of art, which is likely why it significantly impacted James. As Greene (2013) wrote:

The possibilities of the work of art must be central, must be honored. If we can honor the visual, poetic, and gestural possibilities in the arts, we then can begin to understand the openings made accessible by living in the questions.

Although James voiced his concerns, it was not clear whether his perspective was heard or not direct enough to be understood; reflecting on the project, Fiona shared “it was a little bit more structure this year which I think we liked, and the students liked, and Rebecca and James liked

based on our conversations...” (*Interview*, 042117). Partners may have been amenable to more certainty early in the process, however, it is critical for collaborators to revisit perspectives throughout their work together because ideas should evolve (Perkins, 2003). With that in mind, James reflected how the partners underwent a shift in process “from this intuitive to really directive... without really being aware of it or talking about it” (*Interview*, 051917). This was a missed opportunity to engage conflict towards defining their own arts integration practice, which would have been double loop learning. By not having clear disclosure or understanding across partners, they created an environment where the group identity and individual membership were unclear (Argyris, 1996; Smith & Berg, 1987).

Not all members of the USS partnership perceived a lack of uncertainty in the project and the teachers viewed the teaching artists’ expertise as critical to the project. Fiona reflected that the final piece “turned out a lot different than what [they] thought and there was still so much movement for students to follow different inquiry paths” (*Interview*, 042117). The teachers may have viewed there to be more uncertainty in the project compared to their typical practices; students with special needs are often supported with more structure, accommodations such as visuals or more time, or modifications to the curriculum including what is expected to be learned. Additionally, Rebecca noted that in the second project they “[had process] but it helps [students to] have it more clearly defined, it helps everyone be on the same page even though we’re still mindful along the way and experimenting with learning” (*Interview*, 031317). Although it was unclear how Rebecca felt about the amount of uncertainty at the end of the second project, her experience working with people who have disabilities may have increased her pliability toward structure. Additionally, James and Rebecca led in teaching the conceptual underpinnings of the final piece—where the individual clay shields would collectively serve as a community memorial in a site specific installation—but this plan fell apart as described in the following section. Lastly, Fiona listed several occasions where the teaching artists pushed students—and her —to further consider the possibilities in their art:

To be honest, when I saw some of the work I said ‘That’s awesome... I love that you have all the symbols figured out!’ and Rebecca came by and pushed [the student] to another level and was like ‘Ok these are great symbols, but how can we integrate it into one object?’ and [they] were playing with different ideas... (*Interview*, 042117)

A student just loves to poke holes in things, and her entire tile [was] holes so [the teaching artists] recommended she do one wash with a light color and then do it with another one so the holes pop more. Just really taking the students skills and work and amplifying it... and those were unplanned. (*Interview*, 042117)

In thinking about how to address these tensions moving forward, James had a developmental perspective on their arts integration approach and acknowledged a more embracing conflict stance would be required:

Ideally for year three, that there is... less tension in a way. I think I described earlier, just this tension of what are we doing here exactly and are we valued. To have real, transparent conversations about that up front and then having another really active conversation of ‘Alright, now we know this is the way Rebecca and I are approaching things, and now we know that this is the way that you guys would like to approach it, now that we know this, let’s have a real conversation about how we can get this to work... together.’ And clearly that’s not a conversation we could’ve had in year two. (*Interview*, 051917)

He shared that despite the tension, relinquishing his own position was sometimes necessary to collaborative group work (*Interview*, 051917). Although that observation is valid, individual positions should be discussed and debated— this is what progresses a partnership’s inquiry into arts integration practice.

Impacts of a Unilateral Decision. At the end of their project, the USS teachers were confronted with a problem, seized on a solution, and made a unilateral decision. The choice to not include the teaching artists in the process resulted in feelings of distrust. The partners had taken a site tour of the school, discussed areas students were interested in, and took a vote on a final installation site. As James characterized:

We were going to hang it in that stairwell against one wall, and there was a drop ceiling and we were hoping to work with that ceiling to hang all the work so that it would sort of cascade down, almost like they were raining down in a sense, so that we’d have all these singular pieces, but the importance is that they all come together and make the piece which underscores the community aspect of it. (*Interview*, 051917)

The partners did not consider how they would need sanctions to execute the installation. With one week left, the teachers consulted with the principal and school engineer. Due to the size and weight of the pieces, the installation plan was not approved. Sara and Fiona considered alternatives and seized upon a display case in the front of the school to exhibit the final pieces. Although the teachers had wanted more of a permanent structure, they were satisfied with this alternative and felt there was limited time to explore other options. They wished the teaching artist could have been a part of the conversation and “did not want to let them down” (*Interview*, 042117). Sara shared “ I don’t think it was even tension, it was just disappointment a little bit on the artist’s end because they had this vision” (*Interview*, 042117). Although the teaching artists were disappointed, more importantly, they felt frustrated and distrustful to be left out of the resolution. The unilateral decision reinforced the doubt James had about his role as a collaborator: "Is what we’re doing being valued, and not just the whole project, but the things we bring to the table?" (*Interview*, 051917). By changing the site to a display case, the teachers unintentionally removed the conceptual groundwork the teaching artists had established; “it highlighted the individual artist instead of group itself.” (*Interview*, 051917).

The teaching artists contacted CAPE, and a staff member discussed the conflict with them and later facilitated a conversation between all partners. James shared that he felt understood and supported, especially when the staff member emphasized how their conflict was not uncommon. Reinforcing the CAPE methodology of embracing conflict, the partners were encouraged to have an additional meeting with all members to process what happened. Based on that meeting, James was able to dissolve some of his distrust and could understand how the teachers have to balance a lot of priorities. James also considered how he evolved his measure of quality through this project:

Basically through all these obstacles that we had, learning we can still get through those and work with the students themselves and get to a result that maybe as artists we're not totally satisfied with, but in the end is important and meaningful to the students. (*Interview*, 051917)

The teachers also learned more about the conceptual intention of the piece; as Fiona reflected: "I didn't realize how important, in artwork, it is that the space your art is displayed is just as important as the piece itself, and so we both felt bad letting them down in that aspect" (*Interview*, 042117). The meeting enabled the partners to disrupt the diverging communication structures the regular school year necessitated. Here, they were not only able to process the conflict, they were able to better understand how each other's conventions of practice informed their work. Even though the teaching artists were able to confront the conflict, James noted the partners still needed to have "real, transparent conversations" if they were to continue their work together (*Interview*, 051917).

Uncertainty in the Baldwin Partnership.

Uncertainty for Partners. The Baldwin Partnership designed both their process and final product to have uncertainty. Mira described how their first project involved working with various types of clay, and this led to a focus on material and "a lot more switching back and forth" (*Interview*, 031617). Their second project was more process oriented and this created uncertainty in the content and final product. With Mira teaching movement-based art, she felt "it is a little bit more separated actually" and "it could be more collaborative and I hope we find ways of incorporate more parts" (*Interview*, 031617). The process appeared to be collaborative with both partners in fluid dialogue about the process; Mira was responsible for guiding the development of movement-based art and Liliana was guiding the development of a classroom culture to support vulnerability. However, there seemed to be tension in Mira's uncertainty about how additional content would be used in a final product. Initially, Liliana changed her unit to incorporate figure drawing so students could "use knowledge of the human body with [Mira's] lessons" (*Interview*, 031617). The students did engage in drawing exercises, but the additional tracks of sound added to the final videos was produced by Mira. It was not clear whether tension about content was addressed, but it is notable that Liliana was situated more firmly as a learner. Mira shared how their first project was shaped by structure and included a more clear vision for "how it's going to work", which was likely needed as they experienced about seven schedule

changes (*Interview*, 060917). They had established confidence in their adaptability and, by their second project, they were comfortable designing with a loose and intuitive sequence: “We need to be comfortable with our bodies first, then we need music, and then we’re going to figure out how to actually make this into a thing” (*Interview*, 060917). Mira shared her perspective that “[uncertainty] actually causes us to actually have to learn” by being responsive to needs and listening to student interests (*Interview*, 060917). Additionally, Liliana had the goal to increase her use of open-ended curriculum where students “come to their own conclusion” (*Interview*, 040617). Working with Mira gave her an opportunity to continue this exploration into practices she considered “risky” and “scary” and encouraged her to “leave room for the kids to be uncertain about the subject matter” (*Interview*, 031617; *Interview*, 040617). In this way, both Liliana and the students were challenged to decondition their drive for singular and predetermined outcomes (*Interview*, 031617).

Uncertainty for Students. Much like trusting students to learn through experiencing interpersonal conflict, the partners trusted students would learn through reconsidering the possibilities of movement and sound. Mira believed learning movement-based art required a disruption to traditional notions of “right” movement and used the term “deskill, or more importantly, reskill.” (*Interview*, 031617). Here, reskilling meant guiding students to discriminate between traditional notions and what moves felt “right” for them. A CAPE staff member described how this type of “educative model” can help students become discriminating:

How does a youth develop a capacity to not just blindly accept things or to look at things and assign value?... A child can’t just do all that completely and utterly by themselves, whether that is a parent or teacher or an external artist that there’s a model from which they can respond or observe or absorb or react. That model is a key thing to make that happen. (*Interview*, 051617)

Some students had dance backgrounds and others were drawn to physical feats, both of which Mira considered useful tools but not better than other movements (*Interview*, 031617). A group of students who were trained dancers pushed back on what types of movement were praised, and as Mira characterized: “[it] was confusing to them that we weren’t actually doing dance, we were really appreciating the body” (*Interview*, 060917). For students with dance backgrounds, Liliana reflected the process was more about reaching a point where “they totally understood what they could do... they had their own little lexicon of dance moves put together...” (*Interview*, 060917). Further, she considered it a sign of quality that students were comfortable displaying a wide variety of movements —with no copying (*Interview*, 060917). The sound component provided what Mira considered a “cerebral challenge” because, although we are used to producing communication, we tend to not recognize or consider the “weird sounds” we produce (*Interview*, 060917). In one exercise, students drew a place they felt strong and generated a paired sound. For example, a student drew a roller coaster and matched it with an exhilarating screaming sound. The partners guided students to consider how sound can reflect their own notions of strength. When Mira was recording, not all students were interested in participating,

but were “really surprised” when they listened to the track she made with their sounds (*Interview*, 060917). She considered they may have not understood how their sounds could be translated into music (*Interview*, 060917). Here, the students uncertainty about the project was met with an opening of possibilities; as Mira shared: “So to bring [the finished audio] in... that was really funny. They were like ‘Oh, this is actually... we listen to the radio... we like music...and this... silly thing I was doing, this is music, too” (*Interview*, 060917).

As final reflections, both Baldwin partners considered what they learned about uncertainty from their collaboration:

It makes me feel like as long as you have... a good rapport with students, you’re pretty intuitive with them, and you're able to address things as they come up, you can venture into these more unknown outcome art projects... and not really have to worry so much about what it’s going to look like... It will be relevant and it will be important and impactful. (Liliana, *Interview*, 060917)

If both people trust each other, then this could be like a ride that no one really knows where it goes as opposed to being like ‘This is when it dips, this is when this happens.’ Both people are clinging to each other like ‘Alright. Ok, here we go!’ (Mira, *Interview*, 060917)

Recommendations

The findings of this report raise questions as we consider implications on the professional development needs and potentials of arts integration.

- 1. Consider framing conversations around tensions.** CAPE research has shown the tension between conventions of structure and fluidity to be a fundamental conflict in partnerships. Further, in their study of coordination challenges for creative work, Harrison and Rouse (2014) found both integration and disintegration to be fundamental dynamics. Both partnerships experienced large shifts in their practice related to product/process orientation between year one and year two of their work. These tensions—and the others outlined in this report—provide opportunities for learning, but to what degree do participants explicitly engage in dialogue about them? And more specifically, to what degree do partners discuss how their negotiation of such tensions impacts teaching and learning?
- 2. Increase PD opportunities for active discussion, debate, and critical reflection.** There is no way to force participants into vulnerability, but time was a crucial determinant for participants to engage in these practices. Participants in this study tended to crystallize on key aspects of their project in the planning stage, and these decisions were not openly reconsidered once implementation began. For example, the USS Partnership froze upon a vision and medium for a final product. Based on research about cognitive closure, it is

predictable for partners to be less likely to continue exploration once the compacted time of implementation begins (Kruglanski & Webster, 1996). Partners do not always have time for in-person dialogue outside of instructional and PD time—this is especially true for four person partnerships. For these reasons, time in professional development is acutely sensitive for facilitating disclosure, critical reflection, and active discussion and debate.

3. **Expand critique activities.** Critique activities can be a powerful force in encountering alternative perspectives and crucial questions to consider during the planning stage. Structuring a Co-Lab critique across partnerships could be a useful way to focus attention on CAPE Methodology, such as inquiry questions. Additionally, it is worthwhile to consider joining with the Artist/Researcher Program (ARP) for a cross partnership critique to further leverage collective resources.
4. **Expand knowledge sharing across CAPE programs.** It may be useful to have members of the ARP network hold separate sessions for Co-Lab teachers and teaching artists to guide specific discussions on tensions and learning needs. ARP members can speak to the developmental progressions in their partnership, evolution of their collaborative teaching skills, and can share how they have engaged the tensions of collaboration. By offering a separate session, the distinct learning needs of teachers and teaching artists can be better addressed. Further, separate sessions may assist participants to process their tensions before acknowledging it with their partners. Much like James experienced in the USS Partnership, simply knowing tension is a common experience and feeling understood can propel participants into owning and embracing conflict.
5. **Encourage meaningful contexts for inquiry.** CAPE methodology does this, but it was notable in the study. Both partnerships centered inquiries on personally meaningful contexts for themselves and students. In doing so, students were asked to incorporate personally meaningful content into their work and increased their autonomy—both of which have been shown to increase student engagement (Bae & Kokka, 2016; Griner & Stewart, 2014). The heightened relevance and richness also created satisfying teaching experiences for partners. Alternatively, the three partnerships participating in the 2015-2016 program evaluation started with academic standards. This may have been due to the early stage in partnership development or the individual members, but this difference does raise the questions of 1) how can PD encourage partnerships to begin with meaningful contexts for inquiry in their first year? and 2) how are partners processing progressions between their first and second years in these important dimensions of arts integration?
6. **Consider communication and role challenges for four person partnership configurations.** This report found the four member partnerships established diverging communication structures, which strengthened collaboration amongst sub-groups, but resulted in avoidant conflict stances by compartmentalizing tension and pivotal learning moments. For example, 1) Sara's final reflection on how she learned students could do

well with less structure was not shared in the BULB and it is unclear whether this was shared with the teaching artists, and 2) The tension James experienced with his role and the effects of a product orientation were never explicitly shared with the teachers. A divergent communication pattern was also observed in both four person partnerships studied in the 2015-2016 evaluation. PD attendance is profoundly important for these groups due to minimal opportunities for in person discussion. Additionally, four person partnerships could benefit from continued reexamination of roles to help prevent individuals from receding into ancillary positions.

7. **Reconsider implications of art teacher-teaching artist pairings.** To have multiple arts educators within the same collaboration—specifically in roles of teacher and teaching artist—can create a sensitive composition. There is the potential for lowered needs for integration and lower learning potential. In the USS Partnership, the visual arts teacher led instruction on their primary medium. This choice created tension in how the teaching artists integrated their expertise, led to an increased product orientation, and essentially marginalized their role in the collaboration. Further, the visual arts teacher in the Baldwin Partnership learned a great deal about the teaching artist’s area of expertise, but contributed less of her own arts content to the unit. The Baldwin partners also shared similar backgrounds, which created strong connectedness, but reduced the tension between their conventions of practice. To be clear, individuals direct their own learning. However, art teacher-teaching artist pairings may create conditions where there integration is reduced due to similar conventions or content is narrowed due to competing expertise.
8. **Finally, as we consider the importance of embracing conflict as a driving force for partner learning, the role of students must be reexamined.** As noted above, this study found both partnerships began their vision with a relevant context for students. They both also challenged themselves to trust students to learn more deeply through experiencing various tensions: interpersonal conflict, self-governing groups, disrupting notions of movement and sound, less structure, and increased expectations for communication. Trusting students with more autonomy and to learn through experiencing conflict may be particularly challenging for public school teachers. Framing artmaking activities with a focus on the role of autonomy and conflict may help teachers reexamine how these dimensions impact learning for themselves and students.

References

- Achinstein, B. (2002). Conflict amid community: The micropolitics of teacher collaboration. *Teachers College Record*, 104(3), 421-455.
- Argyris, C., & Schon, D. (1996). What is an organization that it may learn? In *Organizational learning II: Theory, method, and practice* (pp. 3-29). Reading, MA: Addison Wesley.
- Bae, S., & Kokka, K. (2016). *Student Engagement in Assessments: What Students and Teachers Find Engaging*. Stanford, CA. Stanford Center for Opportunity Policy in Education and Stanford Center for Assessment, Learning, and Equity.
- Barron, B. (2000) Achieving coordination in collaborative problem-solving groups, *Journal of the Learning Sciences*, 9(4), 403-436.
- Bransford, J. D., and Schwartz, D. L. (1999) Rethinking transfer: A simple proposal with multiple implications. *Review of Research in Education*, 24, 61-100.
- Burnaford, G. (2006) Moving toward a culture of evidence: documentation and action research inside CAPE veteran partnerships veteran partnerships report 2005 – 2006. Chicago Arts Partnerships in Education Report, <http://www.capeweb.org/wp-content/uploads/2011/05/moving.pdf>
- Catterall, J., & Waldorf, L. (1999). Chicago Arts Partnerships in Education summary evaluation. In E. Fiske (Ed.), *Champions of change: The impact of the arts on learning* (pp. 47-62). The Arts Education Partnership and The President's Committee on the Arts and the Humanities. Washington, DC.
- Cranton, P. (1996). Types of group learning. In S. Imel (Ed.), *Learning in groups: Exploring fundamental principles, new uses, and emerging opportunities* (Vol. 71, pp. 25-32). San Francisco: Jossey-Bass.
- Donnellon, A. (1996). A different perspective on teams (Ch1) & Team talk (Ch 2). *Team talk: The power of language in team dynamics*. Boston, Harvard Business School Press: 3-45.
- Edmonson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly*, 44 (2), 350 - 383

- Greene, M. (1991). Texts and margins. *Harvard Educational Review*, 61(1), 27–39.
- Greene, M. (2013). Afterword: the turning of the leaves. *Harvard Educational Review*, 83 (1), 251-252.
- Griner, A., & Stewart, M. L. (2014). Addressing the achievement gap and disproportionality through the use of culturally responsive teaching practices. *Urban Education*, 48(4), 585–621.
- Grotzer, T. (2013). *Adult learners overview* handout. Harvard Graduate School of Education. Cambridge, MA.
- Harrison, S.H., & Rouse, E.D. (2014). Let's dance! Elastic coordination in creative group work: A qualitative study of modern dancers. *Academy of Management Journal*, 57(5) 1256-1283.
- Hackman, J. (2002). A real team. In J. Hackman (Ed.), *Leading teams: Setting the stage for great performances* (pp. 37-60). Boston, MA: Harvard Business School Press.
- Hmelo-Silver, C. E. (2004). Problem-based learning: What and how do students learn? *Educational Psychology Review*, 16(3), 235–266.
- Kruglanski, A. W., & Webster, D. M. (1996). Motivated closing of the mind: "seizing" and "freezing". *Psychological Review*, 103(2), 263-283.
- Leavitt, M. (2006). Team teaching: benefits and challenges. In the Stanford University Center for Teaching and Learning's newsletter *Speaking of Teaching*. 16 (1), 1-4.
- Lotan, R. (2003). *Group-worthy tasks*. *Educational Leadership* (6), 72-75.
- Paradis, L. (2011). *CAPE Veteran Partnerships (VETs) report 2010-2011, [Measuring] the seen and unseen: How the veteran units foster student creativity*. Chicago Arts Partnerships in Education, <http://www.capeweb.org/wp-content/uploads/2011/11/VETs-report-1011.pdf>
- Pea, R. D. (1993). Learning scientific concepts through material and social activities: Conversational analysis meets conceptual change. *Educational Psychologist*, 28, 265–277.
- Perkins, D. N. (2003). Collaboration, not coblaboration. In D. Perkins (Ed.), *King Arthur's round table: How collaborative conversations create smart organizations*. (pp. 147-176). New York: Wiley.

Sikkema, S. Introducing the CAPE Artist/Researcher. Chicago Arts Partnerships in Education's, Posted on June 15, 2016, <http://www.capeweb.org/the-cape-artist-researcher>

Scripp L. & Paradis L. (2014). Embracing the burden of proof: new strategies for Determining predictive links between arts integration teacher professional development, student arts learning, and student academic achievement outcomes. *Journal for Learning Through the Arts*, 10(1).

Smith, K. K., & Berg, D. N. (1987). A paradoxical conception of group dynamics. *Human Relations*, 40(10), 633-658.

Smolin, L. (2010). Contemporary arts practices as a learning process in classrooms: Design seminar 2010 evaluation. Chicago Arts Partnerships in Education, <http://www.capeweb.org/wp-content/uploads/2011/11/2009-2010-Design-Seminar-Evaluation-Report-.pdf>

Ramstetter, C., Murray, R. and Garner, A. (2010), The crucial role of recess in schools. *Journal of School Health*, 80, 517–526.

Wilson, D. (2007). Adapted from: *Team learning in action: An analysis of the sensemaking behaviors in adventure racing teams as they perform in fatiguing and uncertain contexts*. Harvard University, Cambridge, MA.

Unpublished Documents

Digital Portfolios, 2015-2016

Digital Portfolios, 2016-2017

Transcribed Interviews and Field Notes, Document Names

Field Notes, 011717

Interview, 031317

Interview, 031617

Interview, 032717

Interview, 040417

Interview, 040617

Interview, 041017

Interview, 042117

Interview, 050817

Interview, 051617

Interview, 051917

Interview, 060917