Qualities of Expansive Learning in Long-Term Teacher-Artist Partnerships

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Introduction

Significant research efforts have documented the benefits of integrating artistic and academic disciplines (cf. Chemi, 2014; Wynn & Harris, 2013; Madden *et al.*, 2013) and the positive effects on pedagogical practice resulting from partnerships between teachers and artists such integration entails (Lee, 2013; Barry, 2013; Andrews, 2012). At the same time, little attention has been paid to how teacher-artist partnerships develop over time as well as how increasing the longevity of these partnerships affects the integration of art and academy. Of particular note, assessment in artistic and academic disciplines remains underdeveloped (Colwell, 2004; Pennison, 2004), despite plentiful evidence that focusing on assessment can significantly improve learning outcomes for underserved populations such as those served by our sample partnerships (Andrade, Hefferen & Palma, 2014; Black & Wiliam, 1998; Black *et al.*, 2004). With the Veterans Partnership Program (Vets), the Chicago Arts Partnerships in Education (CAPE) presents a unique opportunity to investigate the praxis of multiple partnerships at varying stages of development and illuminate the work of teacher-artist partnerships in the classroom. Specifically, this writing presents an investigation into the following research questions:

1. What qualities describe the activity Vets partnerships for integrating arts in education? How has this activity changed over time and how does it differ relative to the longevity of these partnerships?
2. What tools, people, services, and/or behaviors have they cultivated in their arts-integration efforts? How has this changed over time as artists and teachers have developed their partnerships?
3. How do Vets partnerships assess the learning of their students? How have these assessments changed between implementations of their arts-integrated curricula? How does assessment differ between partnerships?

Methodology

As an exploratory and comparative multi-case study, the following analysis applied grounded theory (Charmaz, 2006) on four primary data sources: (1) pre-/post-implementation interviews, (2) classroom observations, (3) student artifacts, and (4) documentation created by the partnerships for their work with CAPE. At the same time, in order to be sensitive to the multiple, embedded contexts of the six disparate public schools in which this work occurs, cultural-historical activity theory (Engeström, 1999) guided our attention as we triangulated the multiple data sources (Yin, 2009). In the following, we describe the data collection methods and the analytical framework applied to the resultant dataset.

Participating Partnerships and Data Collection

During the 2015-2016 school year, the author conducted a multi-site case study of teacher-artist partnerships participating in the Vets program for CAPE. All schools were part of the Chicago Public Schools (CPS), representing a geographically and demographically diverse sample. Table 1 provides summary statistics gathered from the Illinois Report Card (illinoisreportcard.com) for the six schools in which these partnerships worked.

While CAPE programming may reach multiple teachers and classrooms within any single school, this case study focuses on the work of six partnerships working in six specific classrooms. It is important to note that while each partnership participates in the Vets program, the amount of experience they have working with each other varied significantly. Moreover, due to the variety of programming offered by CAPE, the involvement of individual teachers or artists with CAPE may be significantly more expansive than their participation in the Vets program. Of course, these experiences affected the implementation and design of the curricula enacted by the partnerships, but the descriptions of these partnerships and their curricula provided in Table 2 focus on their participation in the Vets program specifically.

From each partnership, four primary data sources were collected in order to support triangulating this information into thematic and focused codes (Yin, 2009; Charmaz, 2006). First, pre- and post-implementation interviews were conducted with artists and teachers. These interviews were audio-recorded and transcribed. Second, classroom observations occurred periodically during the course of the curricular implementation, with

video-recordings taking place during the course of the observation period. These observation periods occurred

Table 1. Summary statistics for schools in which partnerships worked.

Name	PARCC*	Average Class Size	Total Enrollment	Student Mobility or *Graduation Rate*†	Low-Income Students	English Language Learners	Students with Disabilities	Chicago Neighbor-hood‡
Boone Elementary	32%	29	825	20%	94%	44%	14%	West Ridge
Chopin Elementary	16%	22	514	21%	96%	23%	18%	Humboldt Park
Daley Elementary Academy	15%	25	628	15%	99%	49%	12%	Back of the Yards
George Washington High School	2%	22	1,494	*76%*	93%	9%	14%	East Side
Hamilton Elementary	45%	19	420	5%	31%	6%	15%	Lake View
Henry Elementary	28%	25	667	15%	97%	49%	14%	Albany Park

Table 2. Description of partnerships and their curriculum designs.

School Name	Teacher(s)	Artist	Grade Level	Academic Subject(s)	Artistic Discipline(s)	Title	Length of Partnership (years)
Boone Elementary	Gustavo Soto	Gwendolyn Terry	3rd	Science Social Science	Sculpture	From Sculptural Forms to Identity	3
Chopin Elementary	Beverly Allebach Arturs Weible	Mitsu Salmon	5th	History Music	Dance Theater	Different Faces, Different Places	1 (for the entire partnership)
Daley Elementary Academy	Andrew Watson Teresa DeSantiago	Juan-Carlos Perez	4th & 5th	History Social Justice	Indigenous Art Practices	Children Communicating Social Activism Through the Lens of Indigenous Art and Practices	5 (for Perez & DeSantiago) 1 (for Perez & Watson)
George Washington High School	Noreen Wojtan	Ben Murray	9th-12th	Life Sciences	Performance	The Wonderful World of Whales	3
Hamilton Elementary	Carly Jugenitz	Tim Nickodemus	4th	History	Architecture Urban Planning	City of Light	4
Henry Elementary	Emily Victor	Ayako Kato	2nd	Cultural Studies Geography	Dance	Our World Dance: Dance of Others, Dance of Ourselves	2

primarily towards the beginning and at the end of the curriculum. Third, samples of student work artifacts were collected, primarily through photographs in order to avoid disrupting classwork and the flow of the curriculum.

* Percentage of students that meet or exceed expectations on the assessment developed by the Partnership for Assessment of Readiness for College and Careers (PARCC; parcconline.org) aligned to the Common Core State Standards (corestandards.org).
† Student mobility is reported for elementary schools while graduation rate is reported for high schools. Student mobility is defined as the percentage of students that transfer in or out of the school between the first day of school in October and the end of the school year.
‡ Neighborhoods in Chicago have well-defined boundaries and collect their own demographic information (cf. www.city-data.com/nbmaps/neigh-Chicago-Illinois.html).

Finally, online documentation created by the partnerships served as a data source. Teachers and artists responded to a mid-year survey and created an online portfolio of their curriculum, which they contributed to during the year and finalized after their curriculum concluded.

Analytical Methodology

To make sense of the data sources collected during the course of this case study, we relied on two primary frameworks: *grounded theory* as presented by Charmaz (2006) and an iteration of *cultural-historical activity theory* (CHAT) supported by Engeström and colleagues (1999).

As Charmaz (2006) describes, grounded theory provides a comparative, iterative, and interactive means for building theories from data sources such as those collected for this study. The foundational workflow of conducting a grounded theoretical analysis of data resides in a cycle of collecting and interacting with the data to derive analytical codes, constructing working theories from these codes that attempt to answer the posited research questions, and subsequently refining these theories against samples of the collected data. Grounded theory facilitates the studying of processes as they progress over time, affording the ability to pay attention to phenomena that emerge over the course of a study and refining hypothetical theories in response to new data and experiences. Charmaz (2006) differentiates her version of grounded theory from others by arguing that the researcher's disciplinary and theoretical leanings alongside their relationships with respondents fundamentally shape the collection, content, and analysis of data. Essentially, purely "objective" analyses cannot exist due to qualities of the researcher and their existence as a social human being.

Accordingly, it becomes vital for the researcher to explicitly state their theoretical leanings and how that affects the grounded theory analyses they conduct. In that vein, for this writing it remains important to explicate aspects of CHAT and how they affect the generation of the working theories developed to answer the research questions asked here. Primarily, CHAT focuses on *activity systems* as their unit of analysis, which Engeström (1999) generally describes as comprising six interrelating components (see Figure 1 for a graphical representation): (1) the *subject(s)*, individuals/organizations engaged in the activity; (2) the *instruments* or tools used by the subjects to engage in the activity, which can be both tangible (e.g., a hammer) or symbolic (e.g., a hammer and sickle); (3) the *object(s)*, or purpose(s) of the activity that drive the entire system; (4) the *rules*, either explicit or implicit codes of behavior governing the actions occurring within the activity system; (5) the *community*, or social context in which the activity system exists; and (6) the *division of labor* that circumscribes the activity system and defines the work done by subjects in the system overall. As these six components interact, they generate *outcomes* that may be more or less aligned with the actual object or purpose of the activity system itself.

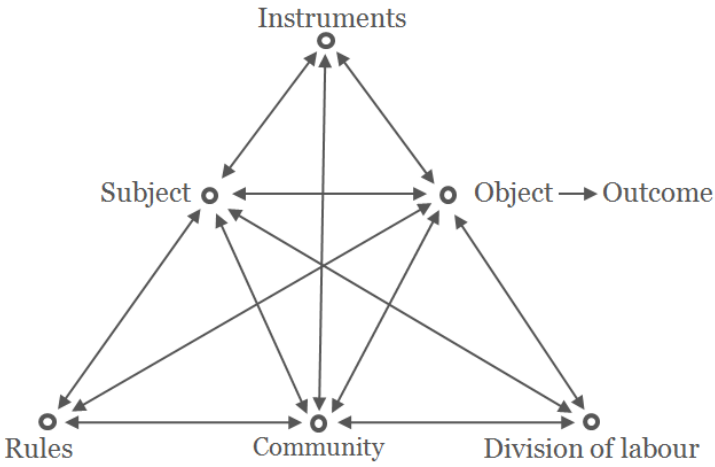

Figure 1. Graphical representation of an activity system adapted from Engeström (1999).

Importantly, since activity systems exist within social and temporal space, they inherently contain *contradictions*—simultaneously existing yet incompatible forces on the components—that manifest in the outcomes of the activity system. These contradictions result in untenable tensions that compel the activity system to go through cycles of critical reflection and searches for solutions, seeking to resolve these contradictions. Ultimately, contradictions must be "creatively and painfully resolved by working out …

something qualitatively different from a mere combination or compromise between two competing forces" (Engeström & Sannino, 2011, p. 371). Fundamentally, this qualitative difference manifests as an *expansion* of the activity system, changing its components, their interrelationships or both, in a process that CHAT defines as *learning* (Engeström, 1999). Ultimately, then, the learning of partnerships requires expansion of the activity systems they participate in, and this analysis focused on discovering how partnerships navigated and negotiated the contradictions compelling them to expand or crumble.

Consequently, the analytical workflow resulting in this writing proceeded as follows. First, all data sources were analyzed from a grounded theory perspective, resulting in numerous analytical codes about the work of partnerships. For example, early analyses of these data sources resulted in codes such as *student choice, institutional mandates, process vs. product, flexibility,* and *design thinking* to name a few. Then, using a CHAT methodology outlined by Engeström and Sannino's (2011), the contradictions inherent within partnerships' work was illuminated through focusing on informants' discourse, particularly during interviews. How these contradictions manifested in participants' discourse supported refining the analytical codes to working theories about the activity of implementing arts-integrated curricula. Focusing on the chronology of the data sources, these working theories resolved toward theories of partnerships' learning, which we expand upon below.

Findings

The process of analysis outlined above focused on uncovering the contradictions that underlie partnerships' activity, particularly those relevant to our research questions. While every partnership navigated and negotiated contradictions in their activity, we foreground two cases per research question to support bringing specific contradictions into clear relief for the reader. This affords the ability to focus on the actions different partnerships took in their efforts to resolve or mitigate the effects of these contradictions, and supports understanding how their activity systems changed as a result of their curricular implementations.

Expanding Objects, Community, and Labor

In order to understand the qualities of Vets partnerships' activity as well as their evolution over time, we foreground the shortest (1 year) and longest (5+ years) partnerships in our sample: those of Daley Elementary (Daley) and Chopin Elementary (Chopin). Several similarities between these partnerships motivate our focus on them for describing the Vets partnerships and their work. First, both partnerships involve three people—two teachers and one artist for each school—and they both worked with 5th grade students. Second, the individuals of these partnerships have varying degrees of experience with CAPE programming as well as in their collaborative relationships. Third, the resulting curricula both involved history, students' identities, and culminated in a public performance or exhibition. Despite these similarities, the progression of each partnership's activity system differed significantly, providing distinct perspectives on the common contradictions they sought to resolve. Ultimately, the data underscore three dimensions along which teachers and artists develop their working relationships: (a) the increasingly *ambitious learning objectives* targeted by the curricula; (b) the deepening *relationships with students*; and (c) the blending of *roles and responsibilities* by collaborators.

Expanding vs. Simplifying the Learning Objectives of the CAPE Curriculum

As the partnerships and their curriculum designs develop deeper histories, they increase in the ambitiousness of the learning objectives they target for their students. In the arts-integrated curriculum at Chopin, the partnership initiated with an ambitious plan to integrate both novels and non-fiction literature with an exploration of identity, resulting in students creating musical compositions and dance performances based on poems about "Where I'm From." However, as "no lesson plan survives first contact with the class" (Arturs Weible, interview, March 17, 2016), the partnership drastically simplified their learning objectives in response to external interruptions (both personal and institutional in nature), as well as the significant resistance they received from students. As the English Language Arts (ELA) teacher, Beverly Allebach stated, "…we simplified it, we just stuck with one thing instead of trying to go into depth with a character [from the books] and issues around obstacles. So we just looked at [the students'] lives and where they're from" (interview, February 10, 2016). Similarly the music teacher, Arturs Weible, supported students in writing four measures of music for their performance, but was ultimately forced to play the compositions on his viola instead of the students performing the pieces themselves. The artist, Mitsu Salmon, echoed the need for simplifying the initial ambitions of the curriculum stating:

> They'd fight internally and talk over us when we were trying to talk about what we were going to do. Or, being like, "You can't touch each other," and them physically touching each other, pushing and stuff … So, stuff like that, you know, chaos. Um, so, any of these things, I feel like if there would have been more time, but, so, after that, I felt like it wasn't going well, I went and looked at videos of the kids dancing, where I had them, where I took different actions they gave me from the "Where I'm From" poems, which you saw, like things I do in the house or things they do in nature and having them act it out in groups. So, there'd be a triangle, and one person would lead. So, in that sense, their role was much more structured. They still had creative license, they could choose whatever movements they want to do … but I think because it was really structured, "You're going to be the leader until the next person's the leader." So, it'd be clear rules, I felt, so, they responded better to those. (interview, July 24, 2016)

In these ways, the partnership simplified the curriculum during its implementation in response to the students' reactions, with each individual scaling back their specific expectations for the students. While they still considered the curriculum's implementation successful in accomplishing the academic and artistic objectives they had for their students, they qualified that success based on their experiences with the classroom and relative to their initial ambitions.

Figure 2. Mitsu Salmon leading students (and teacher) in actions taken from students' "Where I'm From" poems. (classroom observation, March 24, 2016)

On the other hand, the Daley partnership's curriculum continued to expand its learning objectives as it built upon five years worth of development work, and an even longer working relationship between the bilingual coordinator, Teresa DeSantiago, and the teaching artist, Juan-Carlos Perez. Juan-Carlos described their progression in an interview, stating:

> That's how it's changed, right? In the beginning there was three-dimensional, visual arts, symbolism, throughout making art. Using it as a symbol to communicate an idea. And then, eventually, through time there was, well, now let's look at the environment, demographics, and ancestry, and see something that can be even more personal, and be more reflective and gather that and put it together. And then, using materials and techniques from other cultures, let's put that together. And then now, it's like, okay, now that we've gathered all of that, how can we still be self-reflective at the same time now, how can we use it now as a form for change? So, it keeps going a little further each time. Because--and just a little bit each time--because we have to be mindful that the class we're going to get is not the same class we're going to get the next year, right? (interview, March 14, 2016)

Moreover, the longevity of this partnership lent stability to the curriculum, allowing Andrew Watson—who was not only a first-year teacher but also came from Teach For America[1]—to engage their 4th and 5th grade students in discussing, researching, and arguing about fraught topics such as child abuse, terrorism, and immigration that students selected based on their lived experiences (see Figures 3 and 4). Impressively, as a result of participating in the CAPE curriculum, Mr. Watson has focused on expanding his practice to include further student-led activities similar to the one they implemented this year, as he said:

> I think for me, what's really interesting, is just learning to give students free—not free reign—but to take control of their own scholarship … for me, the whole takeaway with this, I need to put in more student-led curriculum in my classroom. Because, I just saw much deeper involvement in scholarship and motivation and cooperation with the students when they were able to do something that they wanted to do. So, when I think about that, I think about going into reading next year, maybe giving students more choices for books, or book groups and stuff like that. Letting students pick things, problems to solve in math and researching things, because that was, I was just very impressed by all of that. (interview, July 21, 2016)

As evidenced here, the strength of the work the original partnership had accomplished not only supported ambitious learning objectives such as conducting research and writing persuasive arguments, but also motivated significant learning on the part of a new teacher, pushing him to significantly expand his practice.

Expanding the Classroom's Culture and Community

Indeed, the partners at Daley did not limit expanding their activity to their personal actions, but also focused on deepening their relationships with and understanding of their students' lives. For instance, Teresa DeSantiago's work with CAPE has spanned over twelve years, which allowed for her collaborations with artists and students to become "traditions" at Daley (interview, March 18, 2016). While this current instance of the CAPE curriculum has yet to reach that status, she defines the success of these curricula based on their effectiveness in engaging the broader community—particularly families—with the students' work. In an interview, she stated:

> [O]ur principal and, just, the community itself has really bought into the CAPE units. Our poetry slam was very successful. We always had a packed house. Two shows, one in the morning, one in the evening. We really brought in a lot of parents. That was one thing, family engagement; it helped a lot with that. And, like I said, it became a fifth grade tradition. (interview, March 18, 2016)

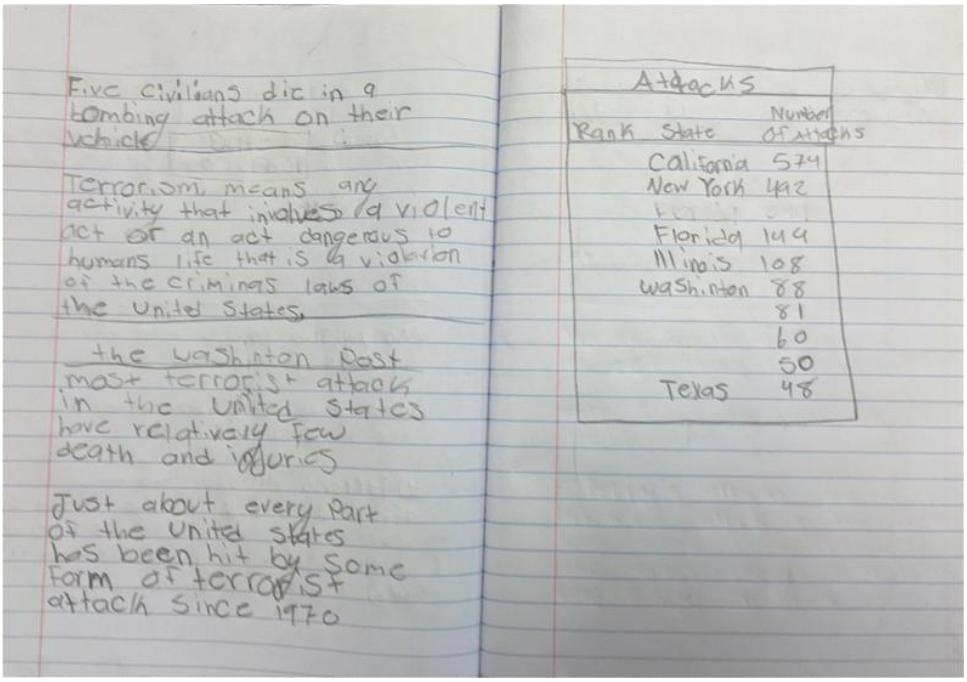

Figure 3. Daley student's research notes on terrorism for the CAPE curriculum. (online documentation, retrieved July 25, 2016)

Referencing the current CAPE curriculum she has developed with Juan-Carlos Perez, she expands on how these units affect family relationships:

> For example, I had a little girl researching date rape, and the mom thought that it was a topic that was a little too mature for her. And, I told her that I was okay with her picking another topic, but she felt strongly about it, so I told her mom, "If we censor her, I mean, this is something that is worrying her about the world. It's better that she educate herself." So, I did have to have several conversations with the mom, and the mom finally decided to let her go with it, so that in itself is a challenge … One time, a parent actually went to the principal first … and, the principal called me down and we had a conference and I explained it … So, I would say that's probably another challenge, knowing that

> some of the topics that the kids pick are going to be strong, but they're topics that they're worried about, that they're concerned about in their community. So, [now] I expect for parents to come and ask what's going on. (interview, March 18, 2016)

Furthermore, the longevity of the curriculum allowed the students to view the successes of others who had already participated and succeeded in a similar curriculum, which further provided those students an opportunity to mentor their younger peers. Andrew Watson described the positive effects of visiting an exhibition of student's work from last year with his classroom:

> I think what really helped was when we went to the Instituto Cervantes[2] downtown, and we saw last year's work being hung up. And, basically, their work being presented, and this was this person's neirika and this is what they're arguing, and they learned and they went through and saw how people paint art pieces to send a message. And, I think, really, that made a huge difference, when they came in, they saw their work in an exhibit and saw that people were actually coming to learn from them. And that, if they make a really impactful art piece, then they're teaching someone something. So, I think they, very much, that really helped set the tone ... And, well, also, several of them had done a similar project last year. And so, some of them actually had their work hanging up at the exhibit. So, the ones that had it felt really encouraged and the other ones wanted that too. (interview, July 21, 2016)

Viewing this exhibit allowed this year's students to not only have a clearer conception of what was expected from them, but also engage in dialogue with the preceding cohort, which supported the quality of in-class discussions as well as set a precedent for students to positively address difficult social issues. By expanding the community of the classroom to include students' families as well as their more experienced peers, long-term CAPE partnerships can establish a continuity of culture that allows students to explore taboo topics with a level of maturity and respect unexpected from ten- and eleven-year-old children.

Figure 4. Daley student's *neirika* artwork depicting the mayor shutting down schools in Chicago. (online documentation, retrieved July 25, 2016)

The Chopin curriculum also resulted in some students grappling with difficult experiences as the inquiry question of their unit asked, "how does who we are and where we come from shape us?" (online documentation, retrieved July 25, 2016). Unfortunately, this question resulted in some students grappling with traumatic experiences exacerbated by their discomfort with the dancing and movement of the arts-integration, which contributed to negative behaviors from students such as bullying and defiance of the partnership (see Figure 5). As Ms. Allebach described it:

> There was a lot of resistance. I figured out at the end there were a couple of dynamics going on. First, I think the fifth graders were a little uncomfortable in their own skin; Hispanic culture, the girls are pretty quiet, pretty shy. But, then we also had—and this is the part I didn't realize—there was one particular student in my classroom who was harassing them during our practices and saying things to them to make them feel really self-conscious of themselves. And, there were a couple times when he wasn't present and the performance and the practice went much smoother. (interview, June 30, 2016)

Without having an established culture for how to discuss difficult topics, the students had no models for their behavior resulting in the resistance and fractious behavior that presented such difficulties for the partnership. While the classroom dynamic evolved without positive history to inform it, the students' struggles

Figure 5. Beverly Allebach attending to a student who refused to participate in the dance instruction. (classroom observation, March 24, 2016)

with engaging with each other and the material could not completely explain the difficulties experienced by the Chopin partnership this year. As Mr. Weible explained, "[b]y far the most successful one was the first one we did with [CAPE] where we ended up putting some things on for the end-of-they-year performance where they asked us to have the kids sing the song that they wrote," suggesting that a history of work on this curriculum would not have completely ameliorated the behavioral difficulties presented by this group of students (interview, July 24, 2016). Instead, two aspects of the classroom culture at Chopin differed from the one established at Daley that influenced the differing results: a difference in self-motivated commitment to accomplishing the project alongside the community being confined to those in the classroom until the final performance. Ms. Salmon touches upon the former as she discusses the differences of this classroom environment from those she has experience teaching in:

> For example, before working in CAPE in schools, which I've done with two other projects, I'm more used to working after-school, where kids choose to be there, or like now, where I work at an art summer camp, where kids choose to be there, where they have that interest. So, I'm not used to trying to persuade kids to do something. It was kind of surprising how resistant kids were to doing theater or dance, because I feel like I've haven't been in environments where...like, I've been in environments where kids want to do that, they come to art camp because they're interested in art, or they come to after-school theater because they want to do theater. of course, there's some resistance, but overall they want to do it. (interview, July 24, 2016)

Chopin's students lacked motivating experiences such as Daley's students' visit to Instituto Cervantes, and so struggled to engage with the artistic experiences provided by Ms. Salmon. Importantly, students from Daley were able to see finished artworks, interact with peers who had succeeded in the CAPE curriculum, and fully own their research projects, from conceiving the topic to tying the last bead on their *neirika.* In contrast, the students at Chopin had no similar experiences with a performance resulting from the curriculum designed by Ms. Allebach, Ms. Salmon, and Mr. Weible. They lacked the opportunity to interact with students who had succeeded in the curriculum and were passed ownership of the topic informing their performance after the simplification of the original curriculum. Yet, all three partners noted the marked difference between the

students' behavior in the class periods and rehearsals and how they acted during and after the final performance, which they performed in front of their families as well as students from other classes at Chopin. Ms. Allebach recounts:

> And then, one thing, because I think we simplified it and we used their work instead of trying to use a character and re-enacting some of the things a character went through, the kids really did do what they wanted to do, and the students who—the audience enjoyed it! And they laughed at them, at the kinds of things they did. Afterwards, the students said, "Well, that was so much fun!" And I'm not sure we would have got the same response if it hadn't been their original work, if we had tried to re-enact some of the characters events and experiences … In the end, they had a positive experience, all of them did, there wasn't one who didn't like it. [Laughing] Yeah, so, and when they sat down and they took questions from the audience, they were so cute, talking about how hard they worked. I mean, they sounded like real, little adults! (interview, June 30, 2016)

Hence, while both curricula unearthed difficult topics for artistic and academic exploration, the difference between the Daley and Chopin CAPE curricula did not solely hinge on differences in their longevity. Instead, the Daley partnership used those years to expand the classroom to include families and students they could look up to while establishing a discursive culture founded on respect and support. While the Chopin partnership provided the students with a degree of ownership over the curriculum, this only occurred after they met with interference from personal and institutional sources and resistance from the students. Indeed, the Chopin partnership ultimately realized the value that this form of ownership and self-motivation could provide to their students as they engaged with the CAPE curriculum. Now that this year's cohort of students has served an example for younger students in their school, the community of the Chopin classroom can expand and next year's students can begin building on the foundation these students set.

Figure 6. Chopin students raising their hands waiting to answer questions from the audience after the final performance, which comprised family members and students from other classrooms. (classroom observation, June 10, 2016)

Expanding the Divisions of Labor by Blurring the Boundaries between Roles

Finally, comparing the Chopin and Daley partnerships illuminates how teachers and artists define their roles relative to each other as they work to implement the curriculum. In the former, these boundaries remain intact due to both the lack of experience in partnering together as well as the artist's admitted inexperience with not just the population of students in the class, but the classroom environment in general. In response to the resistance from multiple students in the classroom, the artist wondered, "are they going to be traumatized from [being made to dance]—which is the opposite of what I want?" (Mitsu Salmon, interview, July 24, 2016), conceding that her inexperience led to an uncomfortability with both asserting her own role as an authority in the classroom as well as following her teacher's advice for interacting with their students. She went on to clarify on this idea:

> I felt like I was a lot softer with the kids in terms of trying to persuade them to do these things. You know, like, "You don't want to dance? Maybe you can just do a hand dance," really trying to ease into it, and I think, for Ms. Allebach

> or Mr. Weible, it's much more like, "No, you got to try this." I mean, and there's this internal conflict with me being like, "Oh no, I don't want the kids to hate doing these things because they're forced to do it," but, like I said, in the end, they ended up enjoying it, so I guess the way they approached it worked in some ways, but it's still something I'm wrestling with. (interview, July 24, 2016)

Both Ms. Allebach and Mr. Weible felt Ms. Salmon's trepidation as they worked with her and their students. Mr. Weible noticed that he would receive "the look" from Ms. Salmon if a student began to act out or disrupt the classroom, cuing and reinforcing his role as classroom manager. Similarly, Ms. Allebach described her impression of Ms. Salmon's inexperience as being one of frustration:

> It was at our last one, she was just frustrated with the students. Maybe some of it was lack of participation and their lack of self-control. I kind of just see that as that's what comes with the territory. So we had a good talk, though, with [a CAPE staff member] afterwards. [They actually] talked, as well. But he didn't feel that it was a bad—that it was a... what word do I want to use. He felt like the kids got something out of it and were participating. And that just kind of comes with the territory. When you're doing performance especially with children this age. And children, students, who aren't used to working in this capacity. They have never done drama before. They haven't ever done dance. So it is a challenge for them, and a lot of students do lack self-control. (interview, May 2, 2016)

In fact, Mitsu Salmon remembers this class period as well, specifically foregrounding her conversation with the CAPE staff:

> One thing that I did find really helpful is [the CAPE staff member] came in one day, and he saw the class, and I think I was self-conscious because it wasn't going so well. But, instead of him being like, "oh...that didn't go," he's the one who gave me the suggestion in terms of structuring it, making it more and more, instead of having the kids come up with this scene, have them just come up with just one movement. He was the one who suggested narrow with the kids, narrow with what they're doing. I found that very helpful because I felt like, after that, I did try to really narrow things down. To give them freedom, they could choose whatever movement they wanted, it's not the whole scene you're acting out, it's this one action, which was more doable for the kids. (interview, July 24, 2016)

Over the course of their work together, the Chopin partnership met at points to discuss the curriculum, but—as this was their first year of working together—they had yet to develop the comfortability with each other that could address the frustration and/or self-consciousness Ms. Salmon felt with respect to a resistant classroom. Indeed, the clarity of how valuable Mitsu found her conversation with the CAPE staff member suggests that what she needed was specific mentorship around working in a classroom environment, addressing reluctant students, and developing her abilities to manage a classroom alongside her teacher partners. Instead, the partners' unfamiliarity with each other led to a rigidity of roles, where teachers were the classroom managers not only because of the artist's hesitance in taking up that role, but also due to lack of time for developing a congenial as well as a collegial relationship with each other.

As a contrast, the boundaries between the roles the teachers and artist fulfilled in the Daley partnership blurred in multiple ways. First, Andrew Watson as a first-year CAPE partner and teacher apprenticed to both Ms. Andrade and Mr. Perez. As Andrew took over Teresa's classroom, he consistently sought her out as the research arm of the project developed, but also worked with Juan-Carlos around learning the steps towards creating the artwork. Here, he describes his relationship to both:

> I would ask Teresa a lot of times with help for little things too. So, where do my students need to be at right now in the project, what would you expect from them right now, how did you do this. Other times with Teresa, especially with the research component and stuff like that, sometimes she would come to my classroom at least towards the start of the year, and I would ask her, like, on this, what would you have done different? During the research, what is the next step? So, it was a lot of checking in after she had done her model lessons, it was a lot of me just checking in with Teresa when I had a moment. And, with Juan-Carlos, it was really, it was sort of a trip, because I was trying to figure out exactly how the [art] project worked. But, I mean, a lot of the times he would give the directions for what they should be doing with these pieces, and I would learn from observing what he was doing with the kids. And with Juan-Carlos too, once we were getting towards the end, what do we need by this date? By this date? When he was able to come in, I'd set up the art for the students, and I'd do what they'd need based on his recommendations. He would ask me what do I think, what do I want to contribute? He was always open for talking about teaching. (interview, July 21, 2016)

Both Teresa and Juan-Carlos echoed the idea that they served as mentors to Andrew in their partnership. Important to note, both described taking time to meet with Andrew informally, in order to get to know him and his views on the partnership. Juan-Carlos described these meetings in the following manner:

> So, for me, not just as an artist but as a collaborator, when I come into these different classrooms, myself, the way I approach it is there's always a lot of pre-planning, and the first couple of planning [meetings] for me is mostly to get a sense of how the other instructor is. For them to get to know me—almost like a first date, right?—they get to know me, I get to know them, try for it to be...you know, the first date's always nerve-wracking, the second one you're a little more relaxed a little more open about your methods of teaching, how you're brain-storming, things like that, kind of get a sense for each other. So, that's the way I approach this with Andrew, while at the same time, this project we had was on its third year and a lot of things that work and Teresa not being in the picture that much--this is his classroom now, he's the instructor. And, she's coming in as a third collaborator but not as fully involved because of her other responsibilities. So, as a collaborator, I had to be mindful of the fact that I want him to get what he wants out of it as well. I want him to explore his own inquiry questions based on what we've said to him. (interview, July 19, 2016)

These excerpts bring into stark relief the differences in how the partnerships related with each other. The Daley partnership explicitly took extra, uncompensated time to meet with each other and develop their congenial and collegial relationships. On the other hand, the Chopin partnership did not have the luxury of incorporating these types of "dates" into their meetings, and thus their working relationships never developed the qualities of mentorship and transparency evident that the Daley partners describe.

RQ1. What qualities describe the activity Vets partnerships for integrating arts in education? How has this activity changed over time and how does it differ relative to the longevity of these partnerships?

Taken as a whole, the preceding discussion supports the notion that the longevity of teacher-artist partnerships impacts the quality of the arts-integrated curriculum they design and deliver. More importantly, however, the evidence marshaled here suggests that history by itself means little if that time has not been spent expanding the conceptual objects, communities, and divisions of labor extant within the activity of the partnership. Through the time spent working together, the Daley partnership steadily expanded the academic and artistic learning objectives in their instruction, while the Chopin partnership necessarily simplified their objectives in response to students' behavior and external interruptions. Similarly, the history of work between Mr. Perez and Ms. Andrade afforded the inclusion and mentorship of Mr. Watson, whereas the nascency of the Chopin partnership prevented the flexible adoption of responsibilities while precluding transparent discussions of individual partner's emotional reactions to the curriculum's implementation. Yet, despite these differences it remains important to note that the Chopin partnership is where the Daley partnership was years ago. With the conclusion of this year and the work done by Ms. Salmon, Ms. Allebach, and Mr. Weible, the CAPE curriculum at Chopin has expanded connections to families and students in other classrooms, laying the groundwork for the establishing the continuity in their classroom culture evident at Daley.

Expanding the Rules, Instruments, and Subjects

In examining how Vets partnerships have adopted tools, recruited people, enlisted services and/or engaged behaviors differently over time, we focus on the work of partnerships at Henry Elementary (Henry) and Boone Elementary (Boone). Again, similarities exist between these two cases, as these classrooms comprised the youngest students (2nd and 3rd grade, respectively), and both curricula focused on aspects of students' identities culminating in a public performance. Moreover, these partnerships have worked together for comparable lengths of time with Emily Victor and Ayako Kato entering their second year of working together while it is the third year for Gustavo Soto and Gwendolyn Terry' partnership. Ultimately, foregrounding these cases clarifies the conception of *expanding the classroom* as a primary function of arts-integration, particularly through affording *student agency* in the curricula while simultaneously meeting the *institutional demands* of schooling and implementing a *designed curriculum* meeting the partnership's goals.

Expanding the Rules of the Classroom by Stretching the Grammar of Schooling

Looking at their curricular implementations, these partnerships worked to resolve conflicts between the *grammar of schooling*—the historical "continuity in the structures, rules, and practices that organize the work of instruction" (Tyack & Cuban, 1995, p. 8)—and the mission of arts-integration as defined by CAPE. For example, one artist argued that applying art studio practices to learning required taking the "preciousness away from the object" (Gwendolyn Terry, interview, February 16, 2016). This involved pushing students away from believing that a "right" answer exists—an expectation they had already developed by the 2nd grade—and towards inquiry-based habits such as experimenting to answer questions and tinkering on their designs. However, these attempts to foreground questions and background answers did not supplant school-as-usual, and instead occurred alongside activities of traditional schooling (Goldman, Radinsky, Tozer & Wink, 2010).

Part 1. Multiple Choice. Circle the correct answer.

1. What makes a bird a bird?
   A. They lay eggs.
   B. They have pretty colors.
   C. They have feathers.
   D. They have wings.

2. How do feathers help birds?
   A. Feathers keep birds warm.
   B. Feathers help birds to fly.
   C. Feathers can be used to camouflage a bird to hide from predators.
   D. All of the above.

Figure 7. (Top) Students working on creating their wearable sculptures in small groups. (still from online video, retrieved July 27, 2016)
(Bottom) Some of the multiple-choice questions on the final test for the CAPE unit. (online documentation, retrieved July 27, 2016)

Indeed, throughout both curricula's implementations, traditional schooling activities (e.g., multiple-choice questions, short constructed-response worksheets) coexisted alongside activities that stretched the purpose these traditional activities served (see Figure 7). As the teachers and artists at Henry and Boone taught their arts-integrated curricula, the partnerships attempted to balance the demands of traditional schooling while incorporating arts-based inquiry practices foundational to the CAPE project. For instance, Emily Victor, the 2nd grade teacher at Henry, described her process of integrating arts with her instruction by saying:

> First I had exposed them to nonfiction texts on all the planets. But when [the artist] came in, what we were planning on doing was watching a video as a whole class. They would take notes and we would fill in the notes with them. And there were so many reasons that didn't work. First of all, the desks were already moved, so they were all on the floor. And also, it was trying to find the balance of having a co-teacher. Which was really hard at first, because they had a really hard time with change … So they were fine when she was teaching them dance—they seemed to completely accept that. But when it was another teacher teaching them content, they just kept looking at me. They were like, "What's going on." And we just found that it wasn't the most effective use of our time … But I think that it was, to go from the content right from the dance, they needed more time to make those connections. So I had to expose them to the content, talk about rotation and stuff. Because we were just jumping right into it assuming they would know, like, "All right, movement. Move your body." (interview, February 16, 2016)

The teacher from Boone, Gustavo Soto, described a similar process the partnership had undertaken in previous years' implementations of the CAPE curriculum:

> Before [Gwendolyn] came in, I did a little bit of background on what installation art was, because they had never heard of that before. They just knew—. I took a little survey, what kind of art [did] they know? Coloring, colored pencils, and crayons, painting. But no one had ever heard of installation art … So when they first looked at the installation art, I put together some slides for them of this artist … So I showed that to the kids, and they were all like, "Wow, this is awesome." And that kind of got them excited about it. But then I had them choose their favorite one, and then they had to write a creative story about it. And if you saw the images, you could see how it would spark all

> these things [in their] imagination. So that was before she came we did that. And then whenever we do an aspect of, like I said, the beak, for example, or the wings was one thing we did [for their wearable bird sculptures], they would write a little bit as well, about—. I'm trying to think, like, there are so many different things. Like I said, a lot of it was writing, so for sure they wrote a piece at the end that was connecting what the bird represented to them. It changes, because the first year was more like a social studies cultural research they did. So they connected what they were learning. They all made these PowerPoint presentations where they were researching where they came from. (interview, February 18, 2016)

From these excerpts, the teachers at Henry and Boone testified to laying the groundwork for the art projects their students would engage in through adapting their everyday instruction to the CAPE project. They emphasize the fact that their arts-integration efforts required surrounding the co-taught, arts-focused periods with instructional time focused on the academic content serving as the basis for their classrooms' artworks. Moreover, the teachers had to not only provide space and time in the classroom for the art-making activities, but also introduce their partner artists and establish their role in bridging the art practices they brought into the classroom with the academic understanding the students brought to the art. In essence, implementing an arts-integrated curriculum required significant work by teachers to stretch the grammar of schooling, which subsequently allowed for the introduction of new people and activities in the classroom.

Introducing the novelty of the CAPE curriculum into the classroom further necessitated protecting the space and time reserved for the curriculum from the demands the grammar of schooling had on their instructional time. The need for managing time manifested in decisions that often resulted in compromising aspects of the CAPE curriculum in order to address mandates from administration or further up in the CPS bureaucracy. For example, Ms. Victor mentioned early on that her original plans for the CAPE curriculum were disrupted by changes at Henry:

> The thing that is gonna be a little difficult is I was planning on [the CAPE unit] being my literacy-slash-social studies topic. And because of just changes in the school, it's not. So we have to do everything as a second grade. Everyone has to do the same thing. Now I just need to find a way to fit it in my schedule someplace. Which I will. It won't be impossible, it's just not as easy. Because last year, it fit with my core literacy instruction. And when we planned this unit, I thought it was gonna be my core literacy instruction, but our admin said we had to do a [Understanding by Design] third-quarter unit on nonfiction. And we picked heroes as a grade. So this year, it's just gonna be a little bit more difficult … I'm just gonna make it my social studies. Because we're studying about cultures, so how does culture influence dance, how does dance influence culture. So I think our question is, like, "How do you move culture, how does culture move you?" I can just adjust my schedule. It's not a huge deal, it's just gonna take a lot of strategic planning during the day. (interview, February 16, 2016)

Here, she describes how the school-level decision to have standardized literacy units for the entire grade-level precluded her ability to use the CAPE unit as her literacy and social studies unit, a strategy she applied last year in order to support meeting the school's demands and her desire to participate in CAPE programming. Moreover, this push for standardization—particularly around ELA and mathematics, the subjects tested at the state level for accountability purposes—prevents teachers from integrating arts with these subjects. As Beverly Allebach put it, "I think I'll be able to work around [standardized curriculum demands] by allowing CAPE to [be] a lot of my writing assessments. We have more freedom in writing. We have more flexibility with writing because we're not tested in writing" (interview, February 10, 2016).

Indeed, every partnership interviewed for this study mentioned the significant demands the standardized testing regime of CPS had on instructional time and the impact this had on their implementation of the CAPE curriculum. When asked about the greatest challenge for implementing the curriculum, Ms. Victor stated:

> Time, I would say. Because, also it was, it also happened to be right before all of their testing. And all of the testing I had to individually give them. So, it just, unfortunately, all of these district mandates [made it] hard to find the time in the day to do all the things we want to do. (interview, June 22, 2016)

Her artist partner, Ayako Kato, spoke of similar pressures in previous partnerships, specifically ones she viewed as less successful than her work with Emily:

> Because teachers, when I worked with fifth grade teachers, [one after another], they need to do the test. Then the test changes their curriculum schedule, so this integration is late. But they need to rearrange schedule all the time. Especially last year, a new test was introduced, I think. They needed to change a lot of their curriculum. Then that makes teacher nervous. I don't work in school, so I don't know what's going on … The teacher is always under pressure so the [gap] between my state of being and their state of being [position], maybe they are not comfortable. (interview, February 12, 2016)

Clearly, the impact of standardized testing directly affects not only the instructional practice in the classroom but also the professional relationships between teachers and artists. By limiting the amount of instructional time available for students, standardized testing affects the breadth and depth of instruction that teachers attempt to provide. At the same time, these pressures create distance between the work of teachers and artists that can hinder the quality of their work together. On the other hand, the lack of large-scale standardized testing for second-grade students afforded Mr. Soto the ability to integrate the CAPE curriculum with both science and ELA, explicitly aligning to their respective standards.[3] He described the integration as follows:

> Not only were students held responsible for creating their own costumes and movement, but they had Common Core standards and Science standards they needed to reach as well in the classroom through writing and research. I felt that the students were able to accomplish these goals because they were given a final assessment at the end of the project and connecting the learning with their performance really kept the students engaged and excited. (interview, July 24, 2016)

Hence, even while freedom from the district's standardized testing regime affords arts-integration across multiple academic disciplines, the grammar of schooling extends to impact the practice of these teachers. In spite of this impact to their practice, teachers still put forth considerable effort to create the space and time for new curricula, people, and relationships in their classrooms. In this sense, arts-integration efforts can provide teachers with resources and support for creating spaces of resistance to the pressures of standardization they feel from their administrations and district bureaucracies. Simultaneously, they cannot shirk the mandates directed toward them and, thus, find themselves in the position of negotiating compromises between these mandates and the benefits their students receive from their arts-integration efforts.

Expanding the Instruments Available to the Classroom through Art and Design

A critical means for further stretching the grammar of schooling comes from the *instruments*—both cognitive and tangible—artists bring into the classroom from their own practice. Within the time and space created for them by their partner teachers, artists bring their facility with the media employed as well as aspects of *design thinking* that shapes their relationships with both students and their partner teachers. In many respects, instilling the cognitive habits of design thinking—e.g., explaining ideas through the iterative creation of artifacts, reflecting on those creations to refine their understanding (Peppler, 2013)—stands at odds to the traditional cognitive processes formed under the grammar of schooling. Gwendolyn Terry, an artist partner at Boone, described this opposition here:

> But, part of that dialogue, too, that we have is really important because [Gustavo] has a tendency to be very literal. It's the nature of, I think, what he does. It's the nature of dealing with third graders. They're very literal. And, in the CPS world, things are right or they're wrong. There's a right way to do it and there's a wrong way to do it. And, my job coming in is to let them explore, to let them discover things. That's not part of that, that CPS world. It's not part of that being-a-teacher-of-the-third-grade-class-in-CPS. And, so, I've got to, I've got to get him on board with that, too … it makes it more conceptual for him. It doesn't just become about an art unit where we're making birds and you're going to make the beak and this is the right type of beak you make. And these are the types of beaks you get to choose from. Instead, it's about, "Oh, wow, let's instead, let them create whatever beak they want," but they're [also] considering, "Ooh, it's pointy, that means its—my bird makes its nest this way. And the beak that it has—this little hangy-bead-thing right here—allows for—" I don't know what. But, they're actually, they're making deeper connections to it and they're understanding it. It's not A, B, it's not a multiple-choice, you know? It's an open-ended, in their understanding the principles. They're making a deeper understanding of the principles behind what they're creating. They're understanding some of the mechanics. They're understanding that there's engineering going on, that these animals are engineering, they're building these things, so they themselves are engineers. And, they're designed to engineer certain ways because they're part of this environment. (interview, July 21, 2016)

Here, Ms. Terry details how her work with Mr. Soto expands both his instructional practice as well as the conception of learning that occurs in the "CPS world." For her, this required convincing her partner teacher that focusing on the underlying conceptual connections between artistic practices and academic content allowed for deeper learning, echoing the literature on how people learn (Bransford, Brown & Cocking, 2000). As she mentions later in the same interview, her focus on underlying conceptual meanings stems from her own practice as an artist, saying "I'm tying nails on string and then hanging them. I couldn't do thousands and thousands of them without having something that makes it worth doing that. I mean, a deeper reason, a deeper connection," (interview, July 21, 2016). Furthermore, she describes her approach to instruction as supporting kids' "willing[ness] to fail miserably and be okay with that" (interview, July 21, 2016), a critical aspect of the iterative cycles inherent to design thinking. For his part, Gustavo agrees with the idea that participating in CAPE

with Gwendolyn expanded his instructional practice, particularly in a classroom with significant numbers of English Language Learners (ELLs) and students with special needs:

> Overall—I can't really say just this year, but it's changed the way I teach, I think. Where I try not to spoon-feed too much. I want them exploring more. That takes a [little bit] of yourself, that you have to take a step back and say, "OK, they're gonna struggle." But you can use that to make something more meaningful later. Say, "OK, they had a hard time with this. So how can we make this—not easier, but give more students an opportunity to be able to be successful." So that comes again with the arts. We have our students who are high academics, can read a book easily, and don't need the visuals as much. But in the setting that I've been in the past couple years, the visual stuff is really important. (interview, February 18, 2016)

Gustavo echoes Gwendolyn's notion of allowing students to fail, to struggle with what is being asked of them in order to substantiate the meaning of their work. In this sense, he reiterates the idea put forward at the beginning of this section by Ms. Terry, that "what you're creating is precious by what you're investing in it. It's not precious as an object [in itself]" (interview, July 21, 2016). Essentially, Gwendolyn's artistic practice incorporates the need for deeper connections between minute actions in the classroom and the underlying conceptual understanding that calls for them. By bringing this practice into the classroom, she provides students with an opportunity to expand their conceptions of who they are and their role in their environment—i.e., as designers and engineers of the classroom—an idea we return to later in this writing.

Again, the arts practices that the artists bring into the classroom stand opposite those that inform the grammar of schooling yet support a depth of learning that traditional instruction often fails to achieve. Perhaps even more importantly, the arts practices afford the ability for teachers to take up the role of novice and view their own practice with their students' eyes. Take, for example, how Ayako Kato described her approach at Henry in the following excerpt:

> It's really how [Emily and I] think, I think. In [Emily's] case, she has trusting students. She tries to nurture them, with actually, yeah, love. I don't want to talk about emotional, mental thing, but actually, when it works, when the goal is achieved, the teacher has the positive and nurturing character … Like, [with] testing score[s], [teachers] must have certain things they should be achieving. So when you try to [pull] students to that level, adjusting that rule or given concept of [who they are]. It becomes impossible. But if you see more, like, who they are—[their] natural entity … Like, pushing from the bottom up, rather than trying to teach them from above … As I create my work, it will keep evolving. And already, after I started to research of each dance, [decide] which dance I'm gonna pick out and teach, I noticed it's not simple, [what] structure we can give [the students]. Our goal this time is to let them understand what kind of culture they're succeeding in, and, as they are succeeding, what kind of culture others are succeeding. And that respecting their culture is [important], then how do you proceed by yourself [now, being in the] United States as an individual. What kind of dance will we create? As your own. It's a big topic for second graders. (interview, February 12, 2016)

In this sense, Ayako describes the arts-integration as allowing for students to drive the direction of their learning from the "bottom up," in essence, standing besides their students as they learn instead of attempting to pull them up to a pre-determined level in a position "above" them. Drawing from her own work as a dancer and the Japanese traditions that inform her work, Ms. Kato describes her views of instruction and dance as grounded in this deep sense of equality:

> I was also asked, "Why do you dance?" by one of the teachers [in her MFA program]. She was a professional dancer, a company dancer. I said, then I reflected [to] myself, "Oh, the thesis I wrote related to Bashō, I'd like to reveal everybody is equal, and everybody can dance, and everybody has a right to pursue their own being. And I'd like to express that through dance." Since then, that became my goal, then that's [why] I'm doing [this work]. So interestingly, not only around that [kind of thing], but also improvisation, is itself just being in a moment, and [tried to] be the best in the moment. Making choices and proceeding your way, [path], through time and space. That really [is] the metaphorical as well as actual [portrait] of our own being and soul. (interview, February 12, 2016)

Foundational to her practice as a dancer resides an inherent belief that "everybody is equal," a belief that informs her efforts to instruct from the "bottom," alongside her students. In fact, Emily describes her lack of expertise in dancing as supporting her ability to see their curricular implementation from her students' perspective:

> I think I had very little to add as far as dancing goes. I mean, I don't know how dancing impacts culture and vice versa. I mean, I know what to research, and understand that idea, and I obviously researched it to be able to explain it, but dance is not something that organically I understand. I appreciate it, but—[Ayako] helped me understand that movement can be dance. Because she's a modern dancer, so she believes, "Okay, that's art." So, for me, I have gained an appreciation for dance … I think a big thing for me too that I had a really hard time with was the tempo, the 1-2-3, 5-6-7, that whole thing, and that was really hard for the kids too. So, I think maybe even before, looking back, before

> we taught them explicit dance moves, teaching them how to count out a step or a beat. Because, we were doing that but we had never taught them what that is. So, they were just counting like ((rapidly)) 1-2-3-4-5-6-7, like, I don't think they made that connection. So, I think in retrospect that would be something we would need to explicitly teach them. (interview, June 22, 2016)

From the bottom, her lack of expertise in dance revealed a lack in the partnership's instruction as her struggles mirrored those of her students. By flattening the power dynamic between teacher and student, implementing the arts-integrated curriculum affords the partnership's ability to see their instructional practices from the perspectives of their students and, thus, provides for their refinement as the unit progresses. In these ways, artists bring with them practices and ways of thinking that expand the classroom's instruments, allowing students to find deep meaning in their scholastic work while presenting teachers with the opportunity to view their classroom from a student's perspective.

Expanding the Subjects Driving Classroom Activity by Promoting Students' Agency

Introducing these new instruments to the activity of the classroom further involved redefining the roles that students played in the classroom. As mentioned previously, artists and teachers implementing the CAPE curricula expanded how students viewed themselves, particularly in their relationships to their own learning and with the classroom environment. In many respects, this expansion further promoted *students' agency in their own learning* through the reflective adjustments partnerships made in response to their students as well as providing for their sense of ownership over the process and products of their work. In their efforts to push back against traditional ideas of success in school, partnerships exhibited a consistent willingness to adapt their curriculum, "planning for flexibility" (Carly Jugenitz, interview, February 29, 2016) while meeting the constraints of time and the goals they set out for the curriculum in the first place. In fact, expanding the classroom to foreground student agency required designing a curriculum that adapts to fit students' and partnerships' needs.

A constant refrain from partners highlighted the need for flexibility within the partnership to adapt the curriculum to meet the students' needs as they emerged within the classroom. Here, Gwendolyn Terry speaks to the importance of collaboratively adapting the curriculum, contrasting that with other types of partnerships she's seen participating in CAPE programming:

> [Gustavo] really bends and he really changes everything he's teaching. Because, he's teaching them—like, I would get e-mails and texts on a Saturday or Sunday when he's coming up with his lesson plans for the week, and he's like, "This is what I'm thinking about hitting." And, he'll be like, it's based on what I'm going to be doing with them, too. He'll be like, "Oh, we're going to do this writing activity asking them about this on this day because you're coming in on Tuesday. So, Monday, I'll have them do the writing activity on identity." We're constantly sort of touching-in with each other about, would it be better to repeat or focus on a certain point before or after an activity for them? … It just takes a little bit of dialogue, a little bit of coaxing, and a little bit of guiding while I'm with him for it to become a lot deeper than a step-by-step manual. Which, is sort of what I've seen, what I've heard from the other teaching artists with their partnerships. It sort of becomes [that]. They'll just, they'll get together, and they'll say, "This is what's going to happen on this day," and I get the feeling there's not a lot, I mean, there is change, but on both ends, it's like, it can be a problem if there's change? Because, "No, we already set the plan. We already know what we're doing. And, it's going to happen at this time and we're going to be doing it in this way." (interview, July 21, 2016)

Through their constant "touch-ins" with each other, the artist and teacher shape their curriculum to meet the needs of the students, which Ms. Terry identifies as integral to their success as a partnership. Gustavo described this process similarly, focusing on how this reflective adaptation stems from his instructional philosophy:

> I think my flexibility—. Like, I look at the project we're doing to do, and then I say, "Well, how can I fit this into what we're going to learn." I don't know if everyone has that flexibility, honestly. I feel like some people—and this is different philosophies, or whatever you want to call it, of teaching—some people feel you have to teach to a book, and this is how kids learn best. For me, I don't believe in it. I feel like I will try to be more flexible, and kind of like, "We're learning about this, but how can I—." I don't know what the right thing to say, to fit in there. Like, how can I tweak it, or … For me, personally, is how can I get away from just teaching from a book. Basically. Bringing in the arts, I'll find a way to make it work. (interview, February 18, 2016)

Again, Mr. Soto reflects on the difference between his partnership's work and those that feel a need "to teach to a book," differentiating his approach toward instruction with those he views as unable to successfully integrate the arts in their classrooms. Emily Victor echoed the sense that flexibility was necessary for the curriculum's implementation:

> I think it was very interesting because [Ayako] and I are, in a lot of ways, very different. So, it was—[Ayako] just had a completely different, I think we both had different perspectives coming into the same situation. So, we were able to think about possible scenarios about how we would have to adjust our plans, and I think we just had a very deep level of respect for each other. (interview, June 22, 2016)

This respect supported their continuous adjustments to the curriculum based on how their students responded to their instruction, a process Ayako described here:

> So, I basically sent her my lesson plan, right? And we discussed our lesson plan, and in the first three or four we showed the video of movement and we discussed how they're doing. And, I sent her, "Next time, I will do this, that." I arrived early in the morning and I shared with her, kind of, short meetings before things begin. Luckily, [Emily] didn't have any students before I came, so fifteen minutes, thirty minutes [before they came], "How are they doing? And you need to do this, you need to do that. It's too much for them." That type of thing we could discuss, in a sense, like updating the condition? Then, "I thought of this music, what do you think," you know … [We'd discuss the] limits, as well as possibilities. (interview, June 10, 2016)

Fundamentally, these constant "touch-ins" that both of these partnerships describe supported a consistent feedback loop focused on where the students were with respect to the curriculum, allowing the partnerships to regularly "update the condition" of the classroom. By engaging in this iterative reflection throughout the curricular implementation, both partnerships foregrounded their students' progress as the driver of their instruction, reflexively examining their own practice with respect to their students' learning.

However, students' agency was not merely mediated through their instructors' attention. Instead, a vital aspect of every partnership's curricular implementation hinged upon supporting students' ownership of the learning process and the artistic and academic products they produced as a result. One common lever that partnerships employed to support students' ownership of the cognitive and artistic material was through focusing on students cultural identities, which served to expand the impact of their learning to students' relationships with their families and provide a means for bringing their families into the classroom. Emily Victor describes the effects of this process:

> They were really excited to share certain things about their families … I have a student whose mom is from the Philippines and he told them she was from the Philippines, so I gave her a book that I used as a kid about the traditions from the Philippines and she read it, and in the morning, she came in and told [the class] what her life was like in the Philippines, which I think just making those connections—what we wanted to do was have a lot of parents come in, but unfortunately, because of time we didn't get to. I think the students were more excited to share about what makes their culture so unique or special … [Before the CAPE unit], I think they just didn't talk about it as much. It wasn't that—I don't think the kids were ever embarrassed of their culture or that they were necessarily intolerant of other people's cultures, but I think it made it more a part of the conversation. It just became a part of our daily conversation … Like, I have a student who was around every day for morning meetings, and I had a student share, this weekend, her grandma—who's from Mexico—she taught her how to make a Mexican recipe. One of the countries we studied was Mexico, and she's actually from the capital, which we learned about, so they're more excited to share aspects of their culture in our daily discussions. (interview, June 22, 2016)

While focusing on students' cultural identities supported their engagement with the CAPE unit, it further helped to both shape the entire classroom's discourse and allowed students to feel ownership over aspects of that discourse. Students' inquiry into their own cultures reflected back onto their peers and shaped how the understood each other's backgrounds or, as Ayako put it, "curiosity is the first step of respect" (interview, June 10, 2016). Furthermore, this afforded the ability to both figuratively and literally bring students' families into the classroom, allowing students to bring more of their identities to bear in their education. Gustavo described his ideas about how identification expanded to ownership at Boone:

> I think with the CAPE stuff that I started thinking more [about] was how to bring in the multicultural aspect. Like, our main theme that we've had for our past two projects have been cultural identity. [This] connection between cultural identity and personal beliefs. Which I'm not sure if I would have thought of that before. It was more like, "Okay, this is what we're doing for science." We [kind of] find something that kind of goes with that. I think it's a lot deeper now, with the work I've been doing with CAPE. (interview, February 18, 2016)

> My main goal through this project was to help students make the connection between finding their own identity and being able to express that through art forms as well as classroom content. I felt that we were able to achieve that goal especially after seeing their performance come to life and seeing the students really take ownership of connecting movements [in the performance] to their own readings [about their identities]. (interview, July 24, 2016)

Again, foregrounding students' identities as a primary object of inquiry mediated their taking ownership over their learning process.

At the same time, engaging in the CAPE curricula also provided students the opportunity to expand their conception of who they are, by providing multiple opportunities for students to engage with their peers and instructors differently than the grammar of schooling traditionally allows. For instance, Gwendolyn Terry shared this anecdote of her experience at Boone:

> So, those were oftentimes the ones who, I would—there were two of them in particular—and they always wanted constant approval … And, those two would have a hard time working with the other kids, and so I'd say, "Hey, you know what, since you finished early and did such a great job"—which they did—"why don't you go ahead and help the rest of your table or show other people how to do it?" At that point, they would, but at the beginning of all this, oftentimes, it was very limited. It was like, only the bare minimum, only what you told them to do, and then they would immediately shut down and be like, "I'm not...ugh." By the, the rest of the kids would be like, "Well, he's not helping me." Or, "He's not doing that." And, if I would call him out, I'd say, "Hey"—it's amazing—he'd immediately start opening up. By the end of the unit, he especially … I started noticing there was more back and forth. He was actually talking with them more. It was more of a, there was more of a sense of camaraderie going on there. And helping one another a little bit more. (interview, July 21, 2016)

From this recollection, we see how the art-making in the curriculum provided students with new roles to take with each other, resulting in increased socialization and healthier relationships between peers in the class. By allowing students to also take on the mantle of "expert" as they progressed in their artistic abilities, the CAPE curriculum opens up space for them to relate differently with their classmates, moving from "shutting down" toward developing "camaraderie." Ayako and Emily noted a similar experience in the classroom at Henry, where some students became frustrated when others were slower to pick up the steps to *do-si-do*, which resulted in conflicts between these groups of students, particularly as they tried to teach each other the steps. However, as the unit progressed these relational dynamics changed as opportunities opened up in the classroom for students to position themselves as experts. Ayako describes this shift here:

> So, in the end, some students really started to share with me their ideas about choreography. And, for second graders—when I worked with fourth- and fifth-graders, even they needed some suggestions, structure. They didn't even have, really, an ability to organize the order of movement. So, I assumed—and also, [Emily said], "Oh, they need help. They can show us some movement they can think of, but maybe I or [Emily] needs to help them structure [their dance]." So, I was thinking I need to structure [their dance]. But, some kids started to share with me some formation[s], "You do this, and everybody's like this, like that," and if I had time, maybe I could listen more carefully and I could try to figure out what he or she was thinking, but it happened towards the end [of the unit], because they experienced it, so they had more images, "Oh, this can be dance," so, in that sense—definitely, in ten, fifteen hours, what we did was something enormously rich. (interview, June 10, 2016)

Here, Ayako describes how students began to take on the advanced role of choreographer as they progressed through the CAPE unit. Moreover, this occurred in spite of Emily's initial assessment of their abilities, showcasing the fact that these curricular units provide students with the opportunity to expand their identities to include not only expertise with the media they were articulating but also as leaders within the class as they helped define the movements and choreography of the final dance performance (see Figure 8). Ultimately, the CAPE curricula allow students to become active participants in their education, not only through the feedback loop teachers and artists attend to as the unit progresses, but also through foregrounding and expanding their identities in the classroom.

RQ2. What tools, people, services, and/or behaviors have they cultivated in their arts-integration efforts? How has this changed over time as artists and teachers have developed their partnerships?

Accordingly, teacher-artist partnerships have significantly expanded the classroom relative to what many view as "real school" beholden to the grammar of schooling (Tyack & Cuban, 1995). Focusing on the curricular implementations at Henry and Boone provided a means for describing the dimensions in which partnerships' activity expands over time to increasingly meet the needs of their students. First, teachers and artists have disparate roles in expanding the classroom to accommodate the CAPE curriculum. On one hand, teachers must *create space within their classrooms*—and the institutions of which they are a part—in which the arts-integration occurs. This entails both adjusting their traditional practice as well as mitigating the demands of their schools and districts, particularly as they push towards ever-increasing standardization of education. Artists, on the other hand, enter this space with cognitive and practical skills that contravene the grammar of schooling, allowing teachers to become novices in their own classroom and students to practice *design thinking*. Taken together, the work of teachers and artists requires a facility for flexibility, affording constant adjustments in

response to their students learning. In essence, this flexibility foregrounds *students' agency* in their own education, allowing them to act as subjects driving their own learning activity. Moreover, this agency supports inquiry into their own identities, expanding their conception of who they are when they are in the classroom. This manifests in pushing the discourse of the classroom toward the multiple identities in the class as well as in the increased variety of roles they can take within the classroom, specifically one of valued expertise. Accordingly, students who participate in these CAPE curricula have the opportunity to expand their identities and play significant roles in driving the activity of the classroom.

While these two cases do not provide significant differentiation in their longevity, their testimony toward the dimensions in which partnerships' activity expands provides a sense of how partnerships progress over time. Teachers must learn how to bend the rules of traditional schooling, to both create space and protect that space from institutional pressures in order to successfully implement the arts-integrated curricula. Artists must transfer the instruments of their artistic practices into the classroom, negotiating a means to support

Figure 8. (Top) Student demonstrating her idea for choreographing the concept "sun" to the class. (classroom observation, March 28, 2016)
(Bottom) Students performing the same movement for "sun" in the final performance. (classroom observation, April 27, 2016)

students' development of design thinking alongside the specific manipulation of their medium of choice. Together, these partnerships must develop the ability to flexibly adapt their curricular designs to meet the emergent needs of their students while promoting students' agency in their own learning, thus expanding the

subject performing the classroom activity. Within their interview excerpts, both artists and teachers referred to how these skills have grown over time within their partnerships as well as how they stand in contrast to other partnerships that fare less successfully in their arts-integration efforts. As a whole, the agreement across all of the cases in this study—not just Henry and Boone—suggest that the experiences described here provide a stable description of some dimensions in which artist-teacher partnerships must develop in order to deliver quality, arts-integrated educational experiences for their students.

Expanding Outcomes

To illuminate the assessment practices of veteran teacher-artist partnerships working for CAPE, we focus on two curricula integrating science and the arts while working with drastically different student populations. The first partnership between Noreen Wojtan and Ben Murray at George Washington works with a low-incidence Special Education cluster of students with widely disparate needs and abilities. Overall, they have worked for three years in this school, which has the lowest percentage of students meeting or exceeding expectations on the PARCC exam, along with a significant percentage (93%) of low-income students (see Table 1). Meanwhile, the second partnership of Carly Jugenitz and Tim Nickodemus have worked together for four years in a general education classroom at Hamilton, the school in our sample with the highest achievement on the PARCC exam and the lowest percentage of low-income students (31%). Despite these differing populations, through the course of their work together, both partnerships have developed an emphasis on *process over product*, while providing *multiple means for inquiry* into the science content. At the same time, the assessment processes for both partnerships centered on providing *opportunities for reflection* in the partnership and classroom.

Expanding Outcomes by Privileging Processes instead of Products

The partnership at George Washington focused their assessment practices on the process of development between rehearsals and final performance to understand their students' learning instead of only attending to what the students were able to do by the end of the unit. Both Ms. Wojtan and Mr. Murray spoke about how students grew in their ability to express themselves through the multiple modalities of the visual and performing arts. For instance, Mr. Murray described the learning processes of students thusly:

> I think as far as the performance is concerned, I mean, I thought some students what they did was great, especially at the end. You could see the progress throughout rehearsal, you know? Some that, I mean, it was a big obstacle for them to be able to perform, and some were able to do it without the script anymore. They just knew when their roles were up, and being able to perfect that kind of communication, I thought, was really good. And then there was some more advanced students that had basic drawing skills and were able to make some of the whales from scratch, just going through and researching images based on who their characters were, and were able to apply more of a deeper understanding just as far as visual communication is concerned. And then, throughout that, there was specific lessons, like looking at proportions, seeing where the hole was, and then that might hopefully related to their understanding of the biology of these creatures and these ecologies. (interview, July 20, 2016)

Working with this population of students foregrounds the partnership's need to pay attention to multiple dimensions of students' growth but, by doing so, they often support students' ability to accomplish things neither the partners nor their families thought possible. Ms. Wojtan provided an anecdote illustrating how the CAPE unit elevated her students to heights neither she nor their families anticipated:

> [Last year's performance] was so exciting because they ended up memorizing the play, and we didn't think they'd be able to do that. And, by the time we performed both years, they knew it perfectly. So, we had kids who are limited in communication, and here they were up in front of families, teachers, other students ... and, here they are, up there, no scripts, and just saying their lines. I mean, the families were thrilled. They were so excited. It just brought out this confidence in the kids, and they were so proud and excited. And, then, to see their families, just thrilled. I had this one grandmother who … came up to me and was like, "Where have you been? I've never seen him do anything like this!" You know, and she was just like, I can't even put into words how she felt. It was great. ((holding back tears)) I'm choked up about it! (interview, February 11, 2016)

An integral aspect of their work with the students centers on engaging them with increasingly lofty goals, scaffolding them towards achieving these goals and, thus, providing the opportunity for students to reach beyond their conceptions of what they can accomplish. Noreen described this approach as foundational to her work with this population, saying, "every day no matter what we're doing, I want to bring them to their best, to their fullest" (interview, February 11, 2016). Furthermore, Mr. Murray attested to how this process provided the space for students to create goals for themselves under the umbrella of the broader CAPE unit:

> I don't think that a ton of the students, at the beginning of the school year, would have jumped into starting off the school year thinking that they really wanted to learn a lot more about the blue whale. But, I mean, within that I think there were certain sub-goals that some students. I mean, there was one—I don't know if he ever explicitly said it—but he was definitely out to be a really good actor. And, I think that he did, he did it. I mean, he, it was really a lot of effort on his part to really refine his skills, to communicate and enunciate clearly, and to learn the lines by himself. There were other students that really wanted to draw and take ownership of how the whale was presented and then add to the environment, and wanted to learn how to paint better, as far as brush marks [go]. (interview, July 20, 2016)

Initially, the partnership sets goals for students that seem out of reach, but subsequently foregrounds the procedural steps that gradually move them towards attaining those goals. This process that the partnership at George Washington initiates allows their students to focus on the discrete aspects of their education that, taken together, culminate in a performance that stretches their academic and artistic abilities. At the same time, the partnership does not disregard the quality of the final performance that the classroom brings forth but, instead, they privilege qualities of the process over the product. As Mr. Murray put it, "before, I think I had more of an ambition to make something a little bit more spectacular, but now I don't think that's the importance … I think it's a lot more that they have the ownership" (interview, February 15, 2016). In the end, this ownership arises through attending to the process of learning their lines, designing the props and set and, thus, investing in the final product through the processes they engage in. Ultimately, emphasizing the process serves as the foundation for this partnership's assessment practice, as they observe the gradual consummation of the students' efforts throughout the CAPE curriculum.

Moreover, students' tendency to focus on the end product often prevents their ability to value the investment of effort and time they place in the process. Tim Nickodemus described the extensive lengths he and Carly went to in order to push students towards focusing on the process over perfecting the product:

> I don't think we realized how much care and—I almost want to say obsession, or maybe love—that they put into their artwork. I know that might sound a bit odd, because that's to be expected, that students would really care for what they're making. But, in the way that they got very precision-oriented, in a lot of ways, we had to steer them away from that … [So] we did some exercises early on where we gave them a single sheet of paper with just a pair of scissors, and they had to construct a model of a building out of it. They didn't get any tape or anything like that. And we went through that exercise a few times. They liked it. They had fun with it. And they came up with forms that they hadn't anticipated. We did a drawing exercise where people closed their eyes and they scribbled, and then they opened their eyes and they had to turn that into a building, a drawing of a building, in some capacity. And, so, we kept doing those exercises with them, and I think they got a lot going through this quite often, that this wasn't going to be—I don't know what to call it—a diorama project. Where it's got to be a perfect replica of something. That it was going to be a bit more experimental. That it was going to have to be more flexible. And we kept repeating those kinds of terms to them, that we're going to have to keep changing, and changing. I kept using the word "tweaking." Tweak things. (interview, June 28, 2016)

Essentially, these partnerships foregrounding the process clearly echoes the design thinking that artists bring into the classroom, adapting the discourse of the classroom to allow space for students' imperfections and opportunities for iterating and "tweaking" ideas and their manifestations of those ideas. Here, Mr. Nickodemus provides an account of how much effort instantiating this process of design thinking requires, and how it required repeated engagement in exercises that stretched students' conceptions of "right" and "wrong." At the same time, this privileging of process over product resulted in difficulties for documenting the assessment of students' progress over the course of the curriculum. Tim expands on these difficulties here:

> Well, some [of the assessment was] really ephemeral, as in those, "Here's a sheet of paper. Make a building out of it." We knew that when the next class came in, those would be matted, folded, squished, et cetera. We tried to save a few of those. So, we took some pictures of those. And, a lot of drawing. And then, a lot of playing with the materials that we were going to use, but not playing with the materials in the way we were going to use them. So, give them the materials as practice, but this time we're going to design transportation or we're going to try and make a portrait … also, we kept experimenting with the students with those shorter exercises to try and illustrate rather than keep saying, "Well, you're going to have to change this." You know, after a while, that just sounds like, "Well, you screwed up so you have to fix it." To illustrate that the design process is a lot about revision and reimagining and rethinking and sometimes even setting something aside for a while and coming back to it with fresh eyes. Or, stopping and starting in a new spot. (interview, June 28, 2016)

Based on these accounts, the process of bringing design thinking into the classroom requires privileging the process of creating the artwork and taking away the "preciousness" of the final product, thus allowing students to "revise and reimagine and rethink" as they engage with the inquiry of the CAPE curriculum. At the same time, this can create a significant amount of work that remains invisible to the outside observer, despite the depth of assessment activities occurring in the classroom—a fact we will address directly later in this writing.

Despite this potential lack of visibility, foregrounding process over product not only supports constant engagement with the ideas undergirding the curriculum, but can also broaden participation in academic activities (Peppler, 2013), reaching populations as disparate as those in the George Washington and Hamilton classrooms.

Expanding Outcomes by Providing Multiple Means of Engagement

Broadening the participation in classroom activity further requires assessment practices that provide students with *multiple means for inquiry* into the artistic and academic content. At George Washington, the broad range of abilities the students brought to bear required flexible approaches to providing for engagement with the curriculum. Noreen Wojtan argued that not only were multiple means for inquiry necessary for her students, but the multiple modalities of expression provided greater insight into her students' understanding and abilities, especially when compared with situations where she's limited to verbal or written communication:

> So, to me, the fact that she could draw [the whale], I know she looked at—it wasn't a diagram, it was a photo—so, she looked at this photo and came up with a pretty decent drawing of it … To me, she could comprehend what that was, so it's an example of her comprehension … So, then, I mean, you can see that they comprehended what they were looking at. Like, they took it in, not only discriminated, but they also comprehended it … because, yeah, there are times where you have to do things limited to words, and, for them, it would be hard to tell what they are getting out of it if all you're doing is using words and not, like, a multi-disciplinary type of thing. Multi-sensory … I suppose even just, like, reading, reading an excerpt. If it didn't have, because we use a lot of—not only them producing—but we use a lot of visuals to help them understand, so, words with pictures and stuff like that. So, if they're just strictly using words and then they're repeating the words, you're limited to see what they really get out of it. (interview, February 11, 2016)

Here, Ms. Wojtan emphasizes the need for multi-disciplinary approaches to academic content for her students, as they mediate both the comprehension and production of students for the curriculum. In a subsequent interview, she further described how one student required multiple modalities for engaging with the curriculum this year due to his particular set of challenges:

> Trying to get everyone involved, you know, your hope is that everyone will participate in the play, but we had one student who just wanted no part of it. He didn't want to do it last year either. I would say this year he participated in the artistic part of it, the visual arts part of it, where he actually painted the scenery and colored some of the backdrops and that kind of thing. So, even though he would not say the words when we wanted him to with everyone else and actually perform, he did a lot for his ability as far as participating in the visual arts part of it. (interview, July 19, 2016)

Providing for multiple means to engage with the inquiry of the CAPE curriculum not only allows for more accurate assessment of students' abilities, but also was foundational for this student's engagement with the classroom activity. Similarly, multiple modalities afford her ability to differentiate amongst student's abilities within and across disparate aspects of the play's production. She described how this process played out for the class as a whole:

> For the ones that were more challenged, we did a lot of whittling down of the amount of words that they needed to learn and practiced over and over, trying to give them an idea of meaning, so that it made sense for them. And then, for the more capable kids, sometimes they would start on their own substituting words and then catch themselves, and we would talk to them about the words that they came up with. And if it was a good fit because it got the meaning across, we would say, "Go ahead with what you came up with. We'll use that instead." And then, they also, using the research they had done, did some of the actual drawing that the other kids then added color to. So, the kids that were unable to do a drawing, someone else would get the notion of what they were trying to depict. So, we would have the more capable students draw the whale and then guide the other kids that would have trouble with that, they would guide them as to what colors to use and where to add the color and that kind of thing. (interview, July 19, 2016)

In this sense, designing the CAPE curriculum to allow students to engage at multiple levels within and across artistic media and academic subjects allows the partnership to assess students' abilities even when they range widely within a single classroom as they did in Ms. Wojtan's and Mr. Murray's. The interdisciplinary and multimedia foundation of CAPE curricula thus provides teacher-artist partnerships to engage a broader variety of students and allow for increasingly informative and accurate assessments of their abilities.

At Hamilton, the importance of providing multiple means for inquiry became central to the partnership's delivery of their arts-integrated curriculum as it broadened participation across the classroom while simultaneously broadening the perspectives they brought to bear on the inquiry. In fact, the curriculum's design centered on promoting students' engagement across modalities and disciplines, which the partnership

viewed as a primary goal, in and of itself, for the curriculum. Carly Jugenitz defined a successful curriculum as following:

> What I consider successful is that the students have widened—not their understanding—their view of the topic that we've brought to them, the question we've given them to think about throughout the unit. And, they've done this through being exposed to different art, written reflection, and actually doing and creating. (interview, February 29, 2016)

In this sense, the partnership viewed the multiple means afforded by integrating art with academic content as supporting the expansion of students' perspectives on the inquiry of the CAPE curriculum. These perspectives expanded further through the reflective writing, discourse, and tweaking embedded within the classroom activity as the class engaged with the question, "How does light shape a city?" (online documentation, retrieved July 24, 2016). Concomitant with their expanding perspectives, Carly described how academic content plays a central role in driving the specifics of students' inquiry processes:

> Well, I feel like the questions we ask for CAPE are more broad, in the sense that there's not specific things, specific answers that's going to say the student's right. It's more of, "Well, are they thinking about it and also considering this content in the way that they think about it?" … And then, really, the way that Tim and I would assess, "Well, are they bringing in these external ideas into the way that they think about our big question or our big idea?" … So, you know, [for our unit this year] we want them to think about how this idea of light affects or impacts architecture as well as city design. So, things that I would cover would be geography … "Do they consider things having to do with Earth's geography, like, the Sun rises in the east, sets in the west?" … Are they taking their knowledge of geography and using that to help them construct their ideas about how light really affects architecture or how it affects the way that cities are designed. (interview, February 29, 2016)

This description of the Hamilton classroom presents the curriculum as expanding beyond the specific medium or discipline originally targeted in the partnership's proposal. As she described it, "I can start from day one of class, start posing questions that will have them make the connection between what we're studying and possibly something bigger … subtly integrating it throughout the school year" (interview, February 29, 2016). Moreover, by providing multiple means for engaging with the inquiry and intentionally connecting content with the CAPE project, Ms. Jugenitz saw benefits in other subjects and curricula outside of the work for CAPE:

> I see the benefits just in a larger sense. When they have the opportunity to create, they naturally start thinking in a way that's, I guess, not so boxed in. They're able to consider ideas from alternative perspectives, more creative, more—not like broad—just off the beaten path. Like, they start questioning things more and they start considering ideas from different perspectives. And, I don't know how closely that relates, or like how much I can associate that with their experience with CAPE. I think it's definitely related. I think that having art in the classroom and giving them the opportunity to create aids their ability to think in alternative ways … [for example,] I was impressed with the ideas that students would bring up, like, when we were studying World War I and II. Thinking beyond just the, main causes. They definitely questioned what else was happening at the time to—that could possibly be related to the events that were going on. (interview, July 21, 2016)

These descriptions provided by Ms. Wojtan and Ms. Jugenitz underscore the importance of providing multiple means for students to engage in the inquiry process that partnerships facilitate in the classroom. Not only do multiple media and disciplines afford differentiating the instruction and assessment of students, they broaden both the population of students that can participate in the program and the perspectives students take as they approach their education, from the CAPE curriculum and beyond.

Expanding Outcomes through Reflective Generation

At the same time, providing these benefits requires teachers and artists to engage in constant assessment activities with their students. In addition to the formative feedback processes described previously, a primary means for these partnerships to assess their students focused on providing space for students to *generatively reflect* on their activity in the classroom. By providing students with consistent opportunities to reflect upon the manifestations of their learning—whether they were performances, artifacts, writings or discourse—partnerships allowed students to generate their own insights from their experiences with the CAPE curricula.

Due to the differences in these classrooms, the opportunities for reflection and the ideas generated through these processes differed significantly between George Washington and Hamilton. At the former school, the reflective opportunities primarily served two functions. First, they provided students with the means to place their individual performance in a larger, class-based context. As they engaged in rehearsals of their play over the course of the year, students increasingly understood the commitment required of them to prepare themselves for

their final performance (see Figure 9). Mr. Murray described how these reflections on their rehearsal process signified the importance of this work for the students in previous years:

> We would notice the students getting excited about it. They were really getting engaged as far as being able to perform and then getting better at something. They would do these daily assessments of their actions. Then, they would—almost every student would answer, "We need to practice more," at the end of the day, so, like, that's good. That's good. That they turned it into work and realized that it took a lot of effort to embed that kind of consciousness for that big empowerment day [of the final performance]. And then, I think, after that, the results. Even with the following year, they would talk about the, they would talk about the play last year and then look forward to the next one coming up. Yeah, so, they would talk about that. I don't remember them—I think they would talk about the performance. Maybe there wasn't so much talk about the subject matter at hand. You know, the first one was about, it was fairy tale, I think it was based off of Grimm's and then, like, no one was talking about the frogs or the bunnies, right? There wasn't so much, we didn't get into the [narratology] of it, but, yeah, I think the performance and the whole process was the thing that they were excited about. (interview, February 15, 2016)

From his description, the reflective process for students served to impress upon them the reality of the goal they had collectively taken up, motivating the realization that the process of practice would ultimately prepare them

Figure 9. George Washington classroom's trajectory from set creation and rehearsals to final performance: (Top Left) Whole-class script reading; (Top Right) Title card from final performance; (Middle Left) Students working on whale drawings with aid; (Middle Right) Final performance with whale masks/signs; (Bottom Left) Students painting waves for set; (Bottom Right) Students in front of set for final performance. (all photographs were taken during either a classroom observation on March 23, 2016 or observation of final performance on April 15, 2016)

for their "empowerment day." Moreover, their responses in these reflections suggest an understanding that their individual performances were part of a larger context, persisting in the memories of their peers and families, and anchoring future experiences. Indeed, Noreen provided a similar description of how these performances stayed with her students, recalling, "some of the kids that are still here will repeat certain lines from their first play … They'll bring that up … It becomes just, such a big part of them, you know? And it brings out so much (interview, February 11, 2016). While the specifics of the content took a backseat to the performance, students' reflections in Ms. Wojtan's classroom generated a sense of belonging to a larger ecology and chronology, connecting them to something larger than themselves. Secondly, opportunities for reflection in the George Washington classroom served as reminders of their past successes, increasing their trust in both teacher and artist, which, in turn, buttressed their confidence as they faced their next challenge. Ms. Wojtan described how she and her partner artist served as reminders for students of their success:

> It would make our relationship stronger, because once they see, "We could do it. You pushed us, but we could do it. You were right." I think that carries over to other things, like more trust and confidence. That they know I'm not going to, that I believe in them and that I'm not going to push them to do something they can't do. I think that's, for any one of us, if you do something you were a little afraid of and that you couldn't really do in the beginning, then when you succeed, the next time you'll be a little more confident. (interview, February 11, 2016)

Accordingly, the opportunities for reflection that students encountered at George Washington served to concretize their connections to their community and anchored their progression across performances over time. As the students progressed through this year's CAPE unit (see Figure 9), they again reinforced their connections to their families and peers, publicly performing a play they persisted in learning with the support of the classroom community. In addition, they strengthened their trust in their artist and teacher as they achieved a goal that again stretched their abilities, redefining their understanding of what they are capable of as they progressed year to year.

The partnership at Hamilton also provided multiple opportunities for students to observe and reflect on their artifacts from "blueprint to building" (Carly Jugenitz, interview, July 21, 2016), but foregrounded different aspects of students' experience with the curriculum in their reflections. Carly described the reflective process in her classroom, particularly as she paired it with class discussions where students publicly articulated the reasoning behind their designs in their collaborate planning of the classroom's city:

> So, we have blueprints. So, we have, actually, their thought process from the beginning to this. You know, so, we have their notes, we have their designs. Maybe they started looking nothing like this, but they have, kind of, evolved. And, I feel like that, documenting that process is really helpful. Getting a sense of the way that students are thinking about it. And, also, as a class, when we put all of these buildings together, they're going to have to be able to verbalize why they want to put them here. It's going to be more of a debate, so students are going to have to be able to verbalize the reasons behind them thinking a certain building should go in a certain place. And we'll be able to see from there how they're thinking as well … they're working together, but along with working together comes disagreements. So, it's like that open debate. Being able to come to a class decision on, "Okay, yeah, I think this is the best place for said building." (interview, February 29, 2016)

Fundamentally, these reflective opportunities also provided fodder for Ms. Jugenitz's formative feedback to her students, an effective assessment practice that has significant benefits for students' learning (Andrade, Hefferen & Palma, 2014; Black & Wiliam, 1998; Black *et al.*, 2004). She described how these reflections informed her and her partner's instructional practice:

> Because, you know, even though [Tim] and I outline the idea, you know, "You need to create this sort of building for this sort of location," students can sometimes interpret that differently. So, looking back and seeing their thought process on paper is helpful for me, because I can see, "Oh, maybe I need to guide them in this way or they need help making this connection between—I don't know—like, powering, like a building being able to power itself and the design. Things like that. So, it's more, I guess [the feedback is] more student-by-student depending on their work … [For example, I ask,] "Why did you do this?" Or, "Can you explain your thinking behind this?" Or, "I don't understand what you wrote here or how you designed this." So, really filling in, having them tell me in their own words why they did certain things. Just, in conversation, you know, defend their ideas. "This is why I made that choice." … But, getting them to think critically really does include that questioning and you have to do it all the time. And, a lot of times they don't do it to themselves, and so getting them to look at their own work and see the questions I'm asking, maybe that's going to help them start asking questions about their own work. And then, like, translate that into other things that they encounter. (interview, February 29, 2016)

Figure 10. The representational trajectory of an Hamilton student's natural light building: (Top Left) Original blueprint; (Top Right) Iteration of blueprint; (Middle Left) Working on building model with aid of artist; (Middle Right) Reflection on the building's role within the classroom's city of light; (Bottom Left) Picture showing building placed with in classroom's city of light; (Bottom Right) Final reflection on the CAPE project. (all photographs except for Middle Left were retrieved from online documentation, July 24, 2016; Middle Left photograph is video still from classroom observation, March 18, 2016)

Ultimately, the collaborative discourse and formative feedback generated through reflection led to Ms. Jugenitz and her class collaboratively creating and explicitly reflecting upon the *representational trajectories* they traversed over the course of the unit. Halverson (2013) defines these trajectories as akin to the "progressive formalization of representations valued in progressive math and science education," where students' artifacts increasingly reflect deep engagement with complex content (p. 122). Reflecting on their representational trajectories supported individual students' as well as the entire class' learning process. Ms. Jugenitz described this culminating reflective event, which occurred in her classroom at the end of the CAPE unit (an example of one student's representational trajectory is provided in Figure 10):

> So, basically, at the end, the students and I sat down and we were like, "Okay, here's all of the work that we've done throughout this time." And, we basically set it out in a chronological timeline. And, so, the students were able to see their work throughout the span of this project. And, it was nice. These could be anything from their blueprints to short written reflections throughout the project. So, a lot of it was very tangible work that the students had created. That was the way that we were able to document their progress … basically I was like, "Listen guys, we've got all sorts of our work and we need to, before we do our final reflection, we need to recap and take inventory of everything that we've done." So, it was more of a collaborative activity. We, as a class, kind of like, "Oh, here's this work." And then, as a class, we would just place this work chronologically. And, it was actually pretty cool to see their reactions going back to look at some of the work they created earlier on. Because, they were like, "Oh yeah!" It was neat to see them go back and reflect on their own work … it was more of the collaborative activity, like, "Let's go back and do this and try to figure out where we've come [from]." (interview, July 21, 2016)

She differentiates this process from collecting an archival portfolio of students' work by focusing on how the representational trajectories supported students' generation of insights in their reflective writing:

> Because, it's almost, like, you can keep a portfolio of work, but actually going back and revisiting it all, and placing it, I don't know. It just seems like, it was nice, it gave—not like closure—but it gave them a sense of understanding of, "Wow, we've come a really long way. Like, we started here and look at everything we've done and what we've created in the end" … [In their written reflections] they wrote about their personal progress, you know, experience and how they, how their work and ideas changed over time. That was the reflection they did after that. I think it was helpful for them to actually go back and revisit before writing that reflection, because then they had a better idea of where they had come from … based on the tangible activity, the written reflections were more meaningful and more true … they were more detailed in terms of providing examples of their work. So, they were able to identify actual pieces of work that were critical in the process. Like, real turning points for the change that they made as artists … I know a lot of students wrote about their ideas about architecture and design and how over time their ideas about that design changed. (interview, July 21, 2016)

Essentially, by providing students with an explicit opportunity to reflect on their representational trajectories she provided them with the means to walk back over the path they had taken in the course of the CAPE unit. Indeed, Latour (1999) argues that this process of walking back is fundamental to learning, writing, "[t]o know is not simply to explore, but rather is to be able to make your way back over your own footsteps, following the path you have just marked out" (p. 74). Publicly presenting her students with these representational trajectories in conjunction with their final reflective prompt created an opportunity for students to generate connections with their own thinking across time and within their classroom community, expanding their conceptions of their abilities. Critically, this echoes the effects of generative reflection at George Washington, grounding students in their respective ecological and chronological contexts.

RQ3. How do Vets partnerships assess the learning of their students? How have these assessments changed between implementations of their arts-integrated curricula? How does assessment differ between partnerships?

Based on these cases, the assessment of students in Vets partnerships occurs primarily through formative feedback and generative reflection. Both forms of assessment occur through informal discussions with students, while the latter takes further forms ranging from public discourse, written responses, and artifact creation. As partnerships become comfortable with implementing their designed curriculum, they present students with increasingly ambitious goals and expand the means for students to participate with the curriculum. Providing multiple means for students to engage in the CAPE curriculum expands student participation and perspective, expanding the community as well as the context of classroom learning. This expansion furthers opportunities for generative reflection, allowing students to ecologically and chronologically contextualize their activity. Indeed, the similarity of assessment practices across these disparate classrooms presents an interesting source of continuity in the arts-integration process supported by the Vets program.

At the same time, partnerships necessarily individualize these assessment activities, resulting in processes that, at a surface level, seem substantively dissimilar. As different Vets partnerships idiosyncratically archive documentation of their curricula online and for exhibitions such as CAPE's Convergence, the archival collections present a jarring disconnect between fundamentally similar processes of assessment. How partnerships select artifacts and design opportunities for students to re-represent their understanding of complex concepts remains an underdeveloped practice in Vets partnerships. Moreover, many of these assessment practices lend themselves to being invisible to outside observers. Formative feedback remains predominantly invisible and opportunities for generative reflection may occur spontaneously in the classroom instead of being intentionally elicited. For example, the chronological ordering of students' artifacts occurred in response to an impending visit by a CAPE staff member to collect their buildings for this year's Convergence exhibit. While Ms. Jugenitz expressed the intention to revisit this process and expand it to other areas of her instruction, the practice of explicitly providing these chronologically ordered reflective experiences remains underutilized in Vets partnerships' assessment practices.

Limitations and Recommendations

In the end, these findings derive from a limited number of cases selected by CAPE staff for study based on opaque conscious and/or unconscious reasons. Thus, these findings may not broadly generalize to partnerships in the Vets program or to other partnerships participating in CAPE programming. That being said, exploratory case studies such as this writing provide theory-based guidance for refining programming and pursuing further research. Hence, despite the small sample size, the findings presented in this writing suggest avenues for improving the Vets program, and iteratively developing a program of research to uncover how these designed changes affect the work of teacher-artist partnerships. Ultimately, the participating partnerships of the Vets program displayed similar developmental trajectories despite a wide variety of content and media in these curricula. By making comparisons across partnerships, we argue that the dimensions along which these partnerships expand their practice have been accurately represented in this writing. Furthermore, by shifting the professional development supports to directly address these dimensions of learning, CAPE can accelerate the learning of new partnerships while expanding the activities in their veterans' repertoire.

The following recommendations for the Vets program are organized based on the Artist-Researcher Model that CAPE presented to their veteran teachers and artists across multiple different professional development sessions during the 2015-2016 school year. While we acknowledge that this model may not persist in its current state—and, indeed, may be scrapped altogether—the amount of time devoted to spreading the model and having partnerships reflect on its characteristics suggested that organizing recommendations along its dimensions would prove valuable to the program. The five dimensions of the CAPE Artist-Researcher Model (ARM) are (1) *reflective questioner,* (2) *critical collaborator,* (3) *role-shifter*, (4) *integrative innovator*, and (5) *social engager.*

Reflective Questioner

As described by CAPE, a reflective questioner "begins learning through a questioning process, revisits questions throughout the art and academic process, and, through reflection, *generates* new questions at the end of a project." The critical aspect of this dimension of the ARM hinges on the constant generation of new questions and ideas through engaging with the CAPE curriculum. Overall, we saw aspects of this across the partnerships studied here. At the same time, the primary recommendation along this dimension that emerged from this work concerns how partnerships translate generating questions for their own practice to simultaneously support students' generative reflection. Accordingly, we present the following recommendations to support this multi-level generative activity:

- Provide opportunities for successful veteran partnerships to share how the support successful generative reflection in their classrooms. For example, the chronological ordering of students' work at Hamilton could (and we argue, should) serve as a model for other partnerships reflective questioning for themselves and their students.
- Use collected student work artifacts (from Convergence or other sources) to center discussion during professional developments, stimulating reflection on how artists and teachers understand student thinking based on these artifacts. Furthermore, this could also provide the basis for Vets members to reflectively generate questions about their own practice and its relationship to student work (e.g., what kind of artifacts capture students thinking about an inquiry question?).

Critical Collaborator

Critical collaborators "wonder, grapple, and invent while partnering with other Artist/Researchers." While this definition provides a relatively vague understanding of this dimension of the ARM, findings from this study expand our understanding of what "partnering" looks like in Vets. While both teachers and artists can "wonder, grapple, and invent," the work done in the classroom often takes different forms depending on what role the Vets member takes on. Teachers must mitigate institutional pressures that artists may be ignorant of, while artists bring cognitive and material practices to the classroom that position teachers as novices. Based on the different definitions "partnering" takes on for teachers and artists, we make the following recommendation:

- Provide further differentiated professional development sessions. Several artists mentioned how valuable they found the 2015 summer session that was artist-only for their own practice. By having some teacher- or artist-only sessions, CAPE can target resources towards addressing the specific types of work these roles undertake when implementing the curriculum in the classroom. For example, teachers may need support in understanding how to schedule their curriculum around the vagaries of "testing season" in CPS. On the other hand, artists could develop their ability to teach design thinking (or studio thinking) to students in different contexts.

Role-Shifter

"During their collaboration, students become artists, artists become teachers, [and] teachers become students, as their roles shift to bring them new perspectives and abilities." This dimension of the ARM, in particular, received significant support from the findings discussed in this writing. At the same time, not all students, artists, or teachers are prepared to take on these roles, specifically in the context of the classroom. Easing this transition for participants in CAPE curricula will facilitate increasingly ambitious learning. Hence, we make the following recommendations:

- Teachers need support in both accepting the role of novice in their classrooms—traditionally the space in which they are the *only* expert. Furthermore, they need support in understanding how to create space in their classrooms for students to become novice artists and transition towards expertise. Flattening this power dynamic does not necessarily come naturally to all teachers, and providing support from fellow teachers or other experts could facilitate the success of CAPE curricula.
- Artists also need support in becoming teachers, particularly in understanding how to manage classrooms, especially if they have to handle any trauma their curriculum unearths in their students (particularly if their curriculum focuses on family, culture, or other personally-driven topics).

Integrative Innovator

This dimension has Artist/Researchers working and thinking "across multiple artistic and academic disciplines to develop new ideas and create original work." In some sense, this dimension of the ARM stands at odds with the Vets program. If longevity of teacher-artist partnerships is valued at the same time as engaging across artistic and academic disciplines, then there must be some differentiation at either the level of time-scales, across CAPE programs that members participate in, or some other form that is not readily apparent. That being said, the present study speaks to this particular dimension in two ways, resulting in two different recommendations for Vets programming:

- First, within classrooms, providing multiple modalities for engaging in inquiry was seen to broaden participation from student populations as well as the perspectives they brought to the CAPE curricula. In that sense the value of being an *integrative innovator* lies in providing multiple avenues for students to be successful in the curriculum. However, some artists and teachers may need greater support in order to accomplish this. For example, high school teachers are specialists, and often do not have expertise in multiple academic disciplines. Similar issues may face artists with respect to their media of choice. Again, finding examples from within the expertise of Vets partners could provide effective resourcing to address this need.
- Second, over time many partnerships iteratively refine a particular curriculum, slowly expanding its scope with respect to its artistic and academic learning objectives. At the same time, injecting new people into a partnership can support establishing novel routes of success for students as well as developing the original work that this dimension supports. One recommendation to support this dimension in Vets partnerships is to begin thinking about how to push partnerships to develop new curricula after a number of iterations of a single curriculum. While this study did not have a large enough sample to suggest a specific number of years that this type of "cycling" would be appropriate, the findings do suggest that partnerships can adapt

their curricula to new academic or artistic disciplines (e.g., plays incorporating ELA and science). Again, finding veteran partnerships that have multiple curricula under their belt and providing them the opportunity to share with other partnerships could prove an effective way to disseminate resources that support development along this dimension.

Social Engager

The final dimension of the ARM has teachers and artists using "their art as a tool for public dialogue and interaction." As it stands, the wording of this dimension does not represent the contextual element of this dimension in practice. Using "art (and education)" to promote public dialogue and interaction does occur across many partnerships, but often these interactions occur in the classroom, a space where students take on multiple, valued roles (e.g., of expert, communicator, artist, teacher). The contexts of these interactions remain valuable for promoting the roles that students (and, probably, teachers and artists as well) feel comfortable taking up. Hence, engaging in these public dialogues and interactions requires attention to the contexts in which they occur. Based on this work, the following recommendation can be made:

- If CAPE wishes for these dialogues and interactions to occur in increasingly varied contexts, then an infrastructure needs to be provided for partnerships and their classrooms to practice their curricula in these contexts. For example, the partnership at Daley specifically visited the exhibit at Instituto Cervantes as a class, which allowed students to take on roles in another space that they had previously only exhibited in the classroom. Expanding these types of opportunities for students requires deliberately promoting these types of events and urging (or incentivizing) partnerships to take advantage of them.

Conclusion

Ultimately, Vets partnerships have expanded their practice along every node of Engeström's activity triangle, including how they and their students evaluate the outcomes of their work. However, these expansions do not occur equally across different partnerships, classrooms, and contexts. Instead, the expansions arise emergently based on the interaction between the designed curricula and the students of the partnerships. In order to intentionally foster the expansion of partnerships' practice in certain ways, CAPE must pay attention to why partnerships have (deliberately or unconsciously) changed their practice. By focusing on the expanding activity of Vets partnerships, CAPE programming can further refine what being an Artist/Researcher means for teachers, artists, and their students.

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Endnotes

[1] Due to Teach for America's model, this results in significantly less experience in classrooms than a new teacher who had graduated from a traditional teacher-education program.

[2] Instituto Cervantes (chicago.cervantes.es) hosted the annual Convergence exhibit for CAPE, showcasing students' work for Vets and other programs from the previous school year (capeweb.org/events-exhibitions/con2015).

[3] The Common Core State Standards (www.corestandards.org) apply for the ELA standards, but Illinois has not yet adopted the Next Generation Science Standards (www.nextgenscience.org). Hence, Mr. Soto likely applied the ACT College and Career Readiness Standards (www.act.org), which have been the standards used in Illinois for more than a decade.

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