Arts Education in NYC (2014-15) – Phase 1

A Cross-Agency Study of Arts Educational Opportunities

for NYC Public School Students

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0. Executive Summary

New York City’s Department of Cultural Affairs (DCLA) plays an important role in supporting arts education for public school students in collaboration with, and at times in addition to, the arts education supported by New York City’s Department of Education (DOE). This report, for the first time, provides an analysis of how the various divisions of these agencies work together to provide arts education citywide, thereby, addressing the following research questions:

- What is the availability of arts education provided by public schools by grade level and discipline?
- How do arts educational experiences\(^1\) funded by the Department of Cultural Affairs complement arts education provided by DOE citywide?
- How does the distribution of arts education relate to the socio-demographic patterns of the schools and the neighborhoods in which they are located?

The first section of the report, Arts Education supported by the Department of Education, describes how arts education takes place by grade level and discipline. It offers two key findings. First, Visual Arts and Music are emphasized across all grades levels.\(^2\) Second, school collaborations with arts organizations create more balance across arts disciplines, at least for students in kindergarten to grade 6.

Overall, the hours for arts education varies across each grade level from 0 to several hundred reported annual hours per school. Further, there is no statistical association between the distribution of overall arts instructional opportunities offered to students and school demographics, such as poverty, or similar neighborhood characteristics measured by census tract. However, the number of arts educational hours decreases from kindergarten to grade 6, as the share of English Language Learners in the school increases. While the level of poverty in a school or its census tract does not correlate with the aggregate hours of arts education offered to public school students from kindergarten to grade 6, some schools with low levels of arts

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\(^1\) Here, arts educational experiences represent any arts educational service rendered to public school students during the academic year 2014-15. Arts educational experiences can vary in length and frequency depending on the agency reporting.

\(^2\) The NYC Department of Education’s annual Arts in School Report details the distribution of arts educational hours by arts discipline and shows the emphasis on Visual Arts and Music.
instructional hours (as defined by New York State guidelines) are located in low income neighborhoods.

The Department of Cultural Affairs supports and complements arts education citywide and through multiple funds and departmental units, such as the Cultural Development Fund (CDF) managed by the Programs Unit, the Cultural Institutions Group (CIG), Materials for the Arts (MFTA), and the City Council-designated Cultural After-School Adventures program (CASA),

Arts education for public school students supported by the Cultural Development Fund increases the range of arts learning facilitated by the Department of Education. Arts educational opportunities provided by arts organizations funded by the Cultural Development Fund are reported by art’s site, and show a concentration of neighborhoods primarily located in Manhattan, northern parts of Brooklyn, and southern parts of the Bronx.

Arts educational opportunities provided by school collaborations between public schools and the Cultural Institutions, the Cultural After-School Adventures program, and Materials for the Arts further support arts education for tens of thousands of students citywide, across grade levels and disciplines.

Based on the findings about the distribution of these efforts, this report makes the following recommendations:

- Build on existing collaborations between schools and arts organizations to create lasting partnerships for each school and grade level.
- Increase the number of arts teachers in schools with low levels of arts education.
- In schools with high numbers of English Language Learners: Increase the number of teachers who have an arts certification in addition to certification in Teaching English as a Foreign Language (TESOL) or Dual Language.
- In collaboration with teacher training programs, facilitate an increase in the number teachers obtaining a TESOL and arts education dual certification.
- Create incentives for arts organizations to create arts learning opportunities in underserved neighborhoods (Bedford-Stuyvesant, Crown Heights, Ocean Hill, East New York, Canarsie, and Brighton Beach in Brooklyn; Far Rockaway in Queens; East Concourse, and Soundview-Bruckner in the Bronx; and East of Inwood and Washington Heights in Manhattan).

- Continue to collect and analyze data on arts education in NYC’s public school across city agencies with the goal of observing developments and tracing policy implementations. Implement data collection practices that will allow for a more accurate portrayal of how the different agencies contribute to arts educational opportunities citywide.

1. **Introduction and Background**

Public education is essential to providing the opportunity for social mobility, personal advancement, and closing the gap of social inequality. Participating in arts and arts education has a direct positive impact on students’ GPA test scores and secondary degree aspirations,\(^3\) and allows students to expand their cultural capital\(^4\), which in turn shapes the “amount and forms of resources”\(^5\) individuals acquire during their lifetime. This report, for the first time, provides a comprehensive cross-agency review of opportunities provided by New York City’s Department of Education and the Department of Cultural Affairs and their various divisions and programs, providing an overall picture of how arts education opportunities are distributed across the city’s public schools.

a. **Purpose of Study and Research Questions**

This report analyzes multiple data sets on arts education collected under the guidance of the Department of Cultural Affairs and the Department of Education for the fiscal and academic year 2014/15. The goal is to examine the interplay among various facilitators and providers of arts education opportunities in New York City’s public schools. In order to examine how arts

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education opportunities are distributed citywide, the report maps the geographic distribution of arts education opportunities for NYC’s public school students, and compares them with the socio-economic characteristics of the schools and neighborhoods in which they take place.

The following research questions will be addressed:

- What is the availability of arts education provided by public schools by grade level and discipline?
- How do arts education experiences funded by DCLA complement arts education provided by DOE citywide?
- How does the distribution of arts education relate to the socio-demographic patterns of the schools and the neighborhoods in which they are located?

b. Analyzing Arts Education Data across Agencies

Analyzing data on arts education opportunities has several benefits. First, it enhances our knowledge of the ways in which multiple agencies contribute to arts education citywide. Second, it offers a comprehensive overview of the amount and types of arts education that multiple agencies make available, and third it allows to understand how the geographic distribution of arts education relates to socio-demographics of the neighborhoods in which it takes place. Together, these insights may enable the agencies to discuss their efforts on the basis of a complete picture, and perhaps to coordinate them in the future.

However, the analysis of data collected by multiple agencies also has several caveats. Each agency collected the data for different purposes, emphasizing different types of information, which means that the structure of the data can differ vastly between agencies, limiting how well the information can be aggregated and compared. The report addresses each of these caveats in detail. Further, Appendix D contains recommendations for improving data collection practices across different agencies and sub-units.
2. Arts Education Supported by the Department of Education

The data utilized for this analysis includes the Annual Arts Education Survey, providing information on school collaborations with arts organizations, the Student Transcript and Academic Recording System (STARS) information on arts education facilitated by arts teachers or classroom teachers, school demographic data, such enrollment, the percentage of Title I funding per school, and the percentage of English Language Learners, and Census characteristics of the tracts in which schools are located. The analysis does not include District 75 schools or Charter Schools unless noted otherwise.

a. Arts Education Provided by Grade Level and Discipline

The DOE collects school-level data in the four arts disciplines: Dance, Music, Theater and Visual Arts. Overall, Visual Arts and Music are the predominant arts disciplines offered in NYC public schools between kindergarten and 6th grade.

The Annual Arts Education Survey and the STARS system both report instructional hours in arts education between kindergarten and grade 6. The following tables depict the percentage distribution of arts educational hours across subjects by grade level. For students in kindergarten to grade 3 who received arts instructional hours by an arts and/or classroom teacher (table 1), an average of 45% of arts instructional hours were spent on Visual Arts, followed by Music (29%), Dance (13%), and Theater (13%).

6 District 75 provides citywide educational, vocational, and behavior support programs for students who: are on the autism spectrum, have significant cognitive delays, are severely emotionally challenged, are sensory impaired, and/or are multiply disabled.
Similarly, for students in grade 4 to grade 6 who received some arts instructional hours by an arts and/or classroom teacher (table 2), an average of 45% of arts instructional hours were spent on Visual Arts, followed by Music (30%), Dance (13%), and Theater (12%).

Table 2:
As tables 3 and 4 show, collaborations with arts organization balances the range of arts disciplines by adding emphasis to the disciplines of Dance and Theater for each grade. For students in kindergarten to grade 3 who received arts instructional hours in collaboration with arts organizations (table 3), an average of 32.5% of arts instructional hours were spent on Visual Arts, followed by Music (31%), Dance (21%), and Theater (15.5%).

Table 3:

For students in grade 4 to grade 6 who received arts education instructional hours in collaboration with arts organizations (table 4), an average of 30% of arts education hours spent on Visual Arts, followed by Music (29%), Dance (24%), and Theater (17%). Despite the stronger emphasis on Music, Dance, and Theater provided through collaborations with arts organizations, Visual Arts and Music still received the most arts educational hours overall.
Different from arts education provided in elementary school, arts education received for grades 6\(^7\) to 12 is measured in numbers of students who received arts educational instruction. The following statistics are based on rates of students enrolled in the various arts disciplines relative to the number of students enrolled in the specific grade level and school. For middle school students (table 5), an average of 56% of students received Visual Arts instruction, followed by Music, received by an average of 38% students, Dance (12%), and Theater (11%).

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\(^7\) For grade 6 only, both data on arts educational hours as well as the number of students who received arts education by discipline are reported.
For high school students (table 6), an average of 39% of students received Visual Arts instruction, followed by Music which was received by an average of 17% students, followed by Theater (7.75%), and Dance (2.5%).

Table 6:

When we compare the distribution of arts instructional disciplines received by middle and high school students to those for elementary school students, we can observe a steep drop in students receiving instruction in the arts disciplines Dance and Theater. The number of high school students who receive Dance instruction appears particularly low (2-3%)\(^8\).

b. Relationships between Arts Instructional Opportunities and School Demographics

Is the number of arts instructional hours students receive related to school and neighborhood demographics? In order to address this question, data from the Annual Arts Education Survey

\(^8\) The observed sudden decrease of arts education hours provided for the disciplines of Dance and Theater may be explained by structural and curriculum changes in regards to arts disciplines offered for Middle and High School students. 1) At the Middle and High School level, schools are not required to provide all four art forms. The decision about the art form is made at the school level. 2) In tandem with this is the fact that for the arts instruction to be credit bearing the Middle and High School levels, it can only be provided by a teacher certified in the art form. 3) Dance and theater certification for teachers is only 15 years old as compared to generations of certification for visual arts and music teachers, and thus, suggests less availability of certified Dance and Theater arts teachers citywide.
and STARS on the average numbers of arts educational hours provided either by classroom teacher and/or school based arts teacher or by an arts organization collaborating with the school were aggregated and then compared to school and neighborhood demographics.

No significant relationship were found between the number of arts educational hours each school provided and the percentage of its students in poverty as measured by the percentage eligible for Title I. **In other words, the percentage of Title I funding received by schools was statistically unrelated to the amount of arts educational hours provided (see table 1, Appendix A).**

However, there is a negative relationship between the percentage of English Language Learners (ELL) in a school and how many arts educational hours it provides through arts organizations and arts teachers. **That means that—as an overall trend—the higher the number of ELL per school, the fewer arts educational hours it provides. The correlation is weak, but statistically significant for grades 1 through 4 (see table 1, Appendix A).**

c. **Geographic Distributions of Arts Education Hours for Kindergarten through Grade 6**

How arts educational hours distributed citywide and which neighborhoods have less compared to others? The following section discusses the citywide distribution of arts education hours as reported through the DOE administered Annual Arts Education Survey for the 2014-15 academic year. In order to analyze the spatial distribution of arts education hours offered in NYC’s public schools, the average hours for each grade level offered by classroom or arts based teachers or through arts organizations in public schools from Kindergarten to Grade 6 has been calculated. **Overall, arts educational hours offered at each grade level vary greatly from none to several hundred reported annual hours per school.**

We can better understand the context by placing the mean values for each of the reported schools in their census tract permitting us to generate maps displaying the average amount of arts education hours offered in relation to neighborhood characteristics. The map below codes the

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9 This includes four outliers, most likely due to over-reporting, of elementary schools reporting over 800 hours of arts education for the academic year 2014-15.
average amount of arts instructional hours across the schools in each census tract that contains at least one reporting school to display the spatial distribution of the average hours of arts instructional opportunities from Kindergarten to Grade 6. In other words, a census tract may show an average of 124 to 186 hours because it holds one school that offers 260 instructional hours and a second that offers zero arts instructional hours for the same grade level. Census tracts that are not color-coded do not have a school of the respective grade level.

Figure 1: Average Arts Instructional Hours per Census Tract for Kindergarten.
It is apparent that the distribution of arts instruction hours across census tracts is somewhat random. Census tracts with low averages of arts instructional hours can be found right next to census tracts with much higher average of instructional hours guidelines of 186 annual hours for grades 1-3, and 93 hours for grades 4-6.
Figure 4: Average Arts Instructional Hours per Census Tract for Grade 3.

Legend
Average Arts Instructional Hrs per Census Tract for Grade 3
- 0 - 63
- 63 - 124
- 124 - 186
- 186+

Figure 5: Average Arts Instructional Hours per Census Tract for Grade 4.

Legend
Average Arts Instructional Hrs per Census Tract for Grade 4
- 0 - 31
- 31 - 62
- 62 - 93
- 93+

New York State’s Education Guidelines call for twenty percent of weekly time spent on arts education for grades 1 through 3 to ten percent for grades 4 through 6, we can see that schools in many census tracts New State Guidelines for grades 4 through 6.
Figure 6: Average Arts Instructional Hours per Census Tract for Grade 5.

Legend
Average Arts Instructional Hrs per Census Tract for Grade 5
- 0 - 31
- 31 - 62
- 62 - 93
- 93+

Figure 7: Average Arts Instructional Hours per Census Tract for Grade 6.

Legend
Average Arts Instructional Hrs per Census Tract for Grade 6
- 0 - 31
- 31 - 62
- 62 - 93
- 93+
d. Disadvantaged Neighborhoods

The relationship between the opportunity for arts instruction and sociodemographic indicators complicates the seemingly random spatial distribution of arts instructional hours citywide. While a regression analysis showed that the median income of a census tract does not predict the amount of arts educational hours offered, **we can observe that a substantial number of low income neighborhoods also have low levels of arts instructional hours as defined by New York State guidelines.** Neighborhoods particularly affected are South Williamsburg, Weeksville, Bedford-Stuyvesant, Brownsville, Sunset Park, Coney Island, and Brighton Beach in Brooklyn; Far Rockaway, and Jamaica in Queens; East Harlem, and the areas East of Inwood and Washington Heights in Manhattan; and large parts of the South and West Bronx.

Figure 8: Census tracts with low median income and low levels of arts education.
3. Arts Education Supported by the Department of Cultural Affairs

The Department of Cultural Affairs supports and complements arts education citywide through multiple funds and departmental units, such as the Cultural Development Fund (CDF), the Cultural After School Adventures programs (CASA), the Cultural Institutions Group (CIG), and Materials for the Arts (MFTA). The following sections discuss the scope and impact of each of these programs on arts education opportunities for New York City’s public school students, and—if appropriate—how they complement opportunities provided by the Department of Education. As noted earlier, when discussing caveats in cross-agency data analysis, each of these units maintains its own data structures for its own purposes, so aggregating them to provide an overall picture of arts educational opportunities for New York City’s public school students can be challenging.\textsuperscript{10}

a. Cultural Development Fund

The Cultural Development Fund (CDF) is the City’s largest source of funding for arts organizations, including neighborhood-based cultural organizations as well as large city-wide cultural organizations. The distribution of grants for New York City’s nonprofit arts and cultural organizations takes place annually. Arts organizations funded by CDF work with students of all grade levels with an emphasis on kindergarten and elementary school students (41%), followed by high school students (22%), and middle school students (15%) (figure 9).

Further, arts education provided by CDF-funded arts organizations balances the range of arts disciplines offered in New York City’s public schools, and broadens the range of arts educational disciplines (especially compared to arts education for elementary school level). With a focus on disciplines other than Dance, Music, Theater, and Visual Arts, students gain the opportunity to be exposed to subjects such as Film, Video, Photography, Humanities, Literature, Museum Activities, and Architecture and Design\textsuperscript{11} (figure 10).

\textsuperscript{10} Recommendations on data collection practices suitable for cross-agency data analysis can found in Appendix D.

\textsuperscript{11} It is important to note here that DOE does not recognize some of the disciplines that CDF categorizes as arts education, so they would not be included of the school’s reporting on arts education.
Figure 9: Grade levels of arts education funded through the Cultural Development Fund.

![Pie chart showing grade levels funded through the Cultural Development Fund: 41% Pre-School, 19% K-5, 15% 6-8, 22% 9-12, 3% No Data.]

Figure 10: Arts disciplines funded through the Cultural Development Fund.

![Pie chart showing arts disciplines funded through the Cultural Development Fund: 41% Dance, 18% Music, 7% Theater, 20% Visual Arts, 14% Other.]

The following examples, taken from across the spectrum of the hundreds of groups that receive DCLA support for education programs, illustrate the depth of interaction and experiences presented to children in pre-K through grade 12 of CDF-supported arts educational programs.
The Sundog Theater in Staten Island offers programs with three schools, providing a dozen 13 week residencies plus 3 school-wide assemblies totaling 159 events during the fiscal year 15. The Chamber Music Society of Lincoln Center offers programs in 8 schools and provides 113 in school sessions – 92 classroom visits plus 21 small concerts in the classroom. An additional 11 concerts are offsite at performing arts centers. ArtsConnection, one of the largest arts organizations supported by CDF, undertook five projects at multiple locations. Just one project served 63 schools with in-school sequential arts education programs, providing 6,771 sessions in those schools.

The maps below show where these types of arts education activities took place for all grade levels. The reporting of the distribution of arts opportunities funded by CDF is quite different from the earlier analysis of DOE-supported arts educational opportunities. The latter includes information about the schools and their neighborhoods, but the former provides information about specific locations of arts education activities. The diverging approaches and practices of data collection by both agencies, unfortunately, do not permit a direct comparison of the data collected by DOE and CDF, nor is it possible to feasibly assess which schools CDF-funded arts organizations collaborated with. Moreover, we do not know how many of the arts organizations collaborating with New York City’s public schools are listed in DOE’s Annual Arts Education Survey, and thus have already been accounted for in the previous discussion. However, a geographic analysis of arts education locations funded, at least in part, by CDF provides us with several relevant pieces information. First, it clarifies where arts organizations collaborate with arts education and where they do not. The following map (figure 11) shows where these organizations collaborated with public schools during school hours by census tracts. It codes only census tracts that had at least one location. The map shows a high concentration in most parts of Manhattan and the Bronx, with less presence in South and East Brooklyn, large parts of Queens (particularly Ridgewood, Middle Village, and Glendale), and Staten Island.
Figure 11: During school hours arts education locations funded through the Cultural Development Fund.

The map of arts education locations taking place after school (figure 12) shows a similar pattern with an even higher concentration in Manhattan.
Finally, considering that some of these arts educational opportunities were counted twice (once in the analysis of DOE data and once in the analysis of CDF data), we can still learn highlight areas where arts education opportunities are lacking.

The following map (figure overlaps arts educational locations per census tract as facilitated through CDF with those census tracts disadvantaged by low median income and an average of instructional hours below New York State guidelines.
Figure 13: Census tracts with low median income and low levels of arts education as funded through the Cultural Development Fund.

Legend
- Tracts with low median income (< $33,465) and low levels of arts instructional hrs
- CDF Arts Education Locations During & After School
- 1-27

This map shows that CDF-funded arts organizations have created education opportunities in otherwise arts educationally underserved, and economically deprived neighborhoods, particularly in the Bronx and East Harlem. We need to be careful, however, to not overestimate the validity of these findings as we do not know whether the arts education opportunities provided in otherwise disadvantaged neighborhoods are actually used by the students of the schools located in these particular census tracts or by other students. Further, multiple areas appear underserved by either the arts instructions provided in schools or by arts education opportunities provided by arts organizations funded by CDF. Specifically, the neighborhoods these underserved census tracts are located in are Bedford-Stuyvesant, Crown Heights, Ocean Hill, East New York, Canarsie, and Brighton Beach in Brooklyn; Far Rockaway in Queens; East Concourse, and Soundview-Bruckner in the Bronx; and East of Inwood and Washington Heights in Manhattan.
b. Cultural Institutions Group

The 33 members of the Cultural Institutions Group (CIG) also maintain partnerships with and receive visits from New York City’s public school students and teachers. During the fiscal year 2015, they established 951 partnerships with public schools (including District 75 and Charter schools) and reported providing five or more sessions or interactions with one or more groups of school children and/or co-planned a program with school educators on content and curricula. They report that 204,286 students benefited from such established partnerships.

In addition to established partnerships, the CIG reported visits from 2,222 schools (including District 75 and Charter schools) that came either for a single, or up to four visits, serving a total number of 179,991 students. A detailed breakdown of the number of students and schools that were reported to visit can found in Appendix B.

c. Cultural After School Adventures

The Cultural After School Adventures program (CASA) provides cultural experiences to youth enrolled in after school activities. CASA partnerships—comprising one public school and one cultural organization—are designated by City Council Members, with up to 7 partnerships per council district for the fiscal year 2015. Each partnership is awarded $20,000. During the fiscal year 2015, 351 CASA awards were designated for 347 schools. Council District Members designated from 5 up to 7 CASA partnerships per Council District. They served 19,855 students directly and 136,133 students, family members, and other audiences were served indirectly. Students received a total number of 15,080 sessions, with a total number 30,012 arts instructional hours. Overall, 1,141 teaching artists were engaged in the context of CASA.
Figure 14: Grade levels funded through the Cultural After School Adventures program.

Most (40%) students benefiting from CASA are between grades 3 and 5, followed by students in kindergarten to grade 2, and middle school students.

How does CASA complement arts education citywide? A multivariate analysis of the likelihood of CASA arts educational hours for kindergarten to 2nd grade showed that CASA collaborations with K – 2 schools increase with as other arts education hours provided in public schools decline (see Appendix C). In other words, for public school students in Kindergarten to grades 2, CASA provides support when arts educational instruction hours are lower rather than amplifying an already existing uneven, and widespread distribution of arts instructional hours. Further analysis shows that this relationship does not hold for grades 3 to 5, however.

d. Materials for the Arts

Materials for the Arts (MFTA) is a partnership between the Department of Cultural Affairs, the Department of Education, and the Department of Sanitation. MFTA provides recycled or donated goods for use by arts and classroom teachers in arts educational instruction. During the fiscal year 2015, MFTA received 1,466 shopping visits from teachers of the Department of Education and over 10,000 DOE staff members are currently registered to use the system (meaning that over 10,000 DOE teachers have gathered supplied at MFTA at some point in the past).
4. Discussion of Findings

This report highlights a number of positive findings. The amount of arts education received by students is not statistically related to the level of poverty (regardless of whether it is measured by Title I funding or at a neighborhood census tract level). Further, this report sheds light on the reach of many well-established collaborations between the Department of Education and arts organizations funded and supported by the Department of Cultural Affairs. Such collaborations have manifold advantages, such as the broadening of the range of arts disciplines available to students, the additional facilitation of arts educational opportunities for public school students, the possibility for students to engage in arts learning in one of the CIG, and the availability of arts educational materials and resources provided to teachers of all disciplines by a city agency.

However, a few challenges need to be addressed. First, the report found a highly uneven distribution of arts education hours across public schools. Similarly, the distribution of arts education collaborations with arts organizations is also highly uneven. This uneven distribution permits the existence of some clusters of poor neighborhoods with low arts education hours.

Based on this analysis, it is possible to make recommendations on how to build on the existing strengths of the arts educational environment in New York City’s public schools:

- Build on existing collaborations between schools and arts organizations to create lasting partnerships for each school and grade level.
- Increase the number of arts teachers in schools with low levels of arts education.
- In schools with high numbers of English Language Learners: Increase the number of teachers who have an arts certification in addition to certification in Teaching English as a Foreign Language (TESOL) or Dual Language.
- In collaboration with teacher training programs, facilitate an increase in the number of teachers obtaining a TESOL and arts education dual certification.
- Create incentives for arts organizations to create arts learning opportunities in underserved neighborhoods (Bedford-Stuyvesant, Crown Heights, Ocean Hill, East New York, Canarsie, and Brighton Beach in Brooklyn; Far Rockaway in Queens; East
Concourse, and Soundview-Bruckner in the Bronx; and East of Inwood and Washington Heights in Manhattan).

- Continue to collect and analyze data on arts education in NYC’s public school across city agencies with the goal of observing developments and tracing policy implementations. Implement data collection practices that will allow for a more accurate portrayal of how the different agencies contribute to arts educational opportunities citywide.
5. Acknowledgements

This report was made possible by generous funding of the New York City Cultural Agenda Fund in The New York Community Trust to the Center for Urban Research at the Graduate Center of the City University of New York for a cultural policy fellowship. The writing and analysis of this report benefited greatly from input from staff of the Department of Cultural Affairs the Department of Education, including Edwin Torres, Paul L. King, Shirley Levy, and Kathleen Hughes, and support from Center for Urban Research staff John Mollenkopf and Steven Romalewski, as well as the support received by the GIS lab at Baruch College (CUNY) including Francis Donnelly and staff.
### 6. Appendices

#### Appendix A

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* Correlation is significant at the 0.01 level (two tailed)

** Correlation is significant at the 0.05 level (two tailed)
## Appendix B

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</tbody>
</table>
Appendix C
Appendix D

The following steps could improve cross-agency social scientific analysis:

- Provide unique identifiers for each case reported, such as unique ID Number or DBN school code (if unit of analysis is school).
- Provide school code (DBN) if venue took place at public school. Alternatively request information in separate columns for Borough Code (Q, K, M, X, R), and school number. School names should be provided in addition to this information, but are not sufficient to establish school ID.
- Report hours and number of sessions of arts education opportunities whenever possible.
- Request exact grade served (rather than grade range) by arts education efforts.
- Avoid numerical limitations on any of the items asked to report and/or the divergence of items reported to multiple spreadsheets. If you do have to limit the number of items reported, a unique identifier of each case becomes all the more relevant.