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Evaluating the Impacts of a Multi-Year Arts Integration Program on Student Outcomes

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Evaluating the Impacts of a Multi-Year Arts Integration Program on Student Outcomes

A dissertation submitted in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy in Education Policy

by

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Abstract

My dissertation evaluates the first year of a three-year intervention, the Windgate School Partnership Program (WSPP), where participating schools participate in three week-long arts integration units taught by resident artists and two educational tours at Crystal Bridges Museum of American Art led by museum educators. The WSPP looks to affect students' academic and non-academic outcomes through an arts-integration program that includes two key features, artist residencies and field trips. A recent meta-analysis of arts integration studies suggests a moderately positive effect on many student outcomes (Ludwig et al., 2017). I use a mixed-methods research design to measure and describe the first-year results. In this mixed-methods study, I examine the following research questions: what non-academic outcomes are associated with participation in the WSPP; what academic outcomes are associated with participation in the WSPP; what the program looks like for participants; and what the participants think of the first year of the program.

For the quantitative portion of this study, I examine how this program affects students' academic and non-academic skills. Because the program is implemented uniformly in participating schools' third grade cohort, I use an adjacent cohort, the school's prior-year third grade cohort, to serve as a comparison group for the treatment third graders. In addition to estimating the average effect of the intervention, I conducted a phenomenological case study to provide a description of what the program entailed and what the program experience was for participants.

The findings from these two arms of my research study indicate a significant, negative effect associated with program treatment on students' desire to participate in creating art in the future and their self-reported levels of empathy toward others. There were marginally significant,

negative effects associated with treatment on students' desire to consume art as well as their self-reported level of tolerance toward others. From the findings of the qualitative study, students spend the majority of their classroom time participating in visual arts or dance/theater arts activities that support the subject matter for each week in the classroom. Students were engaged and the classroom teachers were supportive. During the field trips, museum educators engaged students' interest and thinking with a skillful questioning regimen as well as activities that reinforced the content. Students, classroom teachers, resident artists, and museum educators all describe generally positive views on the first year experience; some potential areas of improvement include reworking the classroom teachers' professional development as well as improving the communication between the two main program providers, the resident artists and museum educators. From these findings, I suggest future policy recommendations when implementing arts integration collaboration programs.

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Dedication

To my family – my original and abiding support system: Grandpa, Grandma, Mam, Paw, Brian, Emmadell, Zach, Griffin, Christie, Gus, Emma, Ivy, Violet, and Payton. Thank you.

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Chapter 1: Introduction

The value of participating in arts activities or creating art can be measured by both its benefits to an individual as well as society (McCarthy et al., 2004; LeRoux & Bernadaska, 2014). Studies have shown that students benefit both academically and socially when they participate in arts activities (Catterall et al., 1999; Catterall, 2009; Greene et al., 2018; Bowen & Kisida, 2019). Since the beginning of the school accountability era in the United States, students may have fewer opportunities to participate in and less access to arts-related activities or learning. Students may not be spending as much time in visual and performing arts classes because schools are focusing on preparing students to take standardized exams in core subjects (Bassok et al., 2016; Reback et al., 2014; West, 2007) or due to budget constraints (Gadsden, 2008); this is especially so in low-performing schools, schools with higher proportions of minority students, or schools with higher proportions of students eligible for free/reduced-price lunch (Rabkin & Hedberg, 2011; GAO, 2009).

If students benefit from studying and participating in arts education, how can schools reap these benefits while still acknowledging true resource constraints, like time and money? One way that schools may bring arts education back to their students could be through arts integration programs. The Kennedy Center defines arts integration programs broadly as “an approach to teaching in which students construct and demonstrated understanding through an art form” (2020). Students use various visual or performance art modes to explore and learn about traditional subjects like math or reading. In addition to the potential academic and non-academic benefits arts-integration programs may have (Ludwig et al., 2017), school leaders may pursue arts integration programs because they are a way to bring back arts in the classroom (Mishook & Kornhaber, 2006). Schools can partner with local arts organizations, like symphonies, theater or

dance troupes, or museums to pursue these arts integration activities (Catterall & Waldorf, 1999; DeNardo, 1997). The Windgate School Partnership program is one such collaboration.

This Study

The Windgate School Partnership Program (WSPP) is an arts integration collaboration between Crystal Bridges Museum of American Art (Crystal Bridges), Trike Theater, and 17 schools in the region. The purpose of the program is to develop students' "critical thinking skills, tolerance, and empathy through in-school art interventions and field trips to Crystal Bridges" (Crystal Bridges, 2020). Throughout the academic year, students in participating schools receive three week-long arts integration units taught by resident artists as well as two educational tours at Crystal Bridges led by museum educators. The intervention lasts for three years, following the students from their third-grade year through their fifth-grade year. My dissertation evaluates the first year of their three-year intervention. The WSPP looks to affect students' academic and non-academic outcomes through an arts-integration program that includes two key features, artist residencies and field trips. Prior research of arts-integration programs suggests a moderately positive affect on various student outcomes (Ludwig et al., 2017). However, the arts integration programs in these studies do not last for as long as the WSPP nor do they look at the effects one program has on as many students in as many schools as the WSPP intervention collaborates with. My dissertation examines the effects of a large-scale, longitudinal arts integration program implemented in 17 schools in three states.

I use a mixed-methods research design to measure and describe the first-year results. In this mixed-methods study, I examine the following research questions:

1. How does participation in the WSPP affect students' non-academic outcomes?

2. How does participation in the WSPP affect students' academic outcomes?¹
3. How engaged are participants in the program activities?
4. What do the participants think of the first year of the program?

For the quantitative portion of this study, I examine how this program affects students' academic and non-academic skills. Because the program is implemented uniformly in participating schools' third grade cohort, I use an adjacent cohort, the school's prior-year third grade cohort, to serve as a comparison group for the treatment third graders. Treatment students are compared with comparison students within the same school; it is plausible that students who attend the same school at approximately the same time would be similar to each other on average. To measure students' non-academic outcomes, I use a survey instrument that measures whether students are interested in consuming art, participating in making art, their interpersonal and creative empathy, their tolerance for people different than themselves, their level of engagement with their school, and their ability to view situations from other people's perspective. To examine students' academic outcomes, I use administrative data on standardized test outcomes, absences from school, and number of disciplinary infractions.

In addition to estimating the average effect of the intervention, it is important to provide a description of what the program entailed and what the program experience was for participants. Because this is a relatively ambitious and novel arts integration program, these descriptions may be used to improve program delivery for the WSPP in the following years as well as serve as guidelines for other school and arts entities that wish to collaborate in the future. I conducted a phenomenological case study to provide these descriptions. A phenomenology answers two basic

¹Non-academic outcomes are *arts consumption, arts participation, empathy, tolerance, school engagement, and social perspective taking*. Academic outcomes are performance on ELA and Math standardized tests, number of disciplinary infractions, and number of absences.

questions – what happened and what did the experience feel like for those involved. My sources of information for this case study come from program artifacts, field observations, and focus group interviews.

The findings from these two arms of my research study indicate a significant, negative effect associated with program treatment on students' desire to participate in creating art in the future and their self-reported levels of empathy toward others. There were marginally significant, negative effects associated with treatment on students' desire to consume art as well as their self-reported level of tolerance toward others. From the findings of the qualitative study, students spent the majority of their classroom time participating in visual arts or dance/theater arts activities that support the subject matter for each week in the classroom. Students were engaged and the classroom teachers were supportive. During the field trips, museum educators engaged students' interest and thinking with a skillful questioning regimen as well as activities that reinforced the content. Students, classroom teachers, resident artists, and museum educators all describe generally positive views on the first year experience; some potential areas of improvement include reworking the classroom teachers' professional development as well as improving the communication between the two main program providers, the resident artists and museum educators.

In chapter 2, I review the literature related to arts education, arts integration, and outcomes associated with arts integration programs that rely on resident artists and field trips. In chapter 3, I describe, in detail, the WSPP intervention. In chapter 4, I present my methods and outcomes for the quantitative study. In chapter 5, I present the methods and outcomes of my qualitative case study. Finally, in chapter 6, I discuss these findings and what they imply for public policy and future research recommendations.

Chapter 2: Review of Relevant Literature

The “value” of the arts

In an interview with Donald Kuspit, Louise Bourgeois highlighted the deeply personal value of creating a piece of art, saying that “art is a way of recognizing oneself” (Kuspit, 1988, p. 82). People make or consume art for personal benefits like enjoyment or fulfillment. If it is argued that how people spend their time and money can serve as a proxy for how they value or prioritize something, how much Americans “value” arts and pursuing arts-related activities can be quantified. Since the 1980s, the National Endowment for the Arts (NEA) has periodically asked Americans how many arts-related activities they participated in in the previous twelve months (Iyengar et al., 2017). In their longitudinal review of data from the most recent Survey of Public Participation in the Arts (SPPA), NEA researchers found a statistically significant increase from 2012 to 2017 in the percentage of adults who had at least one arts-related experience in the past year (Iyengar et al., 2017). Of particular interest to my dissertation topic, there was also a statistically significant increase between 2012 to 2017 in the percentage of Americans who went to art museums or galleries (Iyengar et al., 2017). Underscoring this interest in attending museums, a recent analysis of the economic benefits of museums found that Americans make over 850 million trips to museums annually (Stein, 2017). Americans pursued these activities as a way to connect with their loved ones or as an artistic outlet (NEA, 2020).

Researchers from RAND argue that Americans had valued the personal importance of until the 1990s, when people in the arts, under social pressure, had to demonstrate the importance of the arts to the public in general (McCarthy et al., 2004). These advocates provided evidence about the “instrumental benefits of the arts: They said that the arts promote important, measurable benefits, such as economic growth and student learning, and thus are of value to all

Americans, not just those involved in the arts” (McCarthy et al., 2004, p. xi). Thus, the recent evaluation of the economic impact of museums not only discusses how many times people visit those museums, but it also finds that museum activities directly or indirectly contributed \$50 billion to GDP in 2016, including \$12 billion in federal, state, or local taxes (Stein, 2017). In addition, over three quarters of a million people have jobs either directly or indirectly connected to museums (Stein, 2017).

The RAND research team argued, in 2004, that focusing solely on the public value of the arts “downplays” the personal value of art for individuals, and, importantly, overlooks the potential positive externalities from some of the personal, or “intrinsic” benefits (McCarthy et al., 2004, p. xi). For example, people who, repeatedly, experience or create art can improve themselves and their communities by increasing their ability to empathize with others, to judge soundly, and to use art to create social bonds (McCarthy et al., 2004). The personal benefits that have the capacity to “spillover” to public benefits are, they argue, “improved self-efficacy, learning skills, health” and “expanded capacity for empathy, [and] cognitive growth” (McCarthy et al., 2004, p. xiii). One potential public policy, then, would be to ensure that students have access to arts experiences while in school (McCarthy et al., 2004). However, students in rural areas as well as in under-resourced homes consistently have lower attendance rates to museums and arts experiences (Crispin & Beck, 2019).

LeRoux and Bernadaska, using the General Social Survey, examine the relationship between participating in the arts and these personal-public spillover outcomes in adults. They find that attending an art performance like a play or a concert, or visiting a museum have a consistent, positive association with a person’s civic engagement, tolerance of others, and their level of altruism (LeRoux & Bernadaska, 2014).

Arts in Education

What are the benefits of studying or participating in art at school? As McCarthy et al. (2004) note, there is much correlational and descriptive research on the instrumental outcomes of arts education, like how participating in the arts improves test scores, and some intrinsic outcomes, like arts participation building empathy or tolerance. In one of the earlier correlational studies, Catterall, Chapleau, and Iwanaga use data from the National Education Longitudinal Study of 1988 (NELS:88) to examine whether participating in music or theater increases test scores and non-cognitive outcomes (1999). They find that students who participate in either of these forms of performing arts have higher test scores and this holds true for students from low socioeconomic backgrounds. In addition, they find that students from low socioeconomic backgrounds participating in theater arts activities is associated with positive academic and non-academic outcomes like improved empathy or tolerance (Catterall et al, 1999).

Catterall conducted a follow-up study using the same students in NELS:88. In this second study, he can observe them again at two stages in young adulthood, at age 20 and age 26. At age 20, the students who participated more in arts activities while in high school were more likely to be enrolled in a four-year college as well as more likely to be registered to vote (Catterall, 2009). At age 26, these students were more likely to have obtained their degree as well as be active in their communities through volunteer work or voting behavior (Catterall, 2009).

Vaughn and Winner (2000) found that students who reported taking any art class in high school had higher SAT scores than students who did not. In addition, Vaughn and Winner found that increasing the number of years of art classes, that is, sustained access to the arts, had increasing scores for the students (2000). Students who took three years of an art, therefore, on average had higher scores than both students who did not take any art and students who took two

years of art (Vaughn & Winner, 2000). Vaughn and Winner caution that these results are correlational, as they could not account for the underlying mechanism that caused some of the students to take art, and for how long, and for other students to not take art (Vaughn & Winner, 2000).

Winner and Cooper (2000) repeat this caution in their systematic review and meta-analysis of arts participation studies. Looking at studies from 1950 to 1998, they find that the correlational studies, on average, indicated a significant, positive association between arts participation and verbal test scores, math test scores, and composite scores (Winner & Cooper, 2000). For the experimental studies they were able to identify, they found non-significant, positive effects of arts participation and academic outcomes (Winner & Cooper, 2000). In a vote-count examination of studies that looked at non-academic outcomes, for example, measures of school engagement like boredom, they found that 21 of the 23 studies reported positive outcomes (Winner & Cooper, 2000). They, like McCarthy et al. (2004), call for methodologically stronger investigations into the relationship between arts participation and the associated outcomes, as correlational studies are unable to account for selection into participation.

In a more recent study, Jæger and Møllegaard account for individual and family effects by studying how the difference in cultural activities affects the academic outcomes of identical twins in Denmark (2017). They find that students' increased participation in cultural activities, like going to arts performances, is associated with significant, higher high school exit exam scores, but only for students whose parents had higher educational attainment (Jæger & Møllegaard, 2017). While there is not, necessarily, have strong causal evidence supporting the positive relationship between arts participation and academic outcomes, this could be because, as Winner and Cooper note, most of the correlational studies looked at years of participation while

the experimental studies examined interventions that were, typically, less than a year thus calling up the question of duration of arts participation (Winner & Cooper, 2000). In addition, the studies described in this paragraph studies examine more of the instrumental arguments for arts education (McCarthy et al., 2004), that is improving test scores or quantifiable measures of school climate as the intrinsic arguments are more difficult to measure (McCarthy et al., 2004).

Although there may not yet be a definitive, positive relationship between academic and non-academic outcomes and arts participation during a student's K-12 career, American adults continue to see value in participating in the arts themselves as well as providing arts to students throughout their K-12 education career.² At the same time, students are not spending as much time participating in or studying art in school. Rabkin and Hedberg (2011) examine this using the SPPA. While the SPPA surveys adults, it does ask about their arts experiences in school. Rabkin and Hedberg highlight a reduction in time spent on visual arts and music in school (2011). Importantly, results from different descriptive research finds declines in time studying the arts are shouldered mainly by Black and Hispanic students (Rabkin & Hedberg, 2011), low income schools, and schools with the highest academic needs (GAO, 2009). This reduction in access to arts in school could be driven by increased focus on improving standardized test scores (West, 2007; Bassok et al., 2016; Reback et al., 2014; Polikoff, 2017; Ladd, 2017) or even declining arts budgets (Gadsden, 2008). School leaders may be interested in pursuing arts integration programs not only to capture the theoretical benefits of cross-curricular learning, but also to address the concerns about narrowing the curriculum. In interviews with principals, Mishook and Kornhaber

² For example, over 90% of those polled support providing arts education through all grades of a student's K-12 experience. Source: Americans for the Arts (2018). Americans speak out about the arts in 2018. Retrieved from <https://www.americansforthearts.org/by-program/reports-and-data/research-studies-publications/public-opinion-poll>

(2006) found that principals used arts integration programs to keep students involved in art while learning the content of the core subjects.

Arts Integration Programs

While precise definitions depend on context, integrated curricula can be, very, broadly defined as running the spectrum from teachers using a unit theme to organize different state standards from different core classes to organizing standards as well as skills to complete the unit's activities (Drake & Burns, 2004). The theoretical arguments supporting an integrated curriculum began during the progressive movement, when scholars like Vygotsky, Dewey, and Piaget argued the benefits of learning through thematic units or student-specific experiences rather than by memorization in siloed classes (Burnaford et al., 2018). Arts integration, specifically, became popular in the second half of the 20th century (Burnaford et al., 2007). Researchers have examined the various outcomes using qualitative and quantitative methods. After defining what art integration programs might look like, I will review the literature examining findings from prior research about the student, teacher, and school outcomes associated with arts integration programs.

Defining Arts Integration

In a recent systematic review and meta-analysis, Ludwig, Boyle, and Lindsay (2017) define arts integration as “the practice of purposefully connecting concepts and skills from the arts and other subjects” (p. 5). This definition is broad enough to cover a wide variety of interventions that have been called ‘arts integration.’ From their systematic search, they identify common elements to the integration programs under study; these common elements are not universally deployed in all

arts integration programs. The first is that the intervention has form of professional development to improve the classroom teacher's ability to uses arts integration in their classroom; second, the program has an additional specialist who works with teachers or students directly to pursue program goals; third, the intervention provides material support in the form of curricula, activities, technology; fourth, the intervention partners with community organizations and take students on field trips; fifth, and finally, the art integration may be a whole-school intervention (Ludwig et al, 2017, p. 8). Researchers have also examined many outcomes associated with art integration programs, these outcomes may be academic improvement for students, affecting pro-social or social-emotional behaviors of students, and improving outcomes for teachers, administrators, and parents (Ludwig et al., 2017, p.10).

Academic Outcomes for Students Associated with Arts Integration

Returning to the framework set out by McCarthy et al. (2004), one set of outcomes, the instrumental outcomes, may be of interest for researchers and policymakers because these outcomes could, arguably, produce some positive externalities for society in general. One of the main instrumental outcomes examined in all educational research is that of performance on standardized tests. First, I will discuss what researchers have found when integrating art with core subjects, as opposed to whole-school arts integration interventions.

Andrews (1997) studied what effects from a music integration curriculum were associated with both reading and music achievement. Treatment students in one classroom received an integrated music lesson twice a week for 11 weeks, while comparison students in another classroom received their normal instruction in reading and music separately. Treatment and comparison students demonstrated no statistical differences in music and reading

achievement at baseline. Andrews finds that students in the treatment classroom had statistically higher scores on the reading and music achievement tests (Andrews, 1997).

To discover whether engaging students in drama/geometry integrative lessons improves math outcomes, Duatep-Paksu and Ubuz randomly assigned classes to receive treatment or serve as the control in one school's 7th grade cohort (2009). The researchers found that students in the arts integration classrooms had statistically higher scores on several of the geometric and mathematic concepts tested (Duatep-Paksu & Ubuz, 2009).

Researchers, examining the effects art integration had on both short term and longer-term recall of science knowledge, found that while there were no immediate statistically significant differences between treatment classrooms and control classrooms, students who received science-arts integration interventions scored a fifth of a standard deviation higher on test two months after the intervention (Hardiman et al., 2014).

Finally, researchers examined the effect that drama could have on students' knowledge of state history. Students, in randomly assigned classrooms, participated in an interactive state history play. Comparing student knowledge between the treatment and control students, Kisida, Goodwin, and Bowen (2020) find that participation in this one drama/history interactive arts integration event increased students' knowledge of state history by a fifth of a standard deviation. Thus, arts integration interventions that combine one academic subject and art mode are associated with positive academic outcomes for participating students.

In addition to programs that focus on a specific art mode and academic subject, arts integration interventions can also use a whole-school model. A whole-school model "addresses multiple areas of a school's operation (e.g. professional development, scheduling, and assessment practices to support arts-integrated learning" (Ludwig et al., 2017, p. 7). A

descriptive evaluation of a whole-school arts integration model in Oklahoma finds that the average A+ School in Oklahoma performed better on standardized tests than the average school in Oklahoma, generally (Barry, 2010). In a separate report, Kimball (2006) compares A+ participating schools in Oklahoma City to matched schools throughout the state and finds that, in both reading and math standardized tests, students in the A+ schools had higher average scores as well as were more likely to score at least at the satisfactory level.

Ingram and Meath (2007) examined an arts integration program in Minneapolis across several grade levels. Their analysis yielded mixed results in the effects of arts integration on reading standardized test scores.³ Arts integration practices were associated with significant, positive gains for third, fourth, seventh, and eighth graders; significantly negative for fifth graders; and no significant difference for first, second, and sixth graders (Ingram & Meath, 2007). Another whole-school art integration intervention in Maryland found that students in treatment schools, when compared to a matched counterpart, had increased scores on their state standardized exams (Snyder et al., 2014).

Schools participating in the A+ schools project in North Carolina had higher average scores on standardized tests than the state average (Thomas & Arnold, 2011). In another examination of a whole-school initiative, this time in Chicago, researchers found that students in treatment schools at the elementary level, compared to matched schools, were more likely to score above grade level on indicators for the Iowa Test of Basic Skills (Catterall & Waldorf, 1999). Finally, participating in a whole-school arts integration program, SPECTRA+, is associated with mixed results. Researchers examined the initiative in two different districts and matched treatment with comparison schools within each district. Because the districts used

³The authors note that while AAA was a whole-school initiative, and therefore other academic subjects would be affected, due to test availability and AAA design, they focus on reading outcomes (Ingram & Meath, 2007, p.22)

different standardized tests, researchers looked at results within districts separately. In district A, researchers found while, generally, there were no differences between treatment and comparison schools in reading achievement, there were significant differences for math achievement, especially for boys (Luftig, 1994). In district B, the story is reversed; participating in the SPECTRA+ program is associated with increased reading achievement and no statistically significant math achievement differences apart from “math comprehension” (Luftig, 1994, 25). Taken together, the studies examining whole-school interventions generally found an association between academic outcomes, measured by standardized test scores, and whole school arts integration programs. However, these studies use, at best, a matching technique to identify comparisons, and therefore, these positive outcomes should be interpreted with caution.

Looking at the larger picture of the potential academic outcomes associated with arts integration interventions, it may be said that arts integration programs may improve academic outcomes of participating students. The majority of the data are from quasi-experimental or correlational studies; however, more recent examinations of course-specific arts integration programs (Hardiman et al., 2014; Kisida et al., 2020) do show stronger support for positive academic outcomes.

Non-Academic Outcomes for Students Associated with Arts Integration

In addition to promoting stronger academic skills, arts integration programs may also affect a variety of non-academic outcomes, like improving school engagement as well as promoting growth in pro-social behaviors like tolerance or empathy. In this section, I review the findings from qualitative and quantitative studies of arts integration programs. In Oklahoma A+ Schools, researchers used the *My Class Activities*, created by Gentry and Gable (2001), survey to measure

student attitudes in the A+ schools (Barry, 2010). First, they found, descriptively, that students reported high levels of interest and enjoyment in their classes as well as being challenged by them (Barry, 2010). While the researchers were not able to compare non-A+ schools to A+ schools, they did construct a measure of how much a school had integrated arts into their whole curriculum to determine if a student's response was correlated with this constructed buy-in measure. They found that schools that had more fully embraced arts integration practices had higher scores for student attitudes (Barry, 2010). In their alternative assessment of the Arts and Academic Achievement program in Minneapolis, Ingram and Meath (2007) use non-standardized and qualitative assessments, for example, evaluations of student work by a classroom teacher and evaluator to find non-academic outcomes. Some of their findings included students being more willing to take risks, being more engaged in their learning process, and students demonstrating more cooperation toward others (Ingram & Meath, 2007).

In New York "Schools for the Arts," Ffolks-Bryant (2009) provided descriptive information from student surveys collected to measure how participating in the arts affected students' non-cognitive behaviors. She found significant correlations between arts participation and a student's self-esteem and knowledge, but not a significant correlation between student participation and attitudes (Ffolks-Bryant, 2009). Finally, in addition examining academic outcomes related to participating in the SPECTRA+ program, researchers also looked at the effects on student's self-esteem, their locus of control, and their arts appreciation (Luftig, 1994). They did not find any difference between treatment and comparison groups on the overall self-esteem score, nor were there differences for student's locus of control (Luftig, 1994). SPECTRA+ students were either significantly higher scoring on the arts appreciation measures

or not statistically different than their comparison schools (Luftig, 1994). Students in the SPECTRA+ program also scored significantly higher on creativity tests (Luftig, 1994).

Several studies focus specifically on the relationship between arts integration practices and student attitudes toward learning the subject matter as well as the arts. Andrews (1997) finds that the 11-week arts integration program was associated with higher, more positive, attitudes toward reading as well as music. Duatep-Paksu and Ubuz (2009) found significant, positive effects associated with drama-based math and geometry lessons and student attitudes toward math and geometry. The attitude scales ask students whether they like the subject as well as their comfort level studying the subject (Duatep-Paksu & Ubuz, 2009). In addition to measuring student responses using surveys, the researchers conducted focus group interviews with some of the treatment students and found that they were more engaged with the lessons (Duatep-Paksu & Ubuz, 2009).

An early study, looking at the relationship between visual arts activities and attitudes toward math, attitudes toward art, and creative thinking, found that students in randomly assigned classes that received the arts integration intervention had significantly more positive attitudes toward mathematics after the intervention than students in control classes did (Forseth, 1980). There were no significant differences between treatment and control classes on measures of attitudes toward art as well as overall scores on the Torrance Tests for Creative Thinking (Forseth, 1980). Researchers conducted a multiple case study analysis of sixth grade science teachers using music, songs, in their science classroom to examine how this affected student outcomes (Governor et al., 2014). Using data from teacher interviews, student interviews, and field observations, the researchers suggest that using songs to teach science concepts helped students engage with the lesson being taught (Governor et al., 2014). In 2004, Healy found that

integrating visual arts in math lessons had not had significant association with increasing students' beliefs about the usefulness of math. However, Healy did find, in the one-group, pre-test/post-test design, that the intervention was associated with an increase in students' math confidence as well as their perceptions of the benefits of learning math using art (Healy, 2004). Finally, Kisida et al. (2020) found that students, randomly chosen to attend an interactive arts-history play, report higher levels on interest in learning state history as well as desire to participate in theater productions and attend further theatrical experiences. There is some correlational and qualitative data that suggest that arts integration programs may improve students' non-academic outcomes. The studies mentioned here find suggestive evidence of the benefits to students' school engagement, attitudes toward learning, and even measures of creativity. Again, most of the studies are quasi-experimental or qualitative, thus should be considered as suggestive rather than authoritative proof of the connection between arts integration programs and positive student outcomes.

This section broadly examined the literature available regarding the outcomes associated with arts integration in schools. It highlighted many of the different types of art integration interventions as well as the variety of methods used to answer arts integration research questions. Ludwig et al. (2017) recently completed a systematic review and meta-analysis of arts integration studies using the framework of ESSA's tiers of evidence. As they noted, most of the studies fell in the lowest tier of evidence, level IV, which requires that the study have a theoretically sound logic model but not, necessarily, prove any statistically significant relationships between the outcomes and the intervention (Ludwig et al., 2017). Their meta-analysis found a small, positive overall effect on student outcomes from arts integration

programs (Ludwig et al., 2017). Thus, it may be expected that the effect of arts integration activities in this current study might be either significantly positive or null.

Resident Artists and Field Trips

In addition to discussing arts-integration studies broadly, I reviewed the relevant literature relating to the two student-centered aspects of the WSPP intervention, outcomes associated with resident artists in arts-integration interventions and outcomes associated with field trip interventions. This review provides context for what student outcomes may be expected from the WSPP intervention.

Resident Artists

According to Ludwig et al. (2017), arts integration programs use resident artists to teach the integrated art and subject matter lessons to the students directly instead of the teacher implementing the lessons (p.8). Recent research found that students who participate in arts integration programs led by resident artists saw positive academic outcomes. A series of pilot programs of the *Global Writes* program improved students' ELA exam scores (Ellrodt et al., 2014). In these three studies, resident artists use performance art to teach poetry and other language art skills (Ellrodt et al., 2014). While the three studies used different methods to identify the outcomes, including matching and random assignment by school, the researchers found that treatment students, statistically similar to their comparison counterparts at baseline, had higher average scores on their ELA achievement tests (Ellrodt et al., 2014).

Researchers evaluated an early child education program that used dance to help young students improve their literacy skills “in the areas of decoding and phoneme-grapheme

relationships” (McMahan et al., 2003, p. 110). Dance artists used movement to help students make connections between the shape and sound of letters (McMahon et al., 2003). Researchers found that the intervention improved the treatment students’ literacy skills significantly in comparison to their matched counterparts (McMahon et al., 2003). Palmer-Wolf, Holochwost, Bar-Zemer, Dargan, and Selhorst (2014) found that students who received treatment that included in-class teaching by folk artists had, on average, a six-point higher scale score on their state ELA exam than did students in comparison groups within the same grade and school (Palmer-Wolf et al., 2014).

Finally, researchers randomly assigned two fourth grade classrooms at four schools to either receive literacy education through performance arts or traditional literacy lessons (Rose et al., 2000). Although the treatment group was more advanced on pre-test literacy skills, researchers found that, after controlling for pre-test performance, treatment was still associated with larger growth in literacy skills (Rose et al., 2000).

As these studies suggest, students saw positive literacy achievement associated with participation in resident artist-led arts integration programs. While the arts integration program in this study does not concentrate solely on literacy outcomes, it can be hypothesized that arts integration programs that utilize content teaching through resident artists may improve student academic outcomes.

Field Trips

Field trips have long been an integral part of the K-12 schooling experience in the United States as well as part of educative practices in other countries (Woods, 1937). Since the 1980s researchers have measured outcomes related to field trips to combat naysayers and resource

constrictions (DeWitt & Storksdieck, 2008; Reeves & Rodrigue, 2016). Overall, recent field research has found positive outcomes associated with visiting general cultural sites, such as natural history or science museums.

Several researchers have used nationally representative surveys, both longitudinal and repeated cross sections, to investigate the outcomes associated with participating in cultural activities like visiting a museum or attending live arts performances. Using the 2012 SPPA, Dumais examined whether there are differences in cultural capital, acquired through museum visits, between first-generation college students and their peers (2019). She found that first-generation students who were exposed to cultural institutions and activities as children closed the existing cultural capital gap between first-generation and continuing-generation students as well as continued to participate in cultural activities as adults as well taking their children to these places, too (Dumais, 2019). The second finding in Dumais (2019) is similar to one discussed by Gray (1998). Using the 1982 through 1997 waves of the SPPA, Gray found that early art lessons, those taken before the age of 12, is positively associated with visiting museums as an adult (Gray, 1998).

Building up cultural capital could positively affect students' academic outcomes. Jæger used data from the National Longitudinal Survey of Youth – Children and Young Adults (NLSY) to account for individual-level and family effects, something prior research had not been able to do (2011). Jæger found that even when using the more rigorous fixed effect models, there were small, positive effects on math and reading achievement associated with cultural experiences and activities, but this effect was only for children in high socioeconomic status homes (2011). George and Kaplan (1998) used data from the National Education Longitudinal Study of 1988 (NELS:88) and found that parents provided a positive, statistically significant,

although indirect, influence on their children's attitudes toward science by taking the children to museums. In 2014, Suter used the Longitudinal Study of American Youth (LSAY) and the High School Longitudinal Study of 2009 (HSLs) to examine how visiting science museums may affect students' attitudes toward learning science. He found that visiting science museums is associated with improving students' attitudes toward science in general (Suter, 2014).

In addition to using nationally representative datasets to examine the relationship between visiting cultural institutions and student outcomes, researchers have also focused on site-specific institutions. Researchers examined the cognitive and non-cognitive benefits of attending live theater performances and found that students randomly assigned to see a live production of a play reported significantly higher levels of tolerance towards others, social perspective taking, and content knowledge (Greene et al., 2018). Interestingly, students randomly assigned to see a film version of the play did not reap the same benefits as the students who saw the live play (Greene et al., 2018). Recent work in Atlanta found that students who were randomly assigned by grade within a school to participate in three cultural experiences throughout the year had marginally significantly higher ELA and math standardized test scores the year after the intervention than their control counterparts (Erickson et al., 2019). These students also had significantly fewer discipline infractions the following year (Erickson et al., 2019). In addition to these positive academic outcomes, students in the first treatment cohort demonstrated significantly higher desire to continue consuming these arts in the future (Watson et al., 2019). These students also reported higher ability to consider how another person may view a situation or event (Watson et al., 2019). Finally, Whitesell (2016) found that students had marginally positive effects on their science achievement tests, both their proficiency level and their standardized score, after visiting science museums in New York City. These effects were

statistically significant for Hispanic students as well as students who qualified for free or reduced-price meals (Whitesell, 2016). Thus, recent research at both the national and site-specific level suggest positive academic and non-academic outcomes for students who visit museums or participate in other cultural activities.

Recent research has examined outcomes associated with visiting art museums in addition to the research examining the academic and non-academic effects associated with field trips to cultural institutions broadly. While a growing research field, many of the studies are methodologically rigorous randomized-control field experiments. These experiments yield causal estimates for student outcomes from visiting art museums. Using the opening of a new museum in the area, researchers capitalized on school interest and randomized access to art tours at Crystal Bridges (see Greene et al., 2014). Students who were randomly selected to attend a visit to the art museum, where tours were led by museum educators, scored higher on measures of critical thinking (Bowen et al., 2014; Kisida et al., 2016); remembered historical facts more (Greene et al., 2014); and were more interested in continuing to visit art museums in the future regardless of age (Kisida et al., 2014; Kisida et al., 2018). Students who attended rural or low socioeconomic status schools were especially benefited.

Researchers in Houston found similar, positive effects associated with arts field trips. Schools were randomly selected within matched pairs to receive arts interventions provided by local arts organizations (Bowen & Kisida, 2019). Students in the schools who received the intervention were less likely to have behavior infractions and had higher writing scores on the state standardized test (Bowen & Kisida, 2019). In addition, Bowen and Kisida report that treatment students reported higher levels of compassion, and elementary students were more engaged at school, had higher levels of empathy, and had higher college aspirations (2019).

The existing research, descriptive, quasi-experimental, and causal, suggests that there are both academic and non-academic benefits associated with taking students to visit museums and other cultural institutions. It can be hypothesized, then, that students who participate in arts integration programs that specifically use field trips to an art museum may have positive academic or non-academic outcomes from the experience.

Contribution to the literature

My dissertation contributes to the overall arts integration literature in several ways. First, the arts integration intervention is a multi-year intervention; treatment students will have three years of resident artist lessons and field trips to Crystal Bridges. Many of the programs previously studied, not including the whole-school arts integration programs, last for at most one academic year. Second, it uses a stronger research design than several of the larger-scale studies in the past. While many of the studies rely on matching schools on observables or pre/post outcomes for a single treatment group, I examine the outcomes of students, in two separate years, within the same school. Arguably, within school cohorts may not have as many unobserved differences as do matched schools. As I demonstrate in the quantitative section, this assumption is underscored by baseline equivalence in the survey outcomes. Third, I utilize a survey instrument that potentially captures many of the intrinsic outcomes previous research had discussed in qualitative research. Finally, this research provides further contextual information about the implementation of a large, multi-site arts integration initiative in the qualitative research section.

Chapter 3: Description of the Windgate School Partnership Program

The Windgate School Partnership Program (WSPP) seeks to affect both academic and non-academic outcomes of elementary-aged students using an arts-integration program that is composed of professional development for classroom teachers, resident artists, and field trips to Crystal Bridges. In this chapter, I describe the intervention as well provide an overview of the activities students participated in in their classroom activities and on the field trips.

The Windgate School Partnership Program Intervention

The WSPP is an alliance between Crystal Bridges, Trike Theatre⁴, and partner districts throughout northwest Arkansas, southern Missouri, and eastern Oklahoma. The program is a multi-year arts integration intervention. It has three distinct programming aspects: resident artists from Trike Theatre teach daily, hour-long sessions in the participating schools over three separate weeks in the academic year; students visit Crystal Bridges twice over the academic year⁵, participating in subject-specific education tours led by the in-house museum educators; and classroom teachers receive professional development in the summer before the beginning of the intervention.

Professional Development

The overall goal of providing professional development to the treatment-year classroom teachers is to give the teachers potential strategies they can use to incorporate art into their classroom.

The first year of professional development involved co-planning sessions between the classroom

⁴Trike Theatre provides professional theater productions and education opportunities for children.
<https://triketheatre.org/>

⁵Originally, the schools were supposed to take three field trips, coinciding with the three resident artist weeks, but this aspect of the program changed.

teachers and the intervention leaders. In the first year of the intervention, teachers from the participating districts gathered at Crystal Bridges to participate in a week-long professional development program led by members of Trike Theatre and the Windgate Fellow at Crystal Bridges. Over three separate weeks, groups of classroom teachers participated in professional development and training in arts integration activities as well as the pedagogical methods the resident artists would use in the classroom. The sessions were designed to provide teachers with an understanding of and tools to incorporate arts integration practices in their own classrooms. Resident artists and museum educators also participated in this training.

Resident Artists

The goal of using resident artists in the classroom is to teach the students, and demonstrate for the teachers, the multi-disciplinary approach to instruction in the classroom. Resident artists presented three core subject-based lessons throughout the academic year that corresponded with state standards as well as the field trips. The resident artists utilized mindfulness tactics from Focus 5, Inc, like the “Actor’s Toolbox” to engage students’ attention while then teaching the curricular subject and incorporating a selected artwork at Crystal Bridges into the weekly lesson. Students would create tableaux, essentially living sculpture, and visual art pieces that corresponded with the week’s lesson. For the first week, resident artists presented an English/Language Arts lesson; the second week used Social Studies standards and concepts, and the third week used mathematics standards.

Field Trips

Finally, students participated in field trips to Crystal Bridges that coincided with two of the three resident artist weeks. Museum educators, employees of Crystal Bridges, led the students through pre-planned tours that aligned with the weeks' classroom instruction by the resident artists. Museum educators were trained to use the dialogical⁶ pedagogical model – where museum educators guide students to discover art through questioning strategies rather than lecturing.

Overview of Student Activities

In this section, I focus on the two student-centered arms of the intervention and describe the daily activities in which the students participated. Resident artists provided me copies of the first year's curriculum, including subjects taught and academic standards addressed, as well as their lesson plans for the three weeks of the in-classroom intervention.

In the Classroom

I examined the first year lesson plans from the resident artists to create an overall view of what subjects the resident artists were teaching, the time they spent on different activities in the classroom, and the standards the activities and lessons were going to address. For the proportion of time spent on different activities, I used the resident artist's daily lesson plans. They provide an overview of the activities for each day with a description and an allotted time. I categorized the activities into the following categories: "Acting Right," Content-Related Movement, Direct Instruction, Visual Arts, and Class Logistics.

⁶From the Professional Development literature provided by the Windgate Fellow, members of Crystal Bridges Museum of American Art's education department use *Teaching in the Art of the Museum: Interpretation as Experience*, by Rika Burnham and Elliot Kai-Kee as their pedagogical guide for using the dialogical model.

- “Acting Right”⁷ captures the activities the resident artist undertakes to manage classroom behavior. The “Acting Right” system encourages students to think critically about their behaviors and how they can control them.
- Direct instruction encompasses time when the resident artist is teaching concepts from a core subject like math or language arts.
- Content-related movement are the dance/theater movements or activities associated with the core subject.
- Visual arts are the activities the resident artist undertakes that use the visual arts mode.
- Class logistics are the activities undertaken to organize the class, for example, closing the lesson for the day.

Curriculum Overview

Resident artists originally planned to provide four, hour-long class sessions at each school on three separate weeks. Between the first and second week, program administrators, based on feedback from participating schools, decided that the second week’s field trip would not occur. Resident artists, then, would spent a total of thirteen days with the students. The resident artists created a curriculum that addresses English/Language Arts, Social Studies, Math, Theater and Dance, and Visual Arts standards in the three participating states, Arkansas, Missouri, and Oklahoma. In addition to these content standards, resident artists identified G.U.I.D.E⁸ for Life

⁷ The “Acting Right” activities include “unpacking the actor’s toolbox, concentration challenges, and cooperation challenges” and an overview of these activities can be seen at <https://artsintegrationconsulting.com/arts-integration-resources/>

⁸ Arkansas Department of Education’s G.U.I.D.E. for Life is retrieved from <http://dese.ade.arkansas.gov/divisions/learning-services/guide-for-life>

program skills, a K-12 program in Arkansas that addresses executive function and social skills, they would focus on as well. According to the Arkansas Department of Education, successful students will also have “intangible abilities that help people get along with others, communicate well, and make positive contributions in the workplace and beyond” (Arkansas Department of Education, n.d.). The addition of these standards may be why the resident artists used the classroom management system “Acting Right” in much of their classroom lessons.

From the curricular documents provided by the resident artists, the arts integration lessons should help students identify and use elements of narrative writing, identify how different groups of people impacted history, understand how different shapes may fall under shared categories, or ascertain what message a piece of art (like a poster, a painting, etc.) is trying to convey, among other outcomes.

Daily Activities

While the themes and content standards vary across the three weeks, the structure of each class remains consistent. The resident artist begins each class with a focusing exercise. S/he begins to play a song that consists of bells, and the students gather together in a circle. They “unpack the actor’s toolbox” where they mentally scan the five tools at their disposal and set their intention to behave and participate in the class.⁹ Then, the resident artist gives the agenda for the day. The students and the resident artist participate in at least one movement activity that generally relies on cooperation between groups of students. These activities may involve the subject matter for the week, for example, creating quadrilaterals with their bodies, but they may not. The artist will introduce either a work of art or subject and the students will interact by asking and answering

⁹The “Acting Right” five tools are a students’ “body, voice, imagination, concentration, and their cooperation.” <https://artsintegrationconsulting.com/arts-integration-resources/>

questions or brainstorming scenarios. The resident artist then gives an individual task for the students to work on until the class is almost complete. They then wrap-up the class and prepare the students for the next day. Students are generally quite active during the lesson; they are up moving around and working in groups.

Week 1 – English/Language Arts.

Resident artists teach an English/Language Arts lesson throughout the first week. They set a goal of students being able to answer the question “how does analyzing artwork influence our own story writing?” The resident artists spend much of the time in the first week setting up class expectations and teaching students the components of the “Acting Right” activities. Resident artists use variations of these main activities with students throughout the year. Resident artists use Visual Thinking Strategies¹⁰, a questioning strategy also used by the museum educators, to introduce works of art selected for the week. The Visual Thinking Strategy questions ask students what they see, why they say this, and what more do they see, essentially asking students to think critically about what they are seeing.

For week one, lessons and activities focus on mainly theatrical and performance skills (dance and movement) as well as setting up the class for the rest of the year. The resident artists use the piece *Red Moon* by David Bates from Crystal Bridges to introduce students to the Visual Thinking Strategies as well as for prompts throughout the rest of the week. The students’ final project at the end of the week is to prepare and present several tableaux that incorporate the narrative elements they learned over the course of the previous five days. Figure 1 below shows the breakdown of time spent on each category of activity. Forty-three percent of the week is

¹⁰For a brief overview of Visual Thinking Strategies, see Franco & Unrath (2014).

spent in movement, this could be the concentration challenges, the cooperation challenges, or the tableaux. A quarter of the time is spent setting up the class expectations and introducing and practicing the Acting Right activities. Twenty percent of the time is spent either in review/wrap-up activities or in preparing the students for the museum trip. The final twelve percent is spent either in visual arts instruction or in English/Language Arts instruction.

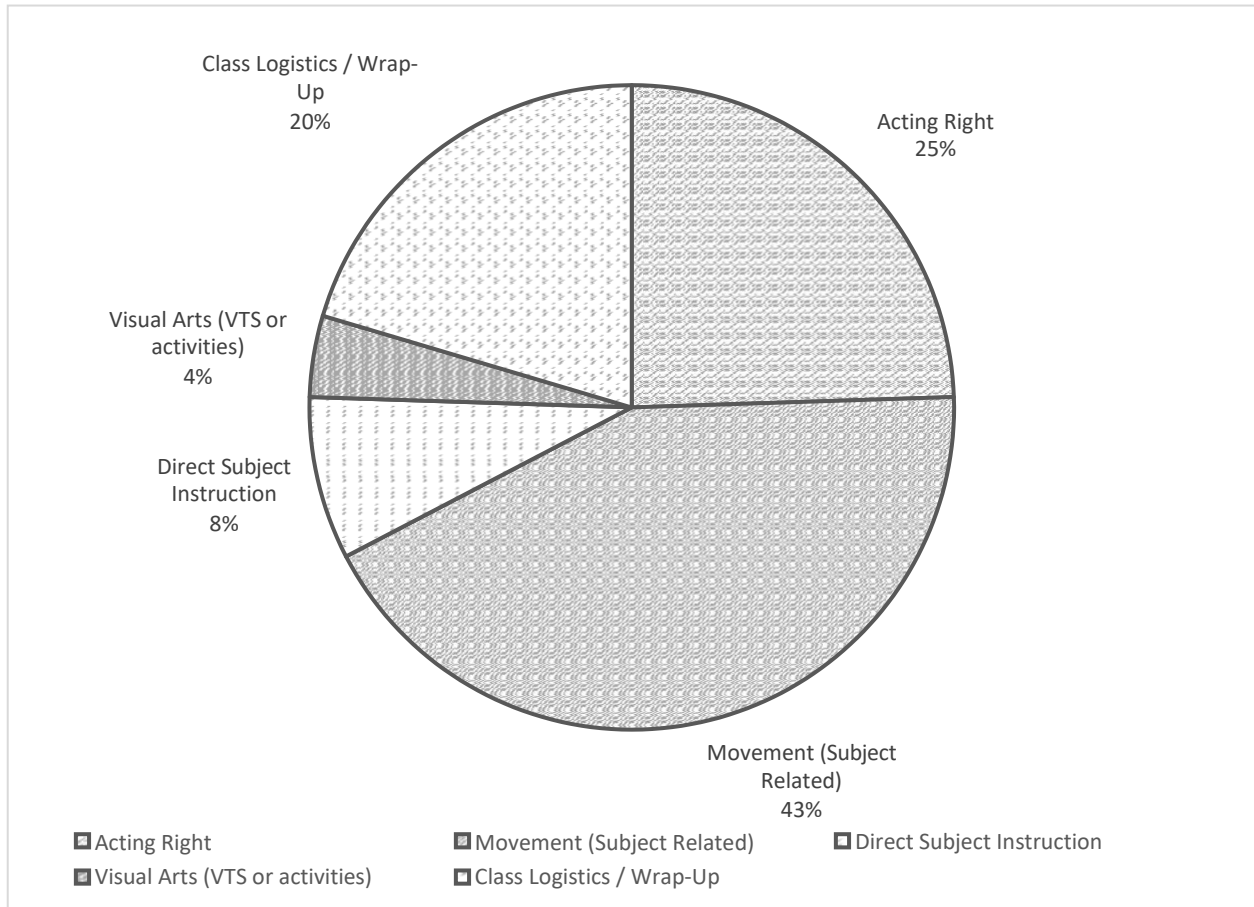


Figure 1 Amount of Time for Each Activity - Week 1

Week 2 – Social Studies.

Students learn a social studies lesson throughout week two. In the second week, resident artists wanted the students to explore and understand “how ... the Great Depression affect[ed] working Americans.” This unit involves more visual art activities, including introducing four pieces from

Crystal Bridges. This week students do not visit Crystal Bridges, so the resident artists teach five days in the classroom. The final product for the week, a photo album, combines visual art with writing. Students are to create a photo album of a family in the 1930s and write from each family member’s perspective about how they are feeling at this tumultuous time. In addition to developing an understanding of what happened during the Great Depression, the resident artists want the students to look at each event from the perspective of each family member, perhaps to develop some empathy through role-playing and view-point taking.

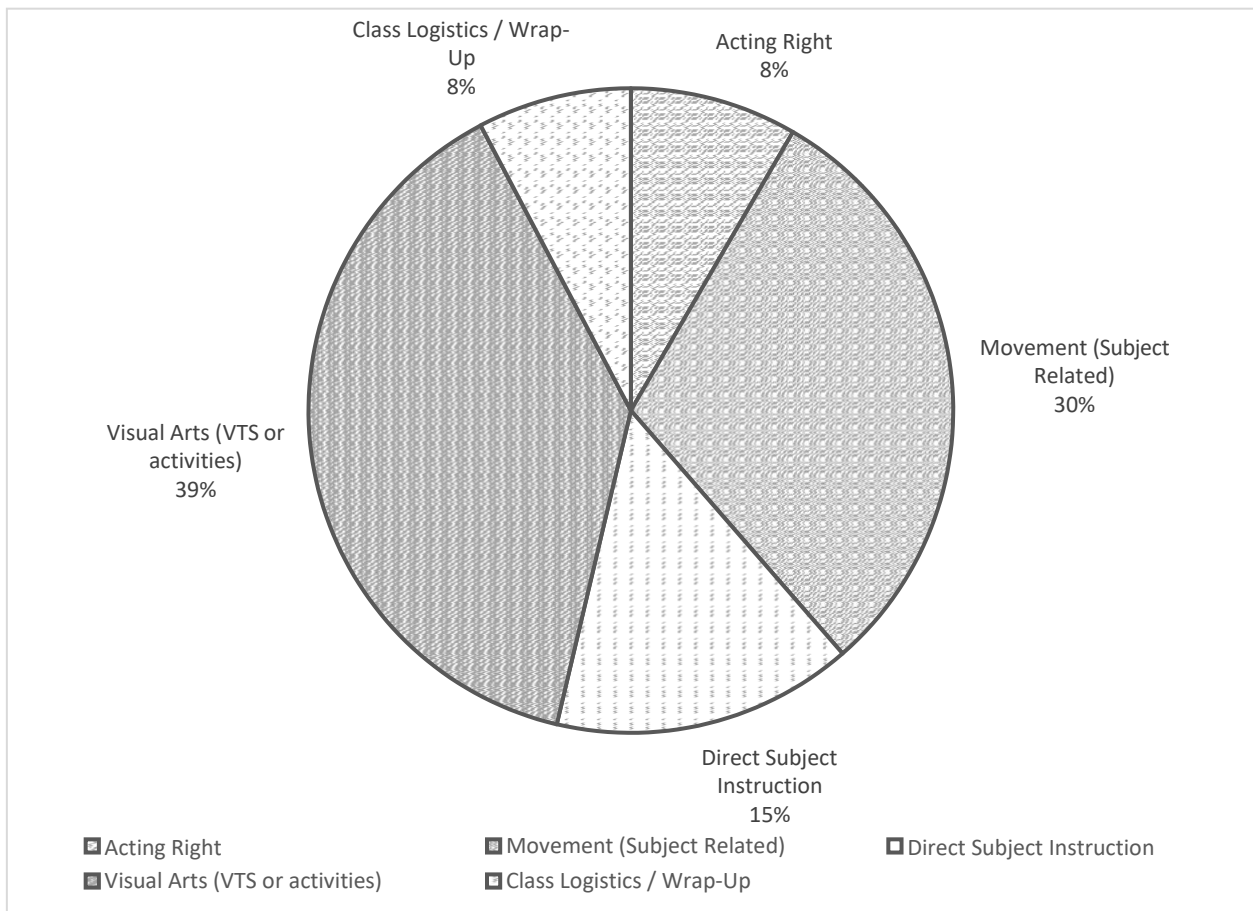


Figure 2 Amount of Time for Each Activity - Week 2

Figure 2 above shows the amount of time spent in each type of activity in week two. During the second week, visual arts activities account for 39% of class time. Then next highest percentage of class time is devoted to movement activities. Resident artists do not devote as much time to setting up class expectations.

Week 3 – Mathematics.

Finally, in week 3, resident artists teach a math-themed week. Students and resident artists explore using shapes, specifically quadrilaterals, to create abstract works of art. Resident artists introduce two main visual arts concepts, abstract art and using color to convey emotions. In week 3, as in week 2, the resident artists use more visual arts activities. Students create an abstract still-life drawing, using color to convey certain emotions, as their final project for this unit. This is also the final unit of the school year, so resident artists also spend time reflecting on what the students learned throughout the year and what they look forward to for the next year. Figure 3 shows the breakdown of the proportion of time devoted to each type of activity.

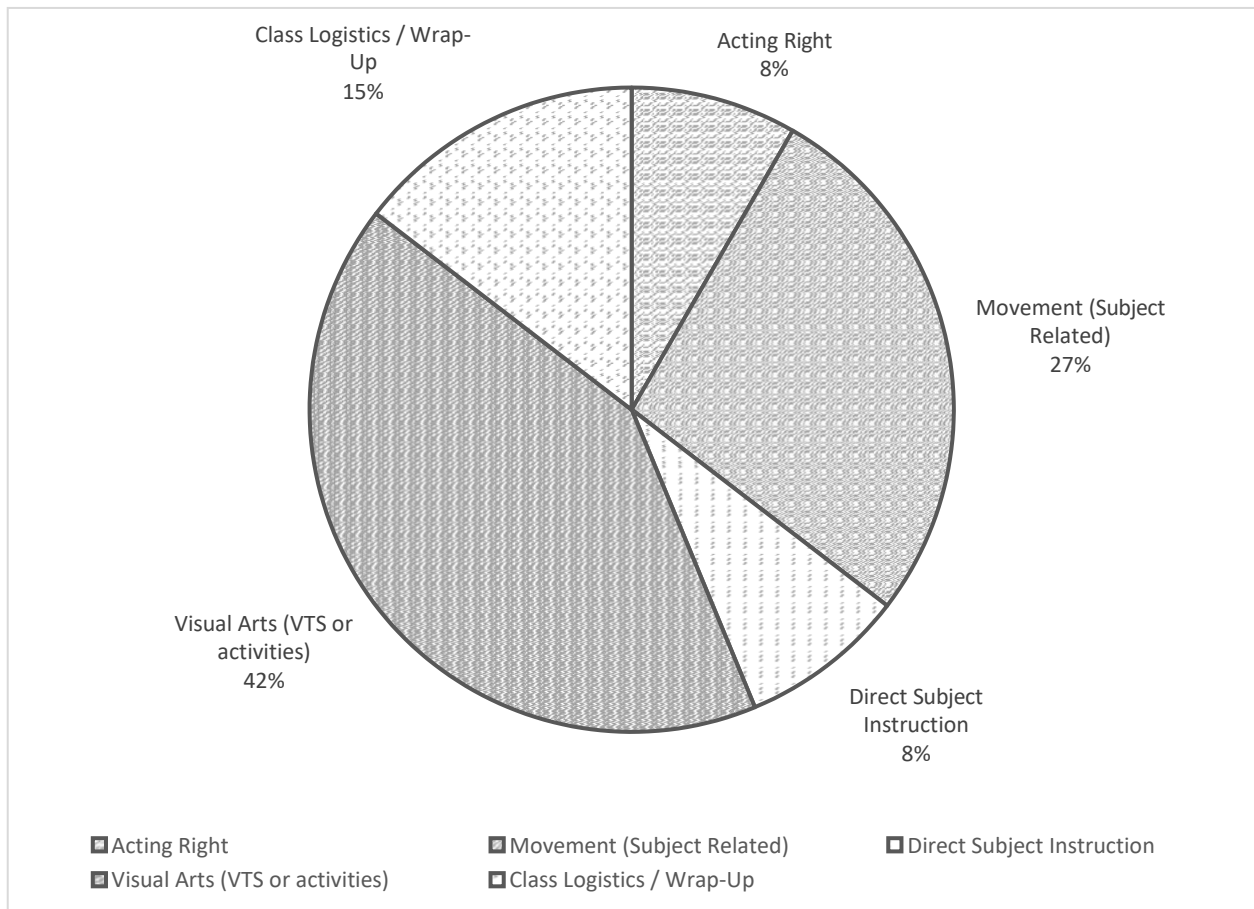


Figure 3 Amount of Time for Each Activity - Week 3

Field Trips

The other student-centered activity is field trips to Crystal Bridges. Students visit the museum two times per academic year, and their visit falls on the day the museum is officially closed. The full museum experience lasts about two hours all together. Students take a themed tour inside the galleries for an hour. Either before or after the tour, the WSPP provides lunch for students at Eleven, the restaurant at Crystal Bridges. Throughout their entire experience, from entering the museum and walking past *Maman* by Louise Bourgeois, to eating lunch, students are immersed in the architecture and artwork at Crystal Bridges.

Upon arrival at the museum, tour groups first go to the lower cloak room level where they use the restroom and drop off bags, jackets, and lunches. These items are returned to the

students after their tour at Eleven. Classroom teachers and chaperones organize the students into tour groups, and the museum educators meet their tour here in the cloak room area. After an introduction that includes reminders about behavior in the gallery and what role the museum educator will take, the museum educator leads the students to the first tour stop, of four. There, the museum educator begins their Visual Thinking Strategies questioning, asking students what they see. At each stop, students complete an activity related to the piece. For example, during the Art and Math tour, students stop at *Parabolic Curves*, a piece by Gabriel Dawe; after discussing the piece, students complete an activity where they create a curve using straight lines. Each stop lasts between ten and 13 minutes, allowing for travel time between the pieces.

For the first year of the intervention, the museum educators used two tours that they had already created. The first tour, in the fall, was the museum's Writing's on the Wall tour. This tour covers English/Language Arts standards. The second Crystal Bridges tour, conducted in the mid-to-late spring of 2019, coincided with the math lesson the resident artists taught in the last week of the intervention. Based on the classroom subject and them, the Windgate fellow and the resident artists decided that the Art and Math tour would be appropriate for the students to take. The Art and Math tour was created for an older group of students, fifth graders, but I learned that the museum educators adjusted the activities for a younger group of students.

This chapter described the goals and the programming aspects, including professional development, resident artist lessons, and field trips, of the WSPP. In implementing these three methods, program leaders aim to achieve the goals of the WSPP which are: to demonstrate a multi-disciplinary approach to teaching and learning, to help students improve their communication skills, and to have students engage with and think critically about art (Beck, 2018).

Chapter 4: Quantitative Study

Prior research suggests that students receive some academic and non-academic benefits from participating in arts-integration programs and field trips to cultural sites. Theoretically, students may gain academic benefits because an arts integration program may promote more positive attitudes toward the core subject (Duatep-Paksu & Ubuz, 2009; Forseth, 1980), more engagement in school (Ingram & Meath, 2007; DeMoss & Morris, 2002; Governor et al., 2014; Kisida et al., 2020), or even more ability to regulate their actions and behaviors, leading to improved academic outcomes (Baum & Orek, 1997). Students may gain non-academic outcomes like increased tolerance or empathy because of the access to new and diverse ideas, people, and concepts (Greene et al., 2014).

Description of Participating Schools and Students

Program leaders at Crystal Bridges began reaching out to school districts within a set distance of the museum in the spring of 2017. By fall 2017, when baseline survey responses for the comparison cohort were collected, 19 schools had agreed to participate in the multi-year intervention. I follow two cohorts of students within the same school over three years, from their third-grade year through their fifth-grade year. My treatment cohort were third graders in academic year 2018-2019. I compare the outcomes of the treatment cohort with the third-grade cohort immediately before them, that is, the comparison cohort were third graders in academic year 2017-2018. By the end of academic year 2017-2018, two of the 19 schools had dropped out of participating in the program. One school failed to turn in the consent forms to participate in the survey, and one school decided to focus on improving student academic outcomes. These schools' departure left 17 schools participating in the first treatment year of the intervention. In

this section, I will provide a description of the school setting for the 17 participating schools followed by a description of the participating third-grade students. Student's agreed to participate in the evaluation by returning consent documents.

Participating Schools

Before describing the participating students, I will describe the characteristics of the 17 participating schools. The participating schools are in three states, Arkansas, Missouri, and Oklahoma, and they are located, on average, about 70 miles away from the museum. The schools range from 10 to 144 miles away from the museum. They have an average of 360 students enrolled across all grades, ranging from 107 to 633 students. This means that some schools have one third grade class while others have four or five third grade classes. The schools are located in towns that range from a population of about 500 people in 2018 to over 87,000; the average town population was 34,228.¹¹

Student demographic and achievement characteristics at the school level are summarized in Tables 1 and Table 2. I separated the schools by state, providing sample and state averages for comparison, if available. I renamed the schools to maintain confidentiality.

Table 1 provides the demographic snapshot of the 12 schools in Arkansas. Their average characteristics, both demographic composition of the schools and the performance on the Arkansas ACT Aspire in third grade, are similar to the average school in Arkansas. On average, across both years, about 40% of students in the sample schools are minority students compared to 39% across Arkansas. On average, sample schools have a slightly higher proportion of students who are eligible for free or reduced-price lunch, comparing between 66% and 68% in

¹¹ I used censusreporter.org to determine the population size of the cities where the participating schools are located.

the comparison and treatment years to 63% and 60% in the general Arkansas student population. In terms of performance on standardized exams, the average of the sample schools is in line with state averages across math and English/Language arts proficiency. There is a noticeable drop in the percent proficient in English/Language arts from academic years 2017/18 to 2018/19 but the state averages remain the same from 2017/18 to 2018/19.

Of course, the average of the sample schools masks wide variation between the schools. For percent minority, in two schools, Aspen and Willow, minority students represent less than 10% of their student population. While in Ash, minority students represent at least 85% of their student body. Some schools have a relatively low proportion of students who are eligible for free or reduced-price lunch, while free and reduced-price lunch eligible students make up the majority of students for Ash and Birch. The third-grade students demonstrate wide variation in proficiency in math and English/Language arts on their state standardized tests. At Aspen, 30% of the comparison cohort third graders were proficient or advanced on their math standardized test while 78% of students in the same year at Oak and Cedar achieved proficient or advanced on their math tests. A similar picture is seen for ELA test scores; at Larch, 30% of treatment year third graders scored at proficient or advanced levels while 60% of students at Spruce scored proficient or advanced.

In addition to wide variation between the schools, there is also variation within the schools between the two cohorts, noticeably on the average academic performance of the third graders. For example, Ash saw a drop of nine percentage points on math achievement between the comparison and treatment cohort and nine percentage points on ELA achievement. ELA achievement, overall, trended lower in the treatment year when compared to the students the year before. The sample school average was four percentage points lower in the treatment year. The

smaller proportion of students achieving at least proficient on the ACT Aspire in the treatment year, 2018/19, could be because the ACT Aspire cut scores were changed between 2017/18 and 2018/19 (Sentinel Record, 2018).

Table 1: Description of Participating Schools - Arkansas

	School - Level				Third Grade Overall			
	% minority - Comparison	% minority - Treatment	%FRPL - Comparison	%FRPL - Treatment	%proficient math - Comparison	%proficient math - Treatment	% proficient ELA - Comparison	% proficient ELA - Treatment
Ash (AR)	88	85	94	96	42	33	24	13
Aspen	5	7	84	85	30	35	33	30
Birch	70	70	94	92	46	33	39	23
Buckeye	46	46	60	64	65	62	53	54
Cedar	23	25	27	33	78	68	64	58
Chestnut	59	57	59	56	59	73	58	55
Eucalyptus	14	17	67	66	70	76	40	52
Larch	54	56	63	61	63	55	47	30
Magnolia	45	43	77	75	64	67	51	48
Oak	48	45	68	69	78	60	44	36
Spruce	16	15	47	51	77	78	65	60
Willow	7	12	57	63	58	82	47	52
Average	40	40	66	68	61	60	47	43
Arkansas Average	39	39	63	60	59	62	41	41

Notes: School names have been changed. Two schools began the intervention but dropped out after the first year (collecting data for comparison group only) for different reasons. They are not included in this table nor in any descriptive statistics or regression models. Arkansas demographic and achievement data sourced from the Office for Education Policy at the University of Arkansas.

Table 2 provides an overview of the four schools in Missouri and the one school in Oklahoma. I provide state averages for the demographic variables and standardized test levels where accessible. The sample schools in Missouri, on average, closely resemble the average demographic characteristics and achievement levels of the state except for one large difference. The sample schools, on average, serve a much larger proportion of students who are eligible for free and reduced-price lunch. Over the two years, the Missouri average was between 49% and 50% while the average for the sample schools is 74% and 73%. This could be because the schools are located in rural southwest Missouri. The sample schools, on average, serve a slightly smaller proportion of minority students than the average Missouri school.

The between school variation for the percent of students who are minorities is driven mainly by Pine. While the other three sample schools have lower than the state average, minority students make up at least 69% of the population at Pine. Maple shows consistently higher than the state average as well as its fellow sample schools for proficiency levels across both years and both standardized tests. There also seems to be a drop in proficiency levels on the English/Language Arts exam for Missouri students in the sample schools, too.

Finally, the school in Oklahoma serves about the same percent of minority students as the state average but has a much higher proportion of students who are eligible for free and reduced-priced lunches than the state average. The comparison cohort students underperformed when comparing them to the state average in math achievement. Only 27% of Cottonwood comparison students achieved at least proficient on their math standardized test compared to 41% at the state level. However, the comparison cohort had a higher percentage of students achieve proficiency compared to the state average in ELA, 67% compared to 33%. Due to a small sample size, fewer than 10 students taking the state's standardized tests, publicly available data did not provide

achievement percentages for the treatment cohort at Cottonwood. However, in 2018/19, the Oklahoma state average increased by three percentage points in math achievement and increased by six percentage points in ELA achievement.

Table 2: Description of Participating Schools - Missouri and Oklahoma

	School - Level				Third Grade Overall			
	% minority - Comparison	% minority - Treatment	%FRPL - Comparison	%FRPL - Treatment	%proficient math - Comparison	%proficient math - Treatment	% proficient ELA - Comparison	% proficient ELA - Treatment
Alder (MO)	12	13	63	61	36	34	47	38
Fir	8	8	68	70	36	40	42	38
Maple	18	13	76	69	82	64	77	64
Pine	69	71	91	91	38	43	43	26
Average	27	26	74	73	48	45	52	41
Missouri Average	29	29	49	50	47	46	49	49
Cottonwood (OK)	52	44	89	91	27	*	67	*
Oklahoma Average	51	52	61	62	41	43	33	39

Notes: School names have been changed. Missouri demographic and achievement data retrieved from Missouri Comprehensive Data System from the Missouri Department of Elementary and Secondary Education.

<https://apps.dese.mo.gov/MCDS/Home.aspx> Oklahoma demographic data sourced from Oklahoma's Office of Educational Quality and Accountability - School Profiles. Oklahoma Achievement Data from Oklahoma State Department of Education State Testing Resources. <https://sde.ok.gov/assessment-administrator-resources-administrators#OSTP>. *Testing Data were not publicly available for the treatment cohort due to fewer than 10 students taking the tests.

On average, the sample schools are mostly similar to the average school in their respective state, with the main exception being eligibility for free and reduced-price lunch. The average sample school is more economically disadvantaged than the average school in their state. There is wide variation between the schools on these demographic characteristics and academic achievement. Most of the within school variation, that is, the variation between the comparison and treatment cohorts, seems to be driven by the overall academic achievement of the third graders in the school.

Participating Students

The research design used in this evaluation of WSPP involves comparing outcomes for adjacent cohorts of students within the same schools. The treatment group consists of 3rd graders in 2018-19, which is the first year WSPP was implemented, and the comparison group are students in the same schools that were in 3rd grade during 2017-18, one year before WSPP began. The students in my sample consented to take part in this study, so not every student enrolled in the third grade is in my sample.

My identification strategy operates under the assumption that students in the same school in neighboring cohorts should be very similar to each other, on average. Under this assumption, if I see differences in outcomes between the students in these two cohorts, it is reasonable to conclude that the difference is associated with the treatment and not with an underlying difference between the two groups of students.

I examine whether the underlying assumption is reasonable and by testing that the students in the comparison and treatment cohorts are similar to each other. I use self-reported demographic and survey data to examine whether the comparison and treatment cohorts are

similar at baseline on demographic characteristics as well as their responses to the survey questions. In the survey¹², students are asked a series of demographic questions. I ask them to identify their gender, their race or ethnicity, and what kind of grades they normally make on their report card. To measure socioeconomic status, I modified questions from the *Family Affluence Scales II and III* to generate an indicator variable where 1 = economically disadvantaged. The *Family Affluence Scales II and III* questions are taken from Hartley, Levin, and Currie (2015) and comprise questions 43 through 47 in the student survey, found in Appendix A. The questions on these scales serve as proxies for socioeconomic status. I run regressions controlling for school effects for the students for whom I have both a fall and a spring survey. The results of these comparisons are presented in Table 3 and Table 4.

Table 3 reports the results from the regression-adjusted means for comparison and treatment cohort students controlling for the school. Looking at their self-reported demographic characteristics, there are significant differences on two demographic variables. The treatment group has a higher proportion of female students and they are significantly younger than the comparison group, by a little over one month. These two groups do not differ in their self-reported grades, minority status, or socioeconomic status.

¹²Complete survey available in Appendix A

Table 3: Baseline Equivalence for All Schools Survey Demographic Measures

	<u>Comparison</u> <u>Mean</u>	<u>Treatment</u> <u>Mean</u>	<u>Difference in</u> <u>Means (C ±</u> <u>T)</u>	<u>P-</u> <u>Value</u>	<u>Sample</u> <u>Size</u>
<i>Survey Demographic Measures</i>					
Female	0.389	0.447	0.058	0.043	1,258
Reported Grades	0.905	0.906	0.001	0.989	1,239
Minority Status	0.422	0.397	-0.025	0.369	1,254
Age at Fall Survey	8.851	8.753	-0.098	0.000	1,249
SES Status	0.434	0.431	-0.003	0.914	1,253

Note: Means presented are regression adjusted means, controlling for school. All regression-adjusted means presented for students who completed both fall and spring surveys. Due to missing data, some individual sample sizes may be lower than 1,258 students.

As seen in Table 4, there are no significant differences between treatment and comparison students at baseline on any of the six outcome measures I collect from the student survey. I will discuss each construct in turn in section C. When they enter the study, these two groups do not differ on their interest in consuming the arts, their empathy, their desire to participate in the arts, their school engagement, their social perspective taking, or their tolerance.

Table 4: Baseline Equivalence for All Schools Fall Survey Constructs

	Comparison Mean	Treatment Mean	Difference in Means (C ± T)	P- Value	Sample Size
<i>Fall Survey Construct Measures</i>					
Arts Consumption	0.023	-0.002	-0.025	0.645	1,258
Empathy	-0.057	-0.063	-0.006	0.912	1,258
Arts Participation	0.077	0.087	0.010	0.854	1,257
School Engagement	0.072	0.005	-0.067	0.236	1,258
Social Perspective Taking	-0.100	-0.035	0.065	0.244	1,258
Tolerance	-0.086	-0.068	0.018	0.738	1,258

Note: Means presented are regression adjusted means, controlling for school. Except for survey participation rates, all regression-adjusted means presented for students who completed both fall and spring surveys. Due to missing data, some individual sample sizes may be lower than 1,258 students.

The two significant differences between the comparison group and the treatment group, gender and age, might be by chance or could be a function of differential rates of participation in the study between treatment and comparison students. Table 5 provides the regression-adjusted means for participation between comparison and treatment cohorts. I calculate *consent rate* by dividing the total number of consent forms received by the number of students enrolled in the third grade within that school for each cohort. I calculate *fall participation* by dividing the number of fall surveys received by the total number of third graders enrolled in the third grade within the school. I calculate *spring participation* in the same manner as *fall participation*. Finally, I calculate *both surveys completed* by dividing the total number of students from whom I received both the fall and spring survey by the total number of third graders enrolled in the school. As seen in Table 5, there are significant differences between comparison and treatment cohorts on my participation variables. Students in the comparison cohort are significantly less likely to provide consent to participate. That is, students in the comparison cohort were less

likely to provide consent to participate in the study. This means that there is a 10% difference between the comparison and treatment students for whom I have both fall and spring survey data.

Table 5: Participation Rates All Schools

	<u>Comparison Mean</u>	<u>Treatment Mean</u>	<u>Difference in Means (C ± T)</u>	<u>P- Value</u>	<u>Sample Size</u>
<i>Participation Rates</i>					
Consent Rate	0.650	0.722	0.072	0.000	1,458
Fall Participation	0.529	0.659	0.130	0.000	1,458
Spring Participation	0.545	0.596	0.051	0.000	1,458
Both Surveys Completed	0.504	0.606	0.102	0.000	1,458

Note: Means presented are regression adjusted means, controlling for school. Participation rates are calculated using all students who completed a fall survey, spring, survey, or both.

The differential consent and participation rates, a 10-percentage point difference exists between the comparison and treatment cohort for completing both surveys, may have produced the two significant demographic differences I observed. I control for these two differences, as well as the student’s minority status, in my fully specified model to reduce the chance for biased results these differences introduce. It is also possible that even controlling for these statistical differences, there remain unobserved differences between treatment and comparison cohorts that will also bias the outcome and thus the interpretation of my findings.

Description of Survey Instruments

My main source of data is student response on a survey designed to measure a student’s interest in consuming art or participate in making art as well as measures of social-emotional outcomes. Several of these constructs have been used in previous evaluations of arts or cultural field trips. I included questions to measure the following six constructs:

- the *arts consumption* scale gauges students' interest in going to art museums now and in the future;
- the *empathy* scale measures students' sympathetic feelings for others as well as their own creative empathy;
- the *arts participation* scale determines if students would like to produce pieces of art for personal or public consumption;
- the *school engagement* scale measures students' bond or tie to their school in addition to the extent of their involvement in the education process;
- the *social perspective taking* scale measures how much students can or attempt to read other people's feelings;
- and the *tolerance* scale evaluates students' ability to accept people who are different than they are.

In this section, I will describe the rationale for each construct as well as provide sample questions and discuss the reliability of each construct. Table 6 provides an overview of the fall baseline, unstandardized survey constructs. For my analysis, I standardize the constructs to approximate normal with a mean of zero and a standard deviation of one.

For each survey administration, researchers read each question aloud to the students in groups, either in their class or in a larger setting, such as the cafeteria. After inputting the data, I then averaged the individual question scores for one overall scale score, or construct score. Table 6 below gives the unstandardized means for each construct. Each set of questions had a minimum of zero and a maximum of four. For students in the sample, on a scale of zero to four, the average response for wanting to *consume* art was 3.129 points out of four. The average score on *empathy* was 3.029 out of four points. The average score for *arts participation* was 2.867

points out of four. The average score for school engagement was 3.1 points out of four. The average score for *social perspective taking* was 2.172 points out of four, and the average score for *tolerance* scale was 2.802 points out of four. Half of the scales achieved acceptable levels of internal consistency, *arts consumption*, *arts participation*, and *social perspective taking*. The other three scales, empathy, school engagement, and tolerance, fall below a Cronbach’s alpha of 0.70, indicating inconsistent measuring of the underlying construct (Tavakol & Dennick, 2011). As Tavakol and Dennick (2011) explain, the inconsistencies could arise from a number of reasons, including too few questions or the questions are measuring different outcomes.

Table 6: Fall Baseline Survey Construct Descriptives

	<i>n</i>	Mean	Std Dev	Alpha	Item Count	min/max
Arts Consumption	1,258	3.129	0.862	0.793	7	
Empathy	1,258	3.029	0.781	0.654	6	
Arts Participation	1,257	2.867	1.099	0.796	4	
School Engagement	1,258	3.100	0.895	0.571	4	0-4
Social Perspective Taking	1,258	2.172	0.850	0.703	7	
Tolerance	1,258	2.802	0.768	0.624	6	

Note: Means and standard deviations from students who completed both fall and spring surveys.

Arts Consumption

Prior research suggests that visits to cultural institutions increases students’ desire to continue visiting in the future (Kisida et al., 2014; Greene et al., 2018, Gray, 1998). Because of this suggested relationship, I added survey questions asking students about their willingness to go to art museums or to suggest that their friends visit art museums. The survey questions that comprise the Arts Consumption construct are modeled after the questions used in Kisida et al.

(2014). The arts consumption scale is composed of 7 questions that are answered on a Likert scale that ranges from 0 to 4. Some example question wording is: “Visiting art museums is fun” and “I plan to visit art museums when I am an adult.” The average, unstandardized baseline score was 3.13 out of 4 points with a standard deviation of 0.86 points, and this construct has an acceptable level of internal consistency, with a Cronbach’s alpha of 0.79.

Empathy

My empathy construct, used in prior research (Holmes et al., 2019; Watson et al., 2019) is modeled after two subscales from the Interpersonal Reactivity Index (Davis, 1980) – the empathic concern subscale and the fantasy subscale. Questions that fall under the empathic concern subscale ask the student to respond to others and their misfortune (Davis, 1980). Questions that fall under the creative empathy scale measure the degree to which a student places herself into feelings and actions of fictional characters in books or movies (Davis, 1980). The overall empathy scale has 6 questions that are answered on a Likert scale that ranges from 0 to 4. Students respond to questions like “It makes me sad to see a child who can’t find anyone to play with” and “After seeing a play or a movie, I have felt as though I were one of the characters.” The average, unstandardized overall empathy score at baseline was 3.03 with a standard deviation of 0.78 points. This scale has a low level of internal consistency, with a Cronbach’s alpha of 0.65.

Arts Participation

Just as prior research suggests that visiting cultural institutions increases a student’s desire to continue visiting (Kisida et al., 2014; Greene et al., 2018, Gray, 1998), such visits may also

increase a student's desire to participate in creating that art form. This is not necessarily so, however, as Greene et al. (2018) discovered. Researchers found that viewing live theatrical performances decreased a student's desire to participate in live theater (Greene et al., 2019). I include questions about participating in creating works of art either independently or in a group setting. The construct includes 4 questions that are answered on a Likert scale that ranges from 0 to 4. Students respond to questions such as "How interested are you in making a work of art" and "I would be interested in joining an art club if my school had one." At fall baseline, the average score for arts participation was 2.87 with a standard deviation of 1.1 points. This scale is internally consistent with a Cronbach's alpha of 0.8.

School Engagement

Based on previous research, one outcome of arts field trips and arts integration interventions is improving students' engagement with school activities (Holmes et al., 2019; Watson et al., 2019; Governor et al., 2014). I utilize questions from previous cultural field trip work (Holmes et al., 2019; Watson et al., 2019) to measure the affective engagement of students in school. These affective measures are based on questions in the *Identification with School Questionnaire* (Voekl, 1996). Students responded to 4 questions like "I feel proud being part of this school" and "School is boring" on a Likert scale that ranged from 0 to 4. The baseline average, unstandardized score was 3.1 with a standard deviation of 0.89 points. This scale does not meet acceptable levels of internal consistency, with a Cronbach's alpha of 0.57.

Social Perspective Taking

Prior research, as well as theoretical arguments, suggest that there is a link between exposing students to the wider world through cultural field trips and their better understanding of other people (Greene et al., 2018). I add questions from Gelbach's Social Perspective Taking questionnaire to measure whether this intervention increases these abilities in the treatment students (2008). The social perspective taking construct is a series of 7 questions that students answer using a Likert scale that ranges from 0 to 4. One example question students respond to is "How often do you try to figure out what motivates others to behave as they do." At baseline, the average score on this construct was 2.17 with a standard deviation of 0.85 points. This scale is consistent with a Cronbach's alpha of 0.7.

Tolerance

Because prior research has found that visiting art museums on field trips has increased students' tolerance for ideas and people different than themselves (Greene et al., 2014), I theorize that exposing students to wider perspectives through arts field trips and arts integration activities will improve their understanding of how others feel and, by extension, their ability to tolerate people who feel and think differently than they do. To measure this, I include 6 questions measuring a student's tolerance for people who are different or who hold different opinions than they do. These questions come from two separate scales. The first scale is questions of political tolerance, adapted from Peterson, Campbell, and West (2001). The three questions from this scale ask students if they agree that someone who holds different views than they do could run for office. The second set of tolerance questions are more general questions about differences and have been used in previous arts field trip studies (Greene et al., 2014; Holmes et al., 2019; Watson et

al., 2019). At baseline, the average tolerance scale score was 2.8 with a standard deviation of 0.77 points. This scale has a low level of internal consistency, with a Cronbach's alpha of 0.62.

Based on the evidence from prior research examining academic and non-academic outcomes associated with arts integration programs, I set the following hypotheses:

H1: Treatment is associated with null to positive effects on a student's desire to consume and participate in creating art.

H2: Treatment is associated with null to positive effects on a student's self-reported levels of empathy.

H3: Treatment is associated with null to positive effects on a student's engagement level with school.

H4: Treatment is associated with null to positive effects on a student's reports of ability to see how other people feel, social perspective taking, and tolerate those differences.

Survey Outcomes

To examine the effects on students' desire to participate in and consume art as well as their self-reports of non-cognitive outcomes, I use multiple regression models that control for baseline survey responses as well as demographic characteristics. I also include a fixed effect for school, therefore comparing treatment and comparison students within the same school.. My fully specified model is as follows:

$$Y_i = \beta_0 + \beta_1 Treat_i + \beta_2 Baseline_i + X_i \beta_3 + \theta_s$$

In the fully specified model, the outcome for student i , Y , is regressed on the following variables:

- *Treat* is an indicator variable for treatment status that takes a value of 1 if student *i* is in the treatment cohort and 0 if not
- *Baseline* is student *i*'s standardized baseline score on the outcome construct of interest
- X_i is a vector of student characteristics, including gender, minority status, and their age at fall survey. These student characteristics are taken from the survey data the student provided
- θ_s a fixed effect for each school.

I present heteroskedastic robust standard errors.

Table 7 reports the results from the regressions where each column presents a model with an additional control. The first column shows my findings controlling only for the student's baseline survey responses (I), the second model adding an additional control for whether the student is female (II), the third adding a control for whether the student is a minority (III), and the fourth adding in a final control for the student's age at fall survey (IV). For each model, I compare the results between treatment and control students within school. I find that receiving the treatment is associated with an overall null or negative effect on student outcomes.

Table 7: Year One Estimated Treatment Effects Full Sample

	I	II	III	IV
Arts Consumption	-0.062 (0.050)	-0.082* (0.049)	-0.085* (0.049)	-0.083* (0.050)
Empathy	-0.108** (0.051)	-0.122** (0.051)	-0.121** (0.051)	-0.125** (0.052)
Arts Participation	-0.101** (0.046)	-0.125*** (0.045)	-0.128*** (0.045)	-0.125*** (0.046)
School Engagement	-0.024 (0.050)	-0.042 (0.049)	-0.048 (0.049)	-0.046 (0.050)
Social Perspective Taking	-0.043 (0.052)	-0.056 (0.052)	-0.054 (0.052)	-0.043 (0.053)
Tolerance	-0.066 (0.052)	-0.081 (0.052)	-0.090* (0.052)	-0.089* (0.052)
<i>Controls</i>				
Baseline	x	x	x	x
Female		x	x	x
Minority Status			x	x
Age at Fall Survey				x
<i>n</i>	1,254	1,254	1,250	1,242

Note: Within-school regression estimates presented. Sample sizes decline due to missing demographic data from surveys. Heteroskedastic robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Arts Consumption

The first estimated impact on *art consumption* is null to marginally significantly negative across all four iterations. On average, students who receive treatment have lower scores on their desire to consume art constructs than do students who did not receive treatment. Controlling only for the student's baseline report of desire to consume art, I see a negative, but not statistically significant, effect associated with treatment. Students who received treatment had a 0.06 standard deviation lower desire to consume art. This negative effect is stable through all four

iterations, with the most robust model finding a 0.08 standard deviation lower score for treatment students. This effect is marginally significant at the 0.10 level.

Empathy

I find that receiving the treatment is associated with a consistent, statistically significant, negative effect on students' reports of empathy. In the model that only controls for students' baseline responses, treatment is associated with a tenth of a standard deviation decrease in students' reported levels of empathy, significant at the 0.05 level. Adding further controls like gender and minority status increases the effect size to 0.122 and 0.121 standard deviations, respectively. Finally, in the fully specified model, students who received treatment reported 0.125 standard deviations lower empathy than their comparison counterparts. Again, these effects are significant at the 0.05 level.

Arts Participation

In addition to marginally significant negative effects on students' desire to consume art, treatment is associated with negative effects on students' desire to participate in arts activities. These negative effects are consistent across specifications. Controlling for student baseline responses, students who receive treatment have a tenth of a standard deviation lower score on their arts participation construct, significant at the 0.05 level. Adding additional controls increases this negative effect. I see in the fully specified model that treatment students have, on average, a 0.125 standard deviation lower score on desire to participate in arts activities than the comparison students. These effects are significant at the 0.01 level.

School Engagement

I do not find any statistically significant effect on a student's participation in the program and their reports of school engagement. Across the four specifications, however, the coefficients follow the similar negative pattern as the estimated effects on the other outcome variables.

Social Perspective Taking

Nor do I find any statistically significant effect on participating in the treatment and student reports of social perspective taking. As with the findings with school engagement, however, the coefficients across all four specifications follow a similar negative pattern.

Tolerance

Finally, I do not find any statistically significant effect on students' report of tolerance associated with participation in the program. In the specifications with more controls, there is a marginally significant negative effect on a student's report of tolerance of 0.09 standard deviations.

In summation, I find null to negative effects associated with participation in the first year of the partnership. In my simplest model, column I, controlling only for baseline responses, students who received treatment, on average, had a lower score by about a tenth of a standard deviation on the empathy scale than their comparison-group peers. Students who received the treatment reported, as well, a lower desire to participate in the arts by at least a tenth of a standard deviation, depending on the control variables used in the model. These results are consistent across models after adding additional controls. For example, across all models, students who received the first year of treatment reported lower interest in participating in arts

activities, from 0.10 standard deviations to 0.125 standard deviations. These results are all significant at the 0.01 level. There may be negative effects of the treatment on student desire to consume the arts as well as a survey measure of their tolerance, but these effects are only significant at the non-conventional .10 level and even then only after additional controls are added.

Administrative Data Sub-sample

In addition to examining the effects on the non-academic outcomes described in section III.D, I was also interested in examining whether participating in the arts-integration program affected students' academic outcomes, too. In this section, I will describe the sub-sample of schools that provided administrative data as well as discuss both non-academic and academic outcomes for this sub-sample.

Administrative Data Schools

Participating schools agreed to provide administrative data that would allow us to examine academic outcomes for participating students in addition to the non-academic outcomes captured by the surveys. I requested administrative data from the participating schools at the beginning of the 2019-20 school year. I asked for standardized test scores, both the score and the level, special population distinctions, such as special education or English learner status, data about number of absences, and data about behavioral infractions.

I received these data for a sub-sample of the schools and students – 10 schools out of 17 participating schools provided some administrative data. Even among those 10 schools, the data they provided was sometimes incomplete. I was only able to analyze results for 7-9 schools for

each of the academic outcomes. Given these data concerns, results from the analyses of academic and non-academic outcomes should not be generalized to the full set of schools participating in the first year of the WSPP.

Administrative Data Baseline

I checked baseline equivalence for the survey constructs and student-level demographic information for the sub-sample of schools that provided administrative data. I find, as reported in Table 8, as with the overall sample, treatment students in the administrative data schools were more likely to report being female and younger than their comparison-group peers. These students also were less likely to report being a minority.

Table 8: Baseline Equivalence Survey Demographics Administrative Data Sub-Sample

	<u>Comparison Mean</u>	<u>Treatment Mean</u>	<u>Difference (C ± T)</u>	<u>P-Value</u>	<u>Sample Size</u>
<i>Survey Demographic Measures</i>					
Female	0.524	0.606	0.082	0.039	644
Reported Grades	1.283	1.365	0.082	0.459	640
Minority Status	0.921	0.845	-0.076	0.047	643
Age at Fall Survey	8.894	8.767	-0.127	0.000	640
SES Status	0.643	0.634	-0.009	0.808	642

Note: Observations in this sub-sample attend schools that provided administrative data. Means presented are regression adjusted means, controlling for school. All regression-adjusted means presented for students who completed both fall and spring surveys. Due to missing data, some individual sample sizes may be lower than 644 students.

I also examined whether treatment and comparison cohorts are different in their overall participation rates as well as completion for both the fall and spring survey. Table 9 presents these tests. Again, I find that a larger proportion of treatment third graders consented to

participate in the study compared to the comparison group at the same school. On average, the comparison consent rate was 77% of third graders in the school whereas the treatment consent rate was 82%, and this difference was statistically significant at the 0.01 level. I also note again a nearly 10% difference in the overall number of students in the comparison cohort and the treatment cohort for whom I have both fall and spring survey data. As Table 10 reports, treatment students and comparison students in the administrative data sub-sample demonstrated baseline equivalence on all survey constructs.

Table 9: Participation Rates Administrative Data Schools

	Comparison Mean	Treatment Mean	Difference (C ± T)	P-Value	Sample Size
<i>Participation Rates</i>					
Consent Rate	0.777	0.826	0.049	0.000	776
Fall Participation	0.612	0.746	0.134	0.000	776
Spring Participation	0.567	0.601	0.034	0.000	776
Both Surveys Completed	0.532	0.630	0.098	0.000	776

Note: Observations in this sub-sample attend schools that provided administrative data. Means presented are regression adjusted means, controlling for school. Survey participation rates use the total number of third graders enrolled in the school for the academic year as the denominator.

Table 10: Baseline Equivalence Fall Survey Constructs Administrative Data Schools

	<u>Comparison Mean</u>	<u>Treatment Mean</u>	<u>Difference (C ± T)</u>	<u>P-Value</u>	<u>Sample Size</u>
<i>Fall Survey Construct Measures</i>					
Arts Consumption	0.080	0.074	-0.006	0.941	644
Empathy	0.141	0.188	0.047	0.529	644
Arts Participation	-0.064	0.029	0.093	0.252	643
School Engagement	-0.509	-0.475	0.034	0.658	644
Social Perspective					
Taking	0.118	0.225	0.107	0.163	644
Tolerance	-0.156	-0.085	0.071	0.332	644

Note: Observations in this sub-sample attend schools that provided administrative data. Means presented are regression adjusted means, controlling for school. All regression-adjusted means presented for students who completed both fall and spring surveys. Due to missing data, some individual sample sizes may be lower than 644 students.

I finally compared demographic characteristics of treatment and comparison cohorts using the provided administrative data. This information, provided in Table 11, demonstrates that treatment and comparison cohorts were statistically similar in both socioeconomic status, measured by free and reduced-price lunch status, and minority status. Like the findings from the survey data, an average treatment cohort student is significantly more likely to be female, the treatment sample being 57% female and the comparison sample being 48% female.

Table 11: Baseline Equivalence Demographics Administrative Data Sub-Sample

	<u>Comparison</u> <u>Mean</u>	<u>Treatment</u> <u>Mean</u>	<u>Difference</u> <u>(C ± T)</u>	<u>P-Value</u>	<u>Sample</u> <u>Size</u>
<i>Administrative Data Demographic Measures</i>					
FRPL Status	0.902	0.948	0.046	0.208	589
Female	0.483	0.576	0.093	0.022	614
Minority Status	0.909	0.918	0.009	0.759	611

Note: Observations in this sub-sample attend schools that provided administrative data. Means presented are regression adjusted means, controlling for school. All regression-adjusted means presented for students who completed both fall and spring surveys.

Administrative Sub-sample Survey Outcomes

To examine the outcomes for the administrative sub-sample, I ran the same models as with the overall sample, controlling first for baseline (I), then adding in whether the student is female (II), the student’s minority status (III), and age at fall survey (IV). I find that, just as with the overall sample, there are significant, negative effects on the students’ interest in participating in the arts – from 0.16 standard deviations in the baseline model to 0.18 standard deviations in the model controlling for gender and minority status.

Table 12: Year One Estimated Treatment Effects - Administrative Data Sample

	I	II	III	IV
Arts Consumption	-0.148** (0.063)	-0.168*** (0.063)	-0.178*** (0.063)	-0.193*** (0.065)
Empathy	-0.057 (0.068)	-0.081 (0.068)	-0.085 (0.068)	-0.103 (0.070)
Arts Participation	-0.164*** (0.063)	-0.190*** (0.062)	-0.196*** (0.061)	-0.199*** (0.063)
School Engagement	0.054 (0.066)	0.033 (0.065)	0.027 (0.065)	-0.001 (0.067)
Social Perspective Taking	-0.009 (0.072)	-0.029 (0.071)	-0.021 (0.071)	-0.017 (0.073)
Tolerance	-0.001 (0.072)	-0.026 (0.072)	-0.038 (0.073)	-0.058 (0.075)
<i>Controls</i>				
Baseline	x	x	x	x
Female		x	x	x
Minority Status			x	x
Age at Fall Survey				x
<i>n</i>	643	643	642	638

Note: Within-school regression estimates presented. Sample sizes decline due to missing demographic data from surveys. Heteroskedastic robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

Arts Consumption.

Unlike in the overall sample, I find a statistically significant negative estimated effect on a students' desire to consume art, and this estimate is consistent across all four specifications. On average, students who receive treatment have lower scores on their desire to consume art constructs than do students who did not receive treatment. Controlling only for the student's baseline report of desire to consume art, I see a negative, statistically significant, effect associated with treatment. Students who received treatment had almost a 0.15 standard deviation lower desire to consume art, significant at the 0.05 level. This significant negative effect is stable

through all four iterations, with the most robust model finding a 0.193 standard deviation lower score for treatment students. This effect is significant at the 0.01 level.

Empathy.

I find null results for the effects of the treatment on measures of empathy for the treatment students in the administrative data sub-sample. Unlike the full sample, I do not find a negative effect on students' report of empathy in the administrative data sub-sample. While the coefficients across the four specifications are negative, they are not statistically significant.

Arts Participation.

In addition to statistically significant negative effects on students' desire to consume art, treatment is associated with negative effects on students' desire to participate in arts activities in the administrative data sub-sample. These findings are similar in the overall sample, as well. These negative effects are consistent across specifications. Controlling for student baseline responses, students who receive treatment have a 0.16 standard deviation lower score on their arts participation construct, significant at the 0.01 level. Adding additional controls increases this negative effect. In the fully specified model that treatment students have, on average, a 0.199 standard deviation lower score on desire to participate in arts activities than the comparison students. These effects are significant at the 0.01 level.

School Engagement.

Interestingly, while I do not find any statistically significant effect on a student's participation in the program and their reports of school engagement in the administrative data sub-sample, I do see the coefficients flip from negative null effects to, generally, positive null effects.

Social Perspective Taking.

I do not find any statistically significant effect on participating in the treatment and student reports of social perspective taking. As with the findings with empathy, however, the coefficients across all four specifications follow a similar negative pattern.

Tolerance.

Finally, I do not find any statistically significant effect on students' report of tolerance associated with participation in the program in the administrative data sub-sample.

As with the overall sample, treatment students in the administrative data sub-sample reported less interest in consuming art, from 0.14 standard deviations in the baseline model to 0.19 standard deviations in the fourth model, controlling for gender, minority status, and student age. Additionally, treatment students in the sub-sample reported a statistically lower desire to participate in arts activities when compared to the previous cohort of students. The estimated effects range from 0.16 standard deviations to 0.19 standard deviations. The statistically significant negative effect on a student's reported level of empathy, seen in the overall sample, is not seen in the administrative data sub-sample.

Administrative Sub-Sample Academic Outcomes

In addition to examining survey outcomes for the sub-sample, I looked at whether the treatment affected academic outcomes as well. Specifically, I examined whether receiving treatment was associated with a difference in standardized test scores, number of absences in school during the third-grade year, and number of discipline infractions reported by the school. The results from these regressions are reported below in Table 13. I find that receiving the treatment is associated with a 0.16 standard deviation decrease in ELA test scores and a 0.18 standard deviation decrease in Math test scores in third grade, relative to comparison counterparts.

Table 13: Year One Estimated Treatment Effects - Administrative Data Outcomes

	ELA 3rd Grade Test Score	Math 3rd Grade Test Score	Total Absences 3rd Grade	Total Discipline Infractions 3rd Grade
Estimated Treatment Effect	-0.168** (0.070)	-0.186*** (0.068)	-0.640 (0.506)	0.057 (0.094)
Controls	X	X	X	X
<i>n</i>	659	696	629	383

Note: Within-school regression estimates presented, controlling for FRPL status, gender, and minority status. Test scores standardized within state. Heteroskedastic robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1

I find no statistical difference between treatment and comparison groups on measures of total absences and total discipline infractions during third grade. These academic results should be interpreted with caution, however, for two reasons. First, I was not able to control for student’s underlying academic ability because I do not have prior-year academic achievement. In all participating schools, students’ first state standardized exam is taken at the end of their third-

grade year. Therefore, I do not have test scores from a previous year to account for underlying academic ability. Second, these descriptive results cannot be interpreted as true causal effects because they come from a sub-sample of schools. Schools chose to participate by giving us access to these data, and therefore I cannot control for any underlying reason why some schools would choose to provide the information while other schools did not.

Summary

Table 14: Year One Non-Academic Outcomes Summary

	Full Sample	Admin Sub- Sample
Arts Consumption	-0.083* (0.050)	-0.193*** (0.065)
Empathy	-0.125** (0.052)	-0.103 (0.070)
Arts Participation	-0.125*** (0.046)	-0.199*** (0.063)
School Engagement	-0.046 (0.050)	-0.001 (0.067)
Social Perspective Taking	-0.043 (0.053)	-0.017 (0.073)
Tolerance	-0.089* (0.052)	-0.058 (0.075)
<i>Controls</i>	x	x
<i>n</i>	1,242	638

Note: Within-school regression estimates presented with controls for gender, minority status, age-at-survey, and survey baseline. Data for controls from survey responses. Heteroskedastic robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1.

Table 14 presents the summary of survey outcomes in the full and administrative data sub-sample. I find null to negative effects associated with participation in the first year of the partnership on the six survey outcomes. These estimated negative effects are surprising when considering previous research that found positive academic and non-academic outcomes associated with arts integration programs broadly as well as programs that specifically used resident artists or field trip experiences. The negative estimates are consistent across iterations of model and within the sub-sample of administrative data schools. For example, across both data samples, students who received the first year of treatment reported lower interest in participating in arts activities, from 0.125 standard deviations in the full sample to 0.199 standard deviations in the administrative data sub-sample.

There is suggestive evidence that treatment is associated with a lower desire to consume arts now and in the future. In the full sample, this negative effect is only marginally significant, but in the sub-sample, it is nearly a fifth of a standard deviation. This result is significant at the 0.01 level. Interestingly, the statistically significant, negative effect on empathy in the full sample is not repeated in the sub-sample. Again, these results should be interpreted with caution for two reasons. First, in the full sample, and in the administrative data sub-sample, differences in participation rates may yield unobservable differences in the comparison and treatment cohorts. While in both samples these students are not statistically different at baseline for the survey constructs, this still warrants consideration. Second, with the administrative data sub-sample, and thus the negative effects on the academic outcomes are not generalizable to all students in the intervention.

Chapter 5: Qualitative Study

While the findings from the quantitative portion of this study provide an estimate of the average effect the WSPP program has on students' non-academic outcomes, it provides no insight into which aspects of the program might be contributing to these outcomes. The strength of using qualitative research methods that can provide important contextual information comes to the foreground. Using these methods, it will be easier to understand the participant's viewpoint as to how these outcomes may have occurred (Denzin & Lincoln, 2005, p12). To examine the experiences of the participants, I will use a phenomenological case study of the intervention, relying on field observations and focus group interviews.

Qualitative Methodology

Research Design

I use a phenomenological case study framework to provide context for the quantitative findings from the first year of the WSPP implementation. In a phenomenological study, the researcher attempts to “describe as accurately as possible the phenomenon, refraining from any pre-given framework, but remaining true to the facts” (Groenewald, 2004, p. 44). The important aspect of phenomenology is to provide as much information as possible to describe what happened “from the perspectives of people involved” (Welman & Kruger, 1999, p. 189 in Groenewald, 2004). A phenomenological study can be distilled down to two essential questions – what happened and how do the people involved feel about what happened?

The purpose of this study is to explore the “lived experience” of the participants and providers of the WSPP – the students, the teachers, the resident artists, and the museum educators (Groenewald, 2004, p. 44). Examining these experiences improves this evaluation in

several ways. First, the observations and discussions in the focus groups provide important contextual information about this specific program. This information can be used to understand what the experience looked like and to compare it to previous arts integration programs when discussing the outcomes of the participants. Second the focus group discussion provides an outlet for participants to articulate their feelings about the experience, leading to better understanding for researchers as well as participants and program providers.

As previously discussed, the foundational questions in a phenomenological study ask what happened and how do the people feel about it. For this study, I answer the following research questions:

- 1. What does this experience look like for students? What activities are students doing and how engaged are the students during these activities (either the resident artist teaching in their classroom or the museum educator guiding the field trip)?*
- 2. What do the participants think of this intervention? What are their previous experiences? What do they think the outcomes are from this program? How could it be better in the future?*

To answer the first research question, I relied on field notes taken during observations of classroom activities and field trip activities. To answer the second question, I use information gleaned from semi-structured focus group interviews with the participants and program providers. I spoke to students, classroom teachers, resident artists, and museum educators.

Sampling Method

I used a purposeful sampling method to identify potential schools for classroom observations (Palinkas et al., 2013). In addition to observing in the classrooms, I also extended invitations to the classroom teachers and students to participate in the focus group interviews. For the participant observations and interviews, I chose schools that represented wide variation in the types of school to capture heterogeneity of experiences (Palinkas et al., 2013). I chose potential schools based on urbanicity, rural or suburban, student demographics, and distance from Crystal Bridges. I also reached out to the program providers, the resident artists and museum educators, to invite participation in the focus group interviews.

Beginning in February 2019, I reached out to five principals of schools with different demographic make-ups as well as different distances from the museum. I received approval from all five principals to observe classes as well as ask their teachers and students to voluntarily participate in the focus group interviews. After receiving permission from the school principal, I coordinated with the third-grade teachers to identify an appropriate time to observe the resident artists in the classroom as well as set up interviews with the teachers and students. Only two schools responded.

Therefore, I completed field observations of the resident artists at two schools. In addition to coordinating observation visits, the teachers identified four to six third-grade students who would be willing to participate in the focus group interview. I asked teachers to provide the selected students with an additional parental consent document, highlighting the procedures the focus group interview would take, and collect the signed consent forms from interested students. Due to scheduling conflicts, I was only able to interview one set of students and one set of classroom teachers, both from different schools.

In addition to interviewing the teachers and students, I was also interested in the perspectives of the resident artists and museum educators. Through their respective coordinators, I asked for voluntary participation of resident artists and museum educators in focus group interviews about their first year's experience with WSPP. All four resident artists participated in the focus group and nine of 13 museum educators agreed to be interviewed. I received signed consent from each interview participant. The semi-structured interview questions for each group, students, teachers, resident artists, and museum educators, is available in Appendices D through G.

Field Observations Protocol

My analysis of the classroom experience comes from the field observations. Each observation was guided by the following overarching questions:

- overall, are the students engaged with the teaching artist?
- overall, is the teacher engaged with the students and the teaching artist?

A copy of the observation notes guidelines is available in Appendix B. During each observation, the number of students in the group was noted, as was the number of students engaged in each activity. Classroom teacher and resident artist activities and engagement were also noted throughout the observation. The classroom observations occurred at two separate schools. In school A, I observed resident artists in two separate classes on two separate days of the third week of the intervention, the Monday and Wednesday session. Students visited the museum on the Tuesday. In school B, I observed on the Monday of the third week of the intervention.

My observations of the field trip activities followed similar guideline questions:

- overall, are the students engaged with the museum educator?

- overall, is the teacher engaged with the students and the museum educator?
- overall, are the students engaged in the experience and the art they are seeing?

A copy of these guidelines is available in Appendix C. For these observations, I noted the approximate number of students who were in the group as well as keeping track of their engagement with the activity at hand. I noted adult (either teacher or resident artist) engagement throughout. I attended field trips on two separate days.

Interview Protocol

Five focus group interviews were conducted between April 3, 2019 and May 28, 2019. The five groups were comprised of one group of students, one group of teachers, one group of resident artists, and two museum educator groups. Interviews were proctored by at least two researchers. At the beginning of each interview, I reminded participants that they did not have to answer or respond to any question that they did not feel comfortable responding to. The interviews ranged in total time between 38 minutes and 63 minutes. Table 15 provides an overview of the focus group sample.

Table 15: Description of Focus Group Participants

	<u>Interview Date</u>	<u>Length of Interview (minutes)</u>	<u>Number of Participants</u>
Students	4/3/2019	52:55	4
Classroom Teachers	5/28/2019	38:00	6
Resident Artists	5/7/2019	63:51	4
Museum Educators 1	5/21/2019	50:02	4
Museum Educators 2	5/21/2019	45:06	5

I interviewed each group at a time and in a location determined to be the most convenient for the participants. I interviewed the group of students at their school after their resident artist session. I interviewed the resident artists after one of their field trip days at Crystal Bridges. I interviewed the museum educators at Crystal Bridges, Finally, I interviewed the teacher group during their planning period. Because of scheduling conflicts, I had to interview the classroom teachers during their last week of school. After I completed the interviews, I downloaded the audio files and transcribed each file. I confirmed the accuracy of each transcription by reading through the transcription and comparing it to the audio file. Transcriptions do not include names of participants to protect the confidential nature of the interview.

Interview Coding

I analyzed the interviews using a modified version of the “Classic Approach” described by Krueger and Casey (2009). This approach does not rely on coding software, but instead uses a systematic visual method to identify themes and sort the results into their appropriate category (Krueger & Casey, 2009). After transcribing and verifying the accuracy of the transcription, I

printed each interview and cut the interviews up by speaker and sorted each section into its appropriate theme. Krueger and Casey recommend sorting by interview question, but I sorted each interviewee's response by whether it fit into an overall theme. These themes were the guiding ideas of the questions I asked. I sorted, and will present, the findings by two groups – the first group will be the interviews with the participants, in this case, students and teachers; the second group will be interviews with the providers, the resident artists and the museum educators.

For each group, participants and providers, the main themes are quite similar. After providing information about their *background experience* with field trips, arts integration, or art education, I asked interviewees to discuss their specific *WSPP experiences*, the *outcomes* from these experiences, and how to *improve* the WSPP program. For the two program provider groups, the museum educators and the resident artists, *WSPP experiences* includes how they prepared for the WSPP. At the end of the coding, I had twelve 16”x16” post-it notes filled with quotes from each group of interviewees pertaining to these main themes.

Findings from Field Observations

My first research question aims to provide a rich description of students' WSPP experience in the arts-integrated classroom as well as on the field trips. I describe the types of activities the students are doing and whether they appear to be engaged during these activities. To answer this question, I relied on field notes taken during three separate visits to the classroom to observe resident artists and three field trip observations.

Classroom Observations

During the third week of the intervention, field observations were conducted at two different schools. As described in chapter 2, the third week of the intervention involved resident artists teaching a math-themed arts integration lesson. The classroom observations yielded the following conclusions: first, teachers engaged with and participated in the class activities to varying degrees; second, the students also varied in their engagement in the activities; third, the resident artists' activities require movement and room, which may be harder for some classrooms to physically accommodate.

I observed the different roles the classroom teacher assumed during the hour instruction from the teaching artist. Some teachers acted as a disciplinarian. As the disciplinarian, their role during the resident artist's hour was to redirect students who were not paying attention or were actively disrupting the class. Another teacher took an active participant role in the resident artist's lesson. This teacher took part in unpacking the actor's toolbox along with the students. If this teacher needed to redirect a student, or a group of students, they used the same phrases used by the resident artist to redirect the activity and the emotions. The researcher commented that there was a noticeable difference in the engagement level between the class led by the disciplinarian teacher and the participant teacher. Students in the participant teacher's class were serious and invested in the activities throughout the hour lesson whereas the students in the disciplinarian's classroom had to be redirected by the classroom teacher and the resident artist throughout the lesson.

I also noticed differences in student engagement, as measured by the need for a teacher to intervene and redirect or remind them of the expectations. One class of the three I observed was noticeably in need of redirection on one of the days I visited. This could be a function of the time

of day when the class took place. The students had just returned from recess, and the arts-integration class was taking place outside of the normal schedule. In one class, the resident artist devoted a large amount of time going over the “Acting Right” introductory movements, for example, unpacking the actor’s toolkit and “signing the contract” of cooperation with each other and the resident artist. The resident artist could have decided to spend extra time on this review because of the length of time between week two and week three of the intervention, which was almost exactly two months.

The activities in the intervention require movement around the classroom. Students are asked to “fill the holes” when they are spreading out across the classroom. Filling the holes involves students moving to free space around the classroom. The resident artist advised students to take up all free space and would spread students out further if they were too close together. Filling the holes and other movement activities involved students moving their bodies independently or collaborating to create tableaux of themes or ideas called out by the resident artist. The configuration of some of the classrooms was more amenable to student movement than others, and some of the classrooms were noticeably larger than others. Lack of physical space may make participation in these activities more difficult, or at least more prone to disruption when students run into each other. Depending on how focused the students were, they may have run out of time to finish their daily tasks. Sometimes the resident artist would collect the work and allow the students to work on the project the next day; other times the classroom teacher kept the work and allows the students to work on it during their free time. Throughout a majority of activities, students are engaged and participating in the lesson. They may also want to do different types of visual arts activities in addition to drawing. In one instance, as the

resident artist was explaining the art assignment, students misunderstood and thought they would be making models of a still-life rather than drawing the still-life.

Throughout the classroom observations, there was no evidence of teachers or students being completely disengaged in the lesson. For example, no teacher left the room while the resident artist was teaching. Rather, as previously discussed, the main difference seems to lie with the teacher taking on a role of disciplinarian or participant.

Field Trip Observations

I observed field trip tours during the third week of the intervention and the second field trip of the academic year. The data for this analysis come from four separate tours from the second round of field trips. Each tour group made four stops. Because of the large number of student groups, museum educators did not show each student group the exact same four art pieces. For example, one of the tours stopped at *Untitled* by Nina Chanel Abney, a mural in a stairwell connecting the restaurant and a gallery, while other tour groups did not see this piece. At this stop, the museum educator commented that shapes are the “building blocks” of drawings and asked students what they saw. One student remarked that the mural looked like “big city noises.” After examining the mural, students created their own mural using felt shapes on a felt board. Many of the shapes are the quadrilaterals used in the resident artist’s lesson on the previous day in class.

The field trip observations yielded the following conclusions: first, students were engaged and eager to participate; second, museum educators were skilled at encouraging student participation and provided engrossing activities at each stop; third, touring the museum while it

is closed did not seem to affect the experience for students; finally, as in the classroom, teachers and chaperones varied in their engagement level with the museum educator and students.

Students on the tour were engaged, responsive, and eager to participate. This was especially the case when the museum educators introduced students to works of art that have elements in common with what they have learned in the resident artists lesson. For example, students were quite excited to discuss what they saw in a piece by Susan Rothenberg called *Four Color Horse*, an abstract piece that has four triangles. Students were excited when they could make connections between the resident artists' lessons and what they were seeing at Crystal Bridges. Students were excited to see a piece the resident artists highlighted in their class the previous day, an abstract piece called *Au Café* by Stanton MacDonald-Wright. The tours passed this piece moving from one stop to the next, and students and teachers commented on seeing it the previous day.

Museum educators are skilled at encouraging students to participate using the Visual Thinking Strategies and eliciting student responses. At one of the stops, a museum educator asked the students to recreate a horizon line in the artwork using their own bodies by standing and lying on the floor. At another stop, students were invited to lie on their backs and look up at the artwork above them; the students enjoyed viewing the artwork from this perspective. Museum educators also emphasized different curricular or artistic aspects of the works of art, making each tour somewhat unique. For example, one museum educator focused on the mathematics associated with each piece, even asking students to tell him the formula to measure perimeter. However, each museum educator did ensure that students generally had the same experience as other students in their school might have had. The museum educators have created tours with hands-on activities that the students enjoyed completing. For example, the students

stopped at *Trois Noirs sur Rouge* by Alexander Calder. This is a large, metal sculpture that resembles a mobile, but is perfectly still because of the balanced, artistic weights on each of the arms of the piece. The museum educator asked students what they saw, and students suggested many different things, including a sad alien. The museum educator affirmed these interpretations of the piece. The students then got to create their own version of the piece, practicing placing the individual pieces to achieve balance. The students enjoyed this activity.

Even though the museum was closed to the public, students were able to see most of the galleries and comment on other pieces in addition to the four on that day's tour. The museum being closed did not detract from the experience, except that there was ambient noise from the normal activities undertaken at the museum on a Tuesday. As I walked from one gallery to the next during a tour, I passed museum employees moving art or setting up new displays. Students moved past these disruptions quickly.

Finally, as I saw in the classroom, teachers or chaperones are never completely disengaged when visiting Crystal Bridges with their students. It was, rather, a question of whether the teacher or chaperone acted more as a disciplinarian or actively participated in the activities with the students. For example, one of the parent chaperones completed the math activity with a student at the *Parabolic Curves*, by Gabriel Dawe, piece.

During the first year of the intervention, students participated in multiple arts-related activities. The resident artists devoted most of their classes to visual arts activities and theater/dance activities. They had planned thematic units that coincide with the content standards for the students. Students are engaged in these lessons, and the teachers I observed at least acted as disciplinarians but also participated in some of the class activities as well. Students participated in two field trips to Crystal Bridges. Both field trips covered the same general

content the resident artists covered in their classroom. Museum educators engaged students through their questioning techniques as well as through activities at the four stops along the museum tour. Students, and teachers, are engaged in these activities and enjoy seeing the works of art, especially when the connection between the work of art and the content they learned with the resident artist crossed over.

Findings from Focus Group Interviews

While it is important to provide an accurate description of the day-to-day activities the WSPP participants may experience, it is equally important to examine what the participants thought of their experiences. The data used to analyze what participants and providers felt about the experience were collected through semi-structured focus group interviews with the four main groups. I spoke to student participants, teacher participants, the resident artists, and the museum educators.

I discussed with each group what they thought of the WSPP intervention, what other similar experiences they may have had, what they think changed, or what the outcomes were from this year, and how the program could be better in the future. The final question, about suggestions for improvement in the future, capitalizes on the longitudinal nature of this intervention. The program is set to run for two additional years, and program leaders may be interested in knowing, from the people who are participating in the program, what aspects might be made better. I will present the themes that arose from the coding of the interviews by group.

Students

Four students participated in the focus group interview after their arts integration class had ended for the day. The interview was conducted in the school's cafeteria, across the hall from the students' classroom. All four students were in the same homeroom teacher's class. I interviewed two girl students and two boy students. Two of the students had attended the school since kindergarten, one had been at the school since first grade, and the final student was in their first year at the school. All four students recalled at least one, non-Crystal Bridges field trip they had been on with their class or with their school. The memorable field trips seem to be connected with some sort of student activity, for example, all four students have been to a farm where they were feeding animals; other active field trips included rock walls, dance floors, and poker. The students also remembered going to see plays or musicals, like the Wizard of Oz and the Nutcracker. They recalled field trips as being both for the whole school/class as well as reward field trips. One of their favorite parts of any field trip is the bus ride.

I asked the students to describe their experience with the resident artists and the work they did in the classrooms. Students said that the WSPP was fun because it is active. Speaking of the resident artists, one student said "I like how they make it more fun than just working ... it's more fun than just sitting and doing work." When asked to elaborate, the student identified that the resident artists brought in games and other "fun stuff." One of these activities the students mentioned specifically is the tableaux, which the students described as an activity where "we have to use our bodies to make the picture" requested by the resident artist. The students also found the resident artists encouraging. For example, in making the tableaux, students would not necessarily succeed the first time because the resident artist gave them specific criteria to achieve

in a set time limit and the students had to work together to complete the task. The students said that if the group did not get it right on the first try the resident artists would allow them to

“try again, they’re very encouraging. And if we have, say, a kid who isn’t participating, and we had a group of four when we were supposed to have a group of five, she would just let us use that. She would tell us ‘let’s try again’ and see if our person who was out of the group would come back and try again.”

I asked the students what they felt they learned from this program so far. The students shared that they felt their experiences had helped with their imagination, creativity, or even self-expression. One student reported that they thought art was capable of inspiring people, although another student thought that they got most of their inspiration internally. One student thought that art might help people in various forms of self-expression, even when deciding what outfits to wear. Students reported that their field trip experiences had helped them create stories and fill in information when looking at different kinds of visual art pieces. In addition to using art in a creative way, the students used art to relate to the real world or what had happened in the past.

“Like when they were talking about the Great Depression, like you saw all of that, but what’s it really about? ... And when you learn more about it, it makes a lot more sense, so it can help you visualize what is going on around them.”

The students also connected the existence of art to the existence of YouTubers, saying that they thought that people who have their own YouTube channels might have been inspired to create by works of art they had seen. Some of the students said that they are trying new types of art that they have learned about or trying to create more art in their free time.

The WSPP experience has broadened the definition of what art is and what it entails for these students. For example, one student related that the Crystal Bridges trip increased their appreciation and enjoyment of art because it introduced more colors. The student remarked that “there’s more colors I didn’t know ‘til now ... like sea green ... just learned that color.” The

students brought what they saw and use it in their own work. They learned that art can “kind of bend the rules of physics a little bit. Like how we learned to make a curve out of straight lines. Like that doesn’t make sense when you say it out loud.” Students learned that artists use chemistry or physics when creating their pieces, and they learned that works of art could range from photographs to fabric. One student, who had never been to an art museum before, said the Crystal Bridges trip was “amazing” and that they appreciated the fact that abstract art allowed for multiple interpretations, saying “I kinda like abstract art because you can think what it is, but you’re not wrong or you’re not right. You can think whatever you want about it.” The other students concurred, citing that abstract art allows you to use your imagination and is like a mystery to be solved.

I asked the students what their favorite work of art was. The students were all able to identify at least one piece they had seen at Crystal Bridges. Some of the work they had seen on a tour stop, but other pieces had just caught their eye as they walked past in the galleries. The student who just recently went to their first art museum said *Untitled* by Donald Judd was their favorite because it went against their expectations.

“Like when I came here for the first time, I was expecting like all paintings, but when I saw stuff in the air, I’m like ... wait ... it’s more than you think.”

The students mentioned *Parabolic Curve* by Gabriel Dawe, *Four Color Horse* by Susan Rothenberg, the realistic statue of the old man sitting on the bench, and the robe made from dog tags as some of their favorite art pieces to see.¹³ Although they were not able to recall the name of each piece, they did remember specific details that remained in their minds.

The students did have some suggestions for improving the experience. They suggested that the visual arts activities they do during the resident artists lessons should involve more than

¹³ *Man on Bench* by Duane Henson and *Some/One* by Do Ho Suh

drawing activities. The students feel this would allow them to improve their creativity, letting them “think outside the box.” In addition, the students suggested that, when the resident artist presents a new piece of art and asks students what they think or what they see, the resident artist should hear from everyone who wants to share before telling them the answer. The students said that the resident artists might correct the students’ impressions too quickly. One student said that “you’re not really wrong when you look at art, though, so they’re kinda just correcting your imagination, which is literally impossible.”

Teachers

I interviewed six third-grade teachers at one of the participating schools on one of their last days of school before the spring semester was over. I conducted the interview in one of the participating teacher’s rooms, sitting around the teacher’s small group instruction desk. The interview took place during the teachers’ planning period. Of the six teachers, four have taught at this school for their entire teaching career. The remaining two have taught at this school for at least five years. One teacher was just finishing her second year of teaching, one her fifth, and the rest of the teachers have at least ten years of teaching experience. All have taught third grade for at least two years. The teachers all recall several different field trips they have taken their students on in the past and noted the benefits they associate with field trips. First, some of the field trips gave students new experiences. For example, teachers liked one field trip called the Spanish Treasure Tour because it gave students “experience, history stuff and science, geology” and another teacher added that “a lot of them [the students] haven’t been in caves before.” Some of the previous field trips had curricular ties to their subject standards. The teachers mentioned that taking students to plays allowed them to tie in character development or a historical

scavenger hunt and history standards. The also though that field trips are a way to foster camaraderie or “social bonding” between the students. The teachers highlighted the learning aspects of field trips, showing that they, the teachers, are learning, too.

“I try to tell them if I learn something. I’ll say ‘oh, I didn’t know that’ and they’ll say ‘you didn’t?’ I’ll say ‘nooo,’ so I mean, we are learning right along with them and I think they do see that.”

The teachers in this school had also seen arts integration strategies in use before, may have even “dabbled” in it themselves, but some see it as a fad. One teacher explained

“I feel like over my whole career there’s always been you know, rises of ‘oh, let’s do more art in the classroom’ and so we do and we may have a training on it or someone may have a really good idea of something to use so I feel like I’ve always dabbled in it, you know, not real seriously. It’s not ever been something I’ve done every year, but maybe some years more than others just because of the trends”

While the teachers had not necessarily implemented arts integration themes or practices in their own classroom, they have taken students to Crystal Bridges and brought back the museum educator’s Visual Thinking Strategies into their classroom. The teachers also, enthusiastically, welcomed guest speakers in their classroom because they feel that the students benefit from these experiences. Whether it is because the guest lecturer had some expertise the teacher did not possess or because the students learned better from someone new, the teachers had positive experiences with guest speakers or teachers in their classroom.

The teachers found the WSPP activities to be beneficial for their students, in general. They report that the students liked the focusing games, the concentration and cooperation games that are part of the Acting Right methodology. The teachers felt that these games and the tableaux exercises promoted cooperative group work that their students needed. One teacher noted that the students did not take the focusing activities seriously at the end of the year, but

they also thought that this could be different in other classes. The teachers thought the timing of the resident artist visits, was well planned. They said that the space of time between each of the three weeks kept the students' interest without overwhelming them. They commented on how some of the content was easier for students to connect to for a couple of reasons. First, the students enjoyed the math-themed week more because they had more background knowledge. The teachers noted that the students liked the history-themed week, when the students studied the Great Depression, but were not able to engage as deeply as they did with the math week. Second, and perhaps because they had more knowledge, the teachers thought that the math week's field trip and the classroom activities worked together seamlessly. They also reported that students in some classrooms, because of scheduling and timing issues, did not necessarily have the same experience as other students in the same school. Some students were not able to do the same crafts and arts activities as other students.

The teachers thought that they and their students received several important benefits from participating in the WSPP intervention. First, they personally have begun using the questioning techniques used by museum educators Crystal Bridges and resident artists and incorporating art into their own classrooms to promote classroom discussions. The teachers had seen that their students were able to handle these discussions in their classroom as well as at Crystal Bridges. These discussions allowed students to practice deeper thinking/critical thinking skills as well as giving them a sense of comfort in sharing what they see and confidence in what they say. The teachers thought that the students have improved in their abilities to collaborate and interact with each other in productive ways. These skills were especially tested and improved in the cooperation activities the resident artists brought into the classroom. As one teacher said in creating the tableau or other cooperation challenges, the students would work together to

complete the task, they compromise on how to achieve their shared goal, and they got better over time. They did mention, however, that the structure of the class, the lack of concrete instructions for some activities, and even the movement and noise, were overwhelming for some of their students. One teacher thought that the tears that shed in her class might be because the students were more invested in the process.

“I feel like I had more tears as it went on because they felt more like ‘no this is how it’s supposed to be’ they had a little more ownership of it.”

The teachers liked that the resident artists used thematic units because they were not always able to do these units themselves. They especially thought that the math unit was very good. The teachers now felt more comfortable trying to incorporate the techniques demonstrated by the resident artists in their own classes in the future. They thought that the surveys needed to be improved. They felt that the questions were too difficult for the students. Overall, the one thing the teachers commented about needing to improve was the professional development they attended the summer before the intervention began. The teachers felt it was useful in that the professional development told them what to expect in the intervention but that this information could have been covered in one or two days rather than over five days. A teacher explained:

“As far as ... the things learned about what they were going to do with our kids and the rationale that was pretty good. As far as like knowing what to expect with the kids and with the work and what we were going to do, and even how we could integrate it in the future that was useful for that as well”

Both the teachers and the students enjoyed the first year of the WSPP. The teachers felt that their students benefitted from the experience and that they themselves learned some pedagogical methods they were going to try in their classroom. The students shared that their concept of what art is grew, and they were more excited by the possibilities this newer, broader definition of art afforded them.

Museum Educators

The museum educators and resident artists were responsible for providing or implementing key aspects of the WSPP. With this in mind, I added one subpoint to the question about their experiences with WSPP. I asked both groups what they did to prepare for the program. Because they are providers of the program, I believed it would be important to gain information about their preparation process as well as their personal experiences before and with the program and their thoughts about WSPP.

I interviewed the museum educators on a Tuesday after the final WSPP tour week had finished. I interviewed them in one of the conference rooms near the education offices at the museum. Crystal Bridges employs thirteen museum educators and nine agreed to participate, so I conducted two separate interviews. The responses from both interview groups are presented together.

The museum educators had a wide variety of professional experiences prior to joining the museum educator cohort. Six of the nine museum educators had experience teaching in an organized school setting, either at the K-12 level or in college. One museum educator taught at other museums and in community classes. Two had no prior teaching experience before their tenure as a museum educator. Of the six with professional teaching experience, five taught in K-12 settings and one taught in a college setting. Four museum educators had formal training in the arts, three in visual arts and one in theater. All but one of the educators had been working at Crystal Bridges as a museum educator for over a year. To prepare as museum educators, they mastered the Visual Thinking Strategies techniques and shadowed veteran museum educators as they led school groups through the galleries on one of their eleven tours.

Prior to beginning the WSPP, some of the museum educators participated in the professional development with the classroom teachers and the resident artists, but not every museum educator did so. Two of the museum educators took an active role in presenting at the professional development; they described what the museum educator does with the classroom teachers and the resident artists. Prior to implementing the program and during the first year, there was no systematic communication or collaboration between the museum educators and resident artists. The tours that the museum educators gave were already created prior to the curriculum being developed for WSPP. One museum educator explained that “[t]hey [the resident artists and Windgate fellow] picked our tours that we’d already written and know, so we didn’t have to prepare for those tours ‘cause those are part of our wheelhouse.” The museum educators did modify the tours for specific group needs. For instance, the Art and Math tour was modified because it was written for older students. The museum educators said that the extent of their involvement in the first year, apart from some attending the professional development, was to give the tours for the students. When the students were there, though, the museum educators proceed as they normally do. They build rapport with the students in their introductions, use Visual Thinking Strategies to encourage student participation, and sneak in the content and subject standards through the discussions and activities.

“And sometimes I don’t make it that obvious for Art and Math. For example, like when we stop at Gabriel Dawe, and they’re convinced that they’re not straight lines, that some of the strings are curved. And I let them think whatever. And I’m like ‘okay, interesting.’ And then we start working on the booklet. I don’t mention math at all. We do the whole activity, and we finish and talk about ‘oh, with straight lines we made a curve.’ So, we start getting on the content. And I’m asking them ‘What did we do today? Is this history? Is this science?’ And they’re like – ‘no, math.’ And we’re using our ruler. And we’re using graphs or axes. And I’m like ‘exactly, and that’s exactly what the artist did’ ... that discovery part of it for them is like ‘wow’.”

The museum educators saw positive outcomes for students, teachers, and themselves after participating in the WSPP. First, the museum educators noted that students' behavior changed from the first tour to the second tour. In both interviews, the museum educators indicated that the fall tour was a little rowdier, perhaps because the students thought of the tour as a time to play. During the spring tour, the students came with the mindset that they would learn something, and this changed the behavior. Teachers and chaperones were more engaged as well. The students also exhibited a level of comfort in the tour. They were comfortable when they were examining and interpreting the art and with the idea that their answers were neither right nor wrong. Coming a second time allowed students to get past a sense of being overwhelmed and even take ownership of the tour and the art. The students were able to “go in and look at the pieces a little more strategically” and think critically about the pieces they saw on the tours. Students were also able to confront new or uncomfortable topics or experiences in a safe environment.

The museum educators thought that the tours also improved the mindsets of classroom teachers, allowing them to see the value of experiences like field trips to Crystal Bridges.

“They think, what do we need an art museum for? How can we possibly use that to educate our kids? We want them in the classroom, we want them learning from their teachers, [and] we want them preparing for these things. ... They understand now what we do with the art and how art can be beneficial to learning overall and not just learning in the arts.”

Teachers also confided in the museum educators that they saw students demonstrating abilities or interests that they had not seen before. Museum educators themselves benefitted from these tours because they found value in the new perspectives about the art the students share.

The museum educators highlighted the need for communication between the resident artists and themselves going forward. They thought this would improve the program in two

ways. First, knowing what the resident artists were doing in the classroom would allow the museum educators to reinforce these activities or skills while at Crystal Bridges. One of the museum educators offered a model that they already follow. For the museum's STEAM tour with a school district, the museum educators meet with the teachers before the tour. They provide the teachers with an outline of what the tour involves and the vocabulary the students are expected to know. This type of communication "would have been very, very beneficial, I think for both ends." In addition to reinforcing what each group was doing, the museum educators would like to know whether any students on the tour have special needs. The museum educators have trained for and have special materials for these instances, but they need to know before the tour begins to prepare. Communication would improve the experience for the museum educators as well as the students, teachers, and resident artists.

Resident Artists

I spoke to the resident artists after museum tours at Crystal Bridges. The interview took place in a conference room near the education offices at the museum. The resident artists' professional background mainly involves theater, although two have had some form of college-level training in visual arts. One has a master's degree in visual arts education and another majored in theater with a minor in visual arts. All four have professional experience teaching in an arts-related field, in public and private schools for K-12 as well as college; two of the resident artists taught theater arts for non-profit organizations or theater companies.

To prepare for delivering the WSPP, resident artists participated in the classroom teachers' professional development as well as organized their own professional development to learn about the universal design for learning. This professional development was geared toward

teaching the resident artists about different learning styles and how to create activities that address these different styles. The resident artists were in charge of designing the curriculum for the year, and then the Windgate fellow approved the curriculum. When designing the curriculum, the resident artists brought in artwork at Crystal Bridges by identifying pieces in the museum's collection that would fit appropriately into their lessons. One key aspect of the first year was there was little time to collaborate with all of the stakeholders, the classroom teachers and the museum educators, when designing the curriculum. According to one resident artist,

“I think that we tried to have those conversations, but at the beginning was just so overwhelming, to figure out what the program would look like, and what the students were like, and what the teachers were like, that is was more like we were just kinda trying to get our sea legs.”

With all of these unknowns there was little to no collaboration between the groups. The resident artists chose the themes and standards they would address each week, conveyed that to the Windgate fellow, and the Windgate fellow identified which Crystal Bridges tours fit these themes.

According to one of the resident artists, in preparing and delivering the three weeks of arts-integration activities, they “kinda reinvented the wheel a little bit here, too.” When asked for clarification, they said that this version of the arts-integration model is different from their previous experience for a couple of reasons. First, artist residencies do not normally last three weeks, even spread over an academic year. Second, the resident artist works with the classroom teacher, offering some ideas, and the teacher says what they are working on and how they would like the artist to get involved.

“But we're coming to them saying, no we're teaching you this, and so, we kinda ... it's kinda ... it's been a different experience.”

This could be because of the number of schools across the different states. Creating the individualized lessons would have been too difficult and time consuming.

This reinvention or reimagination of what an arts-integration program looked like did have advantages for the resident artists, though. They liked that they spent more time with the students, getting to know them and also reinforcing the concepts and behaviors they were trying to teach. The resident artists were able to be the fun person who comes into the classroom while still teaching the students. This longer timeframe also allowed the resident artists to improve their scaffolding and pedagogical approaches. For example, between the first and second weeks, the resident artists learned that the students would probably complete their week's project better if they practiced the skills a little each day.

“At the beginning of the year ... their culminating project was tableau, and ... we taught them the skill set first. And then the last day they did it. We had a draft of these other two curriculums where it was a similar kind of structure ... [b]ut what we found works better is just a little bit at a time, so it's not just one whole day you do the entire project. So, for quadrilaterals, we teach them first about the shapes, then we make sure they understand; we teach them how to draw the shapes, then we teach them how to use the shapes to draw something else, then we teach them how to add color, and then it all comes together”

The resident artists saw clear positive outcomes for their students. Their students were excited by both dramatic and visual arts. Each resident artist was able to share a story where students took up further creative projects or joined the drama or art club at their school. The in-class activities or the visits to Crystal Bridges uncovered this interest in and passion for the arts. Some students had found that art is a gateway for learning about other subjects as well. After the second week's exploration of the Great Depression, one student was “excited to learn about the 1930s ... she was like ‘oh I just read three books because we were going over the 1930s.’” Some schools and students had taken up the behavior management techniques the resident artists used, and the resident artists have noticed a behavioral difference. Even if a school did not accept the

system, students did so individually. The students felt safe in ‘failure’ in the activities the resident artists asked them to do. This was noticeable in the group exercises; the students may not have complete the task in the time allowed, and the resident artist coached them through this ‘failure,’ and they worked together to determine what happened and how to make it better the next time around. The students took risks and had pride in their accomplishments. The resident artists also noticed that the classroom teachers saw their students excelling or demonstrating abilities in areas and ways they did not see before.

For the second year, the resident artists thought that improving communication with classroom teachers would be important. This may help make the curriculum a more collaborative effort and foster teacher buy-in, which the resident artists deem is a critical element to the success of the program overall.

Both the museum educators and the resident artists noted a lack of collaboration as they prepared the units, themes, and activities for the first year of the intervention. They both thought that working together would improve the program in the following year. Both the museum educators and the resident artists saw real differences in their students from the beginning of the program through the end of the year. They felt that students had fewer behavioral issues, claimed ownership of the program and their experiences, and became more comfortable with thinking critically about art.

Summary

The two essential questions that guided the qualitative study were what happened and how do the people involved feel about what happened? Through analysis of field observations and focus group interviews, I found that students participated in multiple arts-related activities throughout

the first year of the WSPP. These activities were mainly based in the visual arts and dance/theater arts. In both the classroom and at Crystal Bridges, students and teachers were engaged in these lessons. Students and teacher shared that, overall, they had a good experience with the program. They felt that their knowledge and abilities had improved. The museum educators and resident artists report similar positive reflections on the previous year's experiences. They believed that improving communication and collaboration would make the intervention even better for everyone involved.

Chapter 6: Discussion and Conclusion

In this study, I evaluated the first-year outcomes of a multi-year arts integration program. This program brings together resident artists from Trike Theater, museum educators from Crystal Bridges, and classroom teachers and students in schools across three states in a large-scale, multi-year arts integration program. The resident artists taught three separate week-long units, museum educators led two different tours, and classroom teachers participated in arts integration professional development.

Previous studies have found that arts integration programs have a small, overall positive effect on student outcomes, however these programs vary widely in duration and scope (Ludwig et al., 2017). I hypothesized that the non-academic and academic outcomes for the students participating in this program would either be null or positive.

Findings

From the quantitative study, I find null to negative effects associated with participation in the first year of the partnership on the six survey outcomes. These results are consistent across models and samples. For example, across both data samples, students who received the first year of treatment reported lower interest in participating in arts activities, from 0.125 standard deviations in the full sample to 0.199 standard deviations in the administrative data sub-sample. There is suggestive evidence that treatment is associated with a lower desire to consume arts now and in the future. In the full sample, this negative effect is only marginally significant, but in the sub-sample, it is nearly a fifth of a standard deviation. This result is significant at the 0.01 level. Interestingly, the statistically significant, negative effect on empathy in the full sample is not

repeated in the sub-sample. At school and on the field trips, students and teachers were engaged in these lessons.

Table 16: Year One Summary

	Full Sample	Admin Sub- Sample
Arts Consumption	-0.083* (0.050)	-0.193*** (0.065)
Empathy	-0.125** (0.052)	-0.103 (0.070)
Arts Participation	-0.125*** (0.046)	-0.199*** (0.063)
School Engagement	-0.046 (0.050)	-0.001 (0.067)
Social Perspective Taking	-0.043 (0.053)	-0.017 (0.073)
Tolerance	-0.089* (0.052)	-0.058 (0.075)
<i>Controls</i>	x	x
<i>n</i>	1,242	638

Note: Robust standard errors in parentheses; *** p<0.01, ** p<0.05, * p<0.1; fully-specified model controls for gender, minority status, age-at-survey, and survey baseline

From the qualitative study, I find that students, teachers, museum educators, and resident artists report generally favorable opinions about the first year of the program. My analysis of the in-class curriculum and field observations demonstrates that students participated in multiple arts-related activities throughout the first year of the WSPP. These activities were mainly visual arts and theater/dance activities.

Table 17: Time (in Minutes) Scheduled for Each Activity

	Week 1	Week 2	Week 3
Acting Right	60	25	20
Movement (Subject Related)	105	90	65
Direct Subject Instruction	20	45	20
Visual Arts (VTS or activities)	10	115	100
Class Logistics / Wrap-Up	50	23	35
Total Class Time	245	298	240

Note: Time is the total number of minutes allotted, according to the RA's weekly lesson plans for each activity. The categories are my own.

From the focus group interviews, I learned that students and teacher had a positive experience while participating in the WSPP for the first year. They felt that their art knowledge and abilities like collaboration and critical thinking had improved. The museum educators and resident artists shared similar experiences. The resident artists and museum educators believed that the program would be better if they collaborated in the future.

Discussion

The average negative effects on arts participation and empathy, found in the quantitative study, were unexpected, given both insights from studied of previous arts integration programs and the overall positive reports from participants and providers in this qualitative study.

In their systematic review and meta-analysis of student outcomes from arts integration programs, Ludwig et al. (2017) find an overall positive effect associated with arts integration programs. They further break these effects down into academic and non-academic outcomes. They find positive effects on students' academic outcomes as positive effects on social-emotional learning (Ludwig et al., 2017). The authors only identified one quantitative analysis that found statistically significant negative impacts (Albright, 2011); these impacts were on

academic achievement in math (Albright, 2011). In addition, prior research finds positive academic outcomes associated with arts interventions taught by resident artists as well as field trips to art museums, the two main student-centered activities in the WSPP.

One potential explanation for negative impact could have been discussed by the museum educators and the resident artists in the focus groups. The picture they describe of how the program was organized and planned for indicate a lack of concerted efforts working toward common goals and understandings of what the program involved. The museum educators specifically indicated that they were not aware of what the resident artists were doing in the classroom, and yet, they were responsible for delivering part of the program. Additionally, due to the scope of the program, resident artists “reinvented the wheel” of arts integration, bringing a pre-made curriculum and lesson plan into the classroom with little teacher input. This lack of cohesion, communication, and collaboration could have been reflected in the implementation of the program. While the focus group students shared an overall positive experience, it is important to recall that these students who sat down with us for the focus group were chosen because they were interested in sharing their opinions. They are not an unbiased sample.

Limitations

The findings from the quantitative study should be interpreted with caution. While the comparison and treatment groups are statistically the same at baseline on the survey outcomes, there may have unobserved differences in the full sample because of differences in the participation rates of the treatment and comparison student groups. This potential difference warrants caution. Second, with the administrative data sub-sample, all schools did not provide data, and there may be underlying, unaccounted-for reasons why some schools chose to provide

their information and why other schools did not. Thus, it is unwise to generalize negative effects on academic outcomes to all of the students in the participating schools. In addition, since the treatment began with third grade students, I do not have any prior standardized tests to control for student achievement at baseline.

The findings from the qualitative study provide important contextual information, especially from the program providers perspective, as I was able to discuss their experiences with almost all of the providers. However, the students' and teachers' perspectives may not be representative of the average experience. First, the students and teachers agreed to participate in the interviews, and they may have had a different experience that would compel them to share. Additionally, I was only able to speak to one group of students and one group of teachers at different schools. Students and teachers at different participating schools may have had different experiences, too. Any discussion of the outcomes should be limited to the participants and program providers who were interviewed.

Policy Recommendations and Future Work

The WSPP is an ambitious arts integration intervention in multiple schools across multiple states. This evaluation offers some takeaways for arts organizations considering similar programs in the future. The first policy recommendation from this study is for arts organizations who would like to implement an arts integration collaboration with schools. The organizations may want to plan with the schools from the beginning, as the WSPP program directors are doing now. This communication and collaboration at the beginning of the project may yield better results. With this collaboration and communication, every participant or program provider is, arguably, working toward the same goal.

Secondly, the program providers are dedicated to learning how to improve the intervention as it continues. One way to do this will be to continue the qualitative study into the second and third year of the intervention. As I continue to collect survey and administrative data, it will be equally important to provide detailed descriptions of the interventions for each additional year. Additionally, I only heard from the teachers in the qualitative study. Although this arts integration program was not focused on getting teachers to implement arts integration practices in their school, the teachers did attend a week-long professional development where they learned methods to use when integrating art and other subjects. To examine if and the extent to which teachers incorporate these practices into their classroom, it would be useful to add teacher surveys as well as observation of teacher practices.¹⁴ Both resident artists and museum educators highlighted the importance of teacher buy-in on the overall success of the program.¹⁵

The WSPP providers at Crystal Bridges and Trike Theater made programming changes that may address some of the concerns raised in the focus group interviews. First, for the second year, the museum educators and resident artists worked together to create a new curriculum that includes WSPP-specific tours at Crystal Bridges. WSPP administrators also updated the professional development classroom teachers received. The professional development focused specifically on providing teachers with a foundation in visual arts vocabulary and experience with designing and producing graphic novels. Resident artists sought teacher input on subject matter to cover during their arts-integration lessons. These changes may affect how the program is perceived by participants.

¹⁴ Researchers in Arkansas did this in their evaluation of the third year of the Arkansas A+ Schools model (OEP, 2018).

¹⁵ Other research, for example, Barry (2010) found that the A+ Schools in Oklahoma who had transformed their schools using the A+ method had better student outcomes.

The quantitative and qualitative studies that comprise my dissertation examined the experiences and outcomes for participants and providers of the first year of the Windgate School Partnership Program. On average, there is a negative effect on a student's desire to participate in art-making activities and their self-reports of empathy. These unexpected findings, when considered within the context provided by the qualitative outcomes, could be explained by inconsistent program implementation. Providers recognized these issues and made changes for year two. Future work, including surveys, field work, and interviews, is warranted to help measure whether these programmatic changes affected any of the average student outcomes or experiences of the participants and providers.

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Appendices

Appendix A: Student Survey

Crystal Bridges School Partnership Survey

UNIQUE ID:

First Name: _____

Last Name: _____

Birthday: **Month** _____ **Day** _____ **Year** _____

I identify as a: **Boy** **Girl**

School: _____

Grade: _____

Teacher: _____

Please turn the page.

STUDENT SURVEY

Instructions: Please complete this survey by supplying the requested information for each item. This will take approximately 30 minutes of your time.

YOUR INTERESTS

1) **How interested are you in making a work of art?**

Not interested Slightly interested Somewhat interested Interested Very interested

2) **How interested would you be in entering your work of art in a contest?**

Not interested Slightly interested Somewhat interested Interested Very interested

3) **How interested are you in visiting an art museum?**

Not interested Slightly interested Somewhat interested Interested Very interested

4) **How interested are you in taking an art class?**

Not interested Slightly interested Somewhat interested Interested Very interested

YOUR OPINIONS

5) **Some people have views that you oppose very strongly. Do you agree that these people should be allowed to come to your school and give a speech?**

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

6) **Visiting art museums is fun.**

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

7) **It upsets me when another child is being shouted at.**

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

8) Some people have views that you oppose very strongly. Do you agree that these people should be allowed to live in your neighborhood?

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

9) I would be interested in joining an art club if my school had one.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

10) Some people have views that you oppose very strongly. Do you agree that these people should be allowed to run for president?

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

11) After seeing a play or movie, I have felt as though I were one of the characters.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

12) I plan to visit art museums when I am an adult.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

13) Sometimes school is a waste of time.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

14) When I watch a good movie, I can very easily put myself in the place of the leading character.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

15) Art is interesting to me.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

16) I feel proud being a part of this school.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

17) When I see someone suffering, I feel bad too.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

18) When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

19) Getting good grades is important to me.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

20) I feel like I don't belong when I'm at an art museum.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

21) I think people can have different opinions about the same thing.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

22) I feel comfortable talking about art.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

23) Women are equally able to do the same jobs that men can do.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

24) I would tell my friends that they should visit an art museum.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

25) It makes me sad to see a child who can't find anyone to play with.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

26) I am interested in learning about people different than me.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

27) School is boring.

Disagree a lot Disagree a little Do not agree or disagree Agree a little Agree a lot

28) Would you like more art museums in your town? Yes No

29) Imagine that a friend of yours is going to go on a field trip. Do you think your friend would enjoy these field trips?

A theater performance Yes No

An amusement park..... Yes No

An art museum..... Yes No

A classical music concert..... Yes No

A nature area Yes No

A sporting event..... Yes No

YOUR ATTITUDES

30) How often do you attempt to understand your friends better by trying to figure out what they are thinking?

- Almost never Once in a while Sometimes Often Almost all the time

31) How often do you try to think of more than one explanation for why someone else acted as they did?

- Almost never Once in a while Sometimes Often Almost all the time

32) Overall, how often do you try to understand the point of view of other people?

- Almost never Once in a while Sometimes Often Almost all the time

33) When you are angry at someone, how often do you try to "put yourself in his or her shoes"?

- Almost never Once in a while Sometimes Often Almost all the time

34) How often do you try to figure out what motivates others to behave as they do?

- Almost never Once in a while Sometimes Often Almost all the time

35) How often do you try to figure out what emotions people are feeling when you meet them for the first time?

- Almost never Once in a while Sometimes Often Almost all the time

36) In general, how often do you try to understand how other people view the situation?

- Almost never Once in a while Sometimes Often Almost all the time

BASIC INFORMATION

37) I identify as a: Boy Girl

38) What grade are you currently in? 3rd 4th 5th 6th

39) What is your date of birth? Month_____Day_____Year_____

40) How would you identify yourself?

- Hispanic/Latino
- White
- American Indian
- Black or African American
- Marshallese
- Asian
- Other: _____

41) What kinds of grades do you usually get?

- Mostly As
- Mostly As and Bs
- Mostly Bs
- Mostly Bs and Cs
- Mostly Cs
- Mostly Cs and Ds
- Mostly Ds
- Mostly Ds and Fs
- Mostly Fs

42) Do you speak a language other than English at home? Yes No

a) If “yes”, how often do you speak a language other than English at home?
 Almost never Sometimes Almost all the time

b) If “yes”, what language other than English do you speak at home?

- 43) Does your family own a car, van, or truck? Yes No
- 44) Do you ever go to bed hungry because there is not enough money to buy food? Yes No
- 45) Do you have a bed of your own? Yes No
- 46) Does your family have a dishwasher?..... Yes No
- 47) Do you have internet access at home? Yes No
- 48) Not counting school field trips, have you ever been to an art museum? Yes No

If yes...which art museum?

If yes...who did you go with?

49) What was the last field trip you took with your school?

Thank you for completing the survey! We hope you enjoyed it. Please let us know if you have any other comments or feedback regarding the survey on the back.

Appendix B: Field Observation Resident Artists
Observation Notes – Teaching Artists

These observation notes should provide you with a general guide of what to look for when observing the teaching artist in the classroom.

1. Overall, are the students engaged with the teaching artist? What evidence do you have for student engagement?
 - a. Responding to the TA's questions - count (this could be verbal responses or physical responses):
 - b. Following TA's instructions – count (this could be participating in a movement activity):
2. Overall, is the teacher engaged with the students and the teaching artist? What evidence do you have for this engagement?
 - a. Following TA's instructions – count (this could be participating in a movement activity):

Appendix C: Field Observation Museum Field Trips

Observation Notes – Field Trips

These observation notes should provide you with a general guide of what to look for when observing the students and adult participants on the field trip.

1. Overall, are the students engaged with the museum educator? What evidence do you have for student engagement?
 - a. Responding to the ME's questions - count (this could be verbal responses or physical responses):
 - b. Asking ME's questions about the museum or the art – count:
2. Overall, is the teacher engaged with the students and the museum educator? What evidence do you have for this engagement?
 - a. Discussion with others – count (this could be discussion between the teacher and the museum educator or the teacher and students):
3. Overall, are the students engaged with experience and the art they are seeing? What evidence do you have for overall student engagement?
 - a. Discussion with others – count (this could be discussion about what the museum educator is saying with a teacher or another student):

Appendix D: Focus Group Questions, Students
Semi-structured Interview Questions for Students

Proctor: Thank you for agreeing to participate in this focus group interview. We would like to remind you that you do not have to answer any of the questions we ask. If you feel uncomfortable with any of the questions, you do not have to answer.

1. How long have you been at [school name]?
2. Have you ever gone on a field trip before that was not to Crystal Bridges?
 - a. Where did you go?
 - b. Did you enjoy the experience? Why?
3. Think about when [the teaching artist] comes to your classroom for a week.
 - a. Do you enjoy your experience with [the teaching artist]?
 - b. What did you not enjoy about the experience with [the teaching artist]? What would you change about this experience if you could?
 - c. What was your favorite part of the experience with [the teaching artist]?
 - d. What have you learned from your experience with [the teaching artist]?
4. Think about when you have gone on a field trip to Crystal Bridges.
 - a. Did you enjoy your experience at Crystal Bridges?
 - b. What did you not enjoy about the experience at Crystal Bridges? What would you change about this experience if you could?
 - c. What was your favorite part about your experience at Crystal Bridges?
 - d. What have you learned from your experience at Crystal Bridges?
5. What is your experience with art (like drawing, or playing music, or acting) before this year?
 - a. Did you like to make art before this year?
 - b. If yes, what did you like to make before this year?
 - c. Do you like to make art now? What do you like to make?
 - d. Do you think you like art more now after the artists have visited and you have visited Crystal Bridges with your school? Why?

Appendix E: Focus Group Questions, Classroom Teacher
Semi-structured Interview Questions for School Teacher

Proctor: Thank you for agreeing to participate in this focus group interview. We would like to remind you that you do not have to answer any of the questions we ask. If you feel uncomfortable with any of the questions, you do not have to answer.

1. How long have you been a teacher?
 - a. Why did you decide to become a teacher?
2. How long have you taught at [school name]?
 - a. How long have you taught this grade level?
3. Think about your most memorable field trip you've taken with any group of students.
 - a. Where did you go?
 - b. Was the experience valuable for you? For your students?
4. Have you had other adults teaching in your classroom before (for example, student teachers)?
 - a. Who were they and what was the purpose for them being in your classroom?
 - b. Was the experience valuable for you? For your students?
5. Have you tried incorporating art into your regular instruction prior to this partnership?
 - a. If so, did you feel it was effective?
6. Think about the teaching artists and the experience you've had with them?
 - a. Did you find the experience with the teaching artist valuable to you as a teacher? To your students? Do you plan on incorporating some or all of the teaching artists' methods into your classroom in the future?
 - b. What, in your opinion, did your students think about this experience? Examples?
 - c. Did your students' behavior change when the teaching artists were in the classroom?
 - d. Do you have any feedback on this experience?
7. Think about the field trips to Crystal Bridges?
 - a. Did you find the field trip experience valuable to you as a teacher?
 - b. What, in your opinion, did your students think about this experience? Examples?
 - c. Do you have any feedback on this experience?
8. From this whole intervention – what do you think the students learned or what will be their take-aways? What about for yourself?

Appendix F: Focus Group Questions, Museum Educators
Semi-structured Interview Questions for Museum Educators

Proctor: Thank you for agreeing to participate in this focus group interview. We would like to remind you that you do not have to answer any of the questions we ask. If you feel uncomfortable with any of the questions, you do not have to answer.

1. What is your background in the arts (e.g. performance, visual, etc)?
2. What did you do before accepting the position as a museum educator?
 - a. How long have you been a museum educator at Crystal Bridges?
 - b. Do you have any experience teaching students, especially students in elementary school?
3. How were you prepared for this position? For example, what professional development did you go through?
 - a. Was the experience valuable for you?
4. What does a typical museum educator day look like for you?
5. How did you collaborate with the teaching artists, program directors, and classroom teachers to prepare for this intervention?
 - a. How has this improved the experience for you or your students?
6. What impact do you think you've made on the students?
 - a. Can you cite examples?
7. For the coming years, how would you improve the experience as a whole?
 - a. What would improve your experience and your practice as a museum educator, specifically?

Appendix G: Focus Group Questions, Resident Artists
Semi-structured Interview Questions for Teaching Artist

Proctor: Thank you for agreeing to participate in this focus group interview. We would like to remind you that you do not have to answer any of the questions we ask. If you feel uncomfortable with any of the questions, you do not have to answer.

1. What is your background in the arts (e.g. performance, visual, etc)?
2. What did you do before accepting the position as a teaching artist?
 - a. Do you have any experience teaching students, especially students in elementary school?
3. How were you prepared for this position? For example, what professional development did you go through?
 - a. Was the experience valuable for you? Do you think it improved your practice in the classroom?
4. What does a typical teaching session look like for you?
 - a. Does this specific intervention [being a teaching artist in a school] mirror other interventions you have participated in or was this different? How and why?
5. How did you collaborate with the museum educators, program directors, and classroom teachers to prepare for this intervention?
 - a. How has this improved the experience for you or your students?
6. What impact do you think you've made on the students?
 - a. Can you cite examples?
7. For the coming years, how would you improve the experience as a whole?
 - a. What would improve your experience and your practice as a teaching artist, specifically?
8. From this whole intervention – what do you think the students learned or what will be their take-aways? What about for yourself?

Appendix H: IRB Approval Letter for Quantitative Study



Office of Research Compliance
Institutional Review Board

August 10, 2017

MEMORANDUM

TO: Jay Greene
Laura Florick
Heidi Holmes
Angela Watson
Molly Beck

FROM: Ro Windwalker
IRB Coordinator

RE: New Protocol Approval

IRB Protocol #: 17-07-024

Protocol Title: *A Longitudinal Evaluation of Crystal Bridges' School Partnership Program*

Review Type: EXEMPT EXPEDITED FULL IRB

Approved Project Period: Start Date: 08/04/2017 Expiration Date: 08/03/2018

Your protocol has been approved by the IRB. Protocols are approved for a maximum period of one year. If you wish to continue the project past the approved project period (see above), you must submit a request, using the form *Continuing Review for IRB Approved Projects*, prior to the expiration date. This form is available from the IRB Coordinator or on the Research Compliance website (<https://vpred.uark.edu/units/rscp/index.php>). As a courtesy, you will be sent a reminder two months in advance of that date. However, failure to receive a reminder does not negate your obligation to make the request in sufficient time for review and approval. Federal regulations prohibit retroactive approval of continuation. Failure to receive approval to continue the project prior to the expiration date will result in Termination of the protocol approval. The IRB Coordinator can give you guidance on submission times.

This protocol has been approved for 9,000 participants. If you wish to make any modifications in the approved protocol, including enrolling more than this number, you must seek approval *prior* to implementing those changes. All modifications should be requested in writing (email is acceptable) and must provide sufficient detail to assess the impact of the change.

If you have questions or need any assistance from the IRB, please contact me at 109 MLKG Building, 5-2208, or irb@uark.edu.

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Appendix I: IRB Approval Letter for Qualitative Study



To: Molly Irene Beck
BELL 4188

From: Douglas James Adams, Chair
IRB Committee

Date: 02/20/2019

Action: Expedited Approval

Action Date: 02/20/2019

Protocol #: 1901171954

Study Title: A Qualitative Evaluation of Crystal Bridges School Partnership Program

Expiration Date: 01/31/2020

Last Approval Date:

The above-referenced protocol has been approved following expedited review by the IRB Committee that oversees research with human subjects.

If the research involves collaboration with another institution then the research cannot commence until the Committee receives written notification of approval from the collaborating institution's IRB.

It is the Principal Investigator's responsibility to obtain review and continued approval before the expiration date.

Protocols are approved for a maximum period of one year. You may not continue any research activity beyond the expiration date without Committee approval. Please submit continuation requests early enough to allow sufficient time for review. Failure to receive approval for continuation before the expiration date will result in the automatic suspension of the approval of this protocol. Information collected following suspension is unapproved research and cannot be reported or published as research data. If you do not wish continued approval, please notify the Committee of the study closure.

Adverse Events: Any serious or unexpected adverse event must be reported to the IRB Committee within 48 hours. All other adverse events should be reported within 10 working days.

Amendments: If you wish to change any aspect of this study, such as the procedures, the consent forms, study personnel, or number of participants, please submit an amendment to the IRB. All changes must be approved by the IRB Committee before they can be initiated.

You must maintain a research file for at least 3 years after completion of the study. This file should include all correspondence with the IRB Committee, original signed consent forms, and study data.

cc: Reid Mack Johnson, Investigator
Jay Phillip Greene, Investigator
Laura Kathryn Florick, Key Personnel
Angela R Watson, Key Personnel