A Comparative Assessment of New York City's Federal Pandemic Education Aid

Highlights

- The pandemic led to a decline in enrollment trends among all of New York State's "Big Five" districts. In the 2021-22 school year, Buffalo was the only one with more students enrolled than it had 10 years prior.

- New York City is unique among the State's major districts in its explicit commitment of such a large share of ESSER II and III funding to early childhood education and in using funds to restore prior programs.

- New York City DOE allocates just over 30 percent of ESSER III spending towards addressing the impacts of COVID-19 on students; funding evidence-based strategies to meet students' social, emotional, mental health and academic needs; and providing extended learning opportunities.

- For comparison, Buffalo allocates nearly 40 percent to these categories, followed by Rochester at 44 percent, and both Yonkers and Syracuse allocated more than 60 percent of their ESSER III funding to these categories.

- The federal government requires 20 percent of ESSER III funding to be spent on academic recovery, but New York City's initial plan allocated just 16.5 percent for this purpose. However, the City's adopted FY 2023 budget repurposed an additional $176 million to support its Summer Rising program, allowing it to reach the required threshold and suggesting a recognition that more funds were necessary for this purpose.

- Among national peers, New York City plans to spend the largest share of ESSER II and III funds on special education.

The COVID-19 pandemic placed many State and local governments in a precarious position, both financially and operationally. Continuing to provide services during the pandemic increased costs at the same time revenue stability came into question, straining municipal budgets. Education, a key service provided by the government, was one of the services most impacted by the pandemic.

To help mitigate the pandemic's negative impacts, the federal government passed three successive rounds of emergency recovery funding, all of which included specific provisions that set aside direct funding to support public school systems across the nation. While the law places certain restrictions on how these one-time funding supports can be used, school districts were also afforded significant leeway to develop specialized plans to best address their own unique needs.

New York City is home to the nation's largest public school system and is unique among its national counterparts due to its sheer size, shared budgetary resources and control structure. However, comparisons with other districts on reporting, timing of use and type of programs funded with federal relief can help benchmark the City's progress and may highlight areas of improvement for effective fund distribution.

Compared to other major school districts, both across the country and within New York State, the City has directed considerably less of its total allocation toward addressing the academic impacts of the pandemic. Instead, it has devoted more than a quarter of these federal funds toward expanding early childhood education – far more than other districts. This response requires greater detail on how the City is using these funds to achieve academic recovery among its current students, particularly those most affected by the pandemic.

The Impact of the Pandemic

Prior to the pandemic, the New York City Department of Education (NYC DOE) had made strides to expand classroom services, particularly for younger students, and attempted to advance an equity agenda. Significant staffing increases were required to manage these efforts. A centerpiece of the previous Mayor's education agenda was the expansion of universal free educational childcare for 3-year-olds, called "3-K," but the program had been implemented across less than half of the City's school districts by the time the pandemic arrived. The financial impact of the pandemic caused the City to delay plans to continue expanding the 3-K program and to temporarily cut funding for other education initiatives. (See OSC's report on COVID-19 and Education in New York City which provides more detail about the decisions the City has made to weather the economic and fiscal uncertainties of the pandemic.)

Districts across the nation also experienced challenges in managing the effects of the COVID-19 pandemic on education. Teachers, students and their families were all forced to contend with long-term school closures, remote learning and hybrid learning models, and adaptations to new health and safety protocols.

These impacts placed unprecedented demands on schools' pedagogical and operational infrastructure and have since required constant safety monitoring and response. The pandemic necessitated a widespread shift in teaching, most notably in the form of remote learning.

Despite the fact that remote learning was often a necessity during the height of the pandemic, many studies have found that it is not as effective as in-person learning, and that students lost significant progress during the pandemic. These negative outcomes disproportionately impacted already-disadvantaged students. A working paper from the nonprofit Northwest Evaluation Association (NWEA), in collaboration with Brown

University and the University of Virginia, found that, nationwide, the average student would begin the 2020-21 school year having lost as much as half of their expected progress in math and a third of their expected progress in English during the previous school year.[1]

Learning losses (caused by multiple factors, such as reduced attendance and school hours as well as technological and physical capacity limitations) have led to changes in student assessments and increased recognition of the difficulties in providing equitable learning opportunities for all students.

A study from Brown and Harvard University researchers found that the learning losses were unevenly distributed; lower-income students achieved about half as much progress in math as their higher-income peers.[2] An analysis by the consulting firm McKinsey found that learning loss was disproportionately concentrated among low-income, African American and Latino students. These students were less likely to have access to conducive learning environments at home such as appropriate space, internet access and dedicated digital devices they did not need to share, as well as parental academic supervision.[3]

A study conducted in early 2022 found substantial correlation between remote instruction and widening race- and poverty-based achievement gaps. It suggested that high-poverty districts that went remote in the 2020-21 school year would need to devote nearly all of their emergency federal aid to academic recovery in order to help students recover from pandemic-related learning losses.[4] Absenteeism, including long-term absenteeism, which has long been tied to student performance, has also risen during the pandemic.[5]

The results of recent testing have borne out these findings. The 2022 National Assessment of Educational Progress exams (often referred to as "the nation's report card") showed significant learning loss since 2019 (2020 and 2021 exams

were not conducted due to the pandemic). Nationwide, math scores fell five points for fourth graders and eight points for eighth graders – the largest drop since the assessments were first held in 1990 – and English scores fell three points in both grades. New York State's losses were even more severe.

In New York City, the preliminary results of the 2022 statewide English and math exams (the first statewide exams held since 2019) conducted in grades 3-8 show that, citywide, the percent of students who scored proficiently in math fell by 7.7 percent, with losses across all grade levels. The share of students scoring proficiently in English actually rose by 2.5 percent across all grades, but older grades (6-8) exceeded these gains while younger grades (3-5) saw measurable losses.

The pandemic also had an immediate impact on education budgets. In New York, decisions in the State Fiscal Year (SFY) 2021 budget process resulted in cuts to local aid that required many districts to reduce services or replace State funds with locally-derived revenue. Furthermore, student enrollment fell precipitously in the 2020-21 school year across the State. In New York City, City records show that public schools lost more than 3.3 percent of total student enrollment that year, and while the City initially expected enrollment to rise in the 2021-22 school year, it fell another 3.2 percent. The City now expects enrollment to continue falling in the upcoming year. Statewide, public school enrollment fell by a full 3 percent in the 2020-21 school year and a further 2 percent in the 2021-22 school year. This is significant, as student enrollment is a key factor in determining how much education aid districts receive from the State.

Federal Aid

Seeking to mitigate the financial impact of the pandemic on school districts and to repair the learning loss experienced by students, the federal government has provided a total of nearly $190 billion to schools since the beginning of the pandemic, an extraordinary level of one-time emergency funding for education. The funding was passed in three rounds of legislation, which created and funded the Elementary and Secondary School Emergency Relief (ESSER) Fund. The three rounds of funding are referred to as ESSER I, ESSER II, and ESSER III, respectively (see Figure 1). School districts in New York State received a total of more than $14 billion from this fund (including set asides for administrative costs, homeless children and other specifics). New York City received approximately $7.7 billion, to be spent over five years. These funds are not only expected to allow districts, including New York City, to maintain services throughout the course of the pandemic, but also

FIGURE 1
ESSER Funding for New York State School Districts
(in millions)

	CARES	CRRSA	ARP	Total ESSER
New York City	$720.5	$2,136.4	$4,801.6	$7,658.6
Buffalo	29.7	89.2	200.4	319.3
Rochester	29.2	87.6	196.8	313.6
Syracuse	16.2	48.4	108.9	173.5
Yonkers	10.4	31.3	74.6	116.4
All Other Districts	328.1	1,435.1	2,798.8	4,561.9
Total	**$1,134.1**	**$3,828**	**$8,181.2**	**$13,143.3**

Note: Does not include funding for charter schools; All Other Districts data include funds allocated under the Governor's Emergency Education Relief (GEER) fund made available through the CARES Act and CRRSA.
Sources: New York State Education Department; OSC analysis

to help overcome the lingering impacts on education from the pandemic.

ESSER I

In order to accommodate pandemic-related changes to educational services across the country, the federal government provided emergency assistance to states and localities under the Coronavirus Aid, Relief and Economic Security (CARES) Act on March 27, 2020. Under the Act, more than $1.1 billion was earmarked for school districts in New York State, with New York City authorized to receive $721 million and the "Big Four" (the city school districts of Buffalo, Rochester, Syracuse and Yonkers) receiving another $86 million combined. The remaining funds were to be split among the 668 other school districts in the State.

Just days later, however, the State, facing its own revenue shortfalls, passed its budget for SFY 2021. This budget essentially used the new federal emergency funding to supplant an equal amount of State education aid to school districts. Furthermore, the State did not increase other forms of aid in response to the pandemic, forcing New York City to backfill its optimistic projections for State aid with its own funds. The Big Four, which did not have such large gaps to fill, also did not have the same flexibility to fill those gaps with their own funds. To add to districts' budget uncertainty, the State budget also included a provision that allowed the State, in the absence of additional federal aid, to cut aid to localities (including school aid) to achieve a balanced budget. While ESSER I funds were available for a wide range of uses, they effectively replaced a corresponding loss of State aid in district budgets. Given the use of these funds in managing the immediate needs of the pandemic and general replacement of State aid, this report does not focus on district use of ESSER I funds.

ESSER II

In response to growing concerns over school readiness and learning losses across the country, as well as school districts' fiscal ability to respond, the federal government included education funding in the Coronavirus Response and Relief Supplemental Appropriations Act (CRRSA), signed into law on December 27, 2020. The CRRSA supplied $54.3 billion of education funding nationwide, of which New York City received more than $2.1 billion, to be spent by January 2024. The "Big Four" districts received a combined total of almost $257 million. These funds are relatively unrestricted, and districts can use them to prepare for, prevent or respond to the impacts of the pandemic.

Eligible uses included addressing learning losses among students, preparing schools for reopening, and testing and improving air quality in buildings (see Appendix A for a full breakdown of the allowable uses of ESSER II funding). This time, however, the law was crafted to prevent states from using the federal support to supplant their own funding. At the same time, improving economic conditions in New York State lessened fiscal pressures that led to education budget cuts in the prior year.[6] In New York City, the Mayor announced that portions of this aid would be used to restore cuts to NYC DOE spending.

ESSER III

In March 2021, Congress passed legislation including another round of pandemic aid, called the American Rescue Plan (ARP) Act. By far the largest of the three rounds of education funding, amounting to nearly $122 billion nationwide, the federal government intended this round to not only support district operations but also to enable schools to help students recover the learning they lost throughout the two years of the pandemic. This round of stimulus funding supplied New York City with $4.8 billion in emergency education aid, and the "Big Four" were allocated $576 million, to be spent by January 2025. Again, the State was

prevented from usurping the funds for its own uses. In addition, the federal government required districts to use at least 20 percent of the allocation to address learning losses through evidence-based interventions (such as summer enrichment programs), and to ensure that such interventions addressed students' emotional and social needs as well as their academic success. (See Appendix B for a full breakdown of the allowable uses of ESSER III funding). ESSER III applications were also required to include measures that each district intended to be used to identify student needs and monitor student progress as a result of planned interventions and supports, in order to promote academic recovery.

This third and largest round of funding included the most stringent reporting requirements, and therefore has the most available data concerning how districts have allocated the money. However, the structure of the reporting requirements can create difficulties comparing different districts' uses of the funds, as different kinds of initiatives could be included in more than one of the federally-defined categories of allowable expenditures. For example, the category "addressing learning loss" could include providing laptops to students as well as extending school days or expanding summer school. But the purchase of laptops could also be considered the "purchase of educational technology," a separate category of allowable activity. This means that two different school districts may not report identical activities in the same terms. Additionally, other allowable activities are broad, catchall categories, such as authorizing spending necessary to maintain the operation of a district, which encompasses a wide variety of expenditures.

Methodology

Given the limitations in federal reporting requirements noted above, in order to provide a reasonable comparison across national school districts, this analysis categorizes planned spending using the broad thematic categories created and reported on by New York City. For ESSER II, these are "Information Technology, Programmatic, & Operational Support," "Restorations," "Early Childhood," "Instructional Support," and "Other." For ESSER III, they are "Early Childhood," "Instructional, Programmatic, & Operational Support," "Academic Recovery," "Special Education," "Social-Emotional Learning & Mental Health," and "Other." For the sake of comparing ESSER II and ESSER III, the three support categories are combined into one "Operational Supports" category.

For other New York State school districts, two different sources of data also provided information. ESSER II and ESSER III funding applications provided a standardized breakdown of the proposed uses of ESSER funding. However, the substantial latitude and interoperability afforded by federal reporting requirements allows school districts the ability to interpret application categories broadly, and it is clear that different school districts did not define similar planned expenditures identically under the same categories. New York City's ESSER III application, for example, places more than 77 percent of its ESSER III funding in two of the broadest and least descriptive federal reporting categories, relying on other official City reporting resources to describe purposes more clearly and in greater detail. Though the federal allowable activities include one category specifically for "addressing the impact of lost instructional time" and another for "activities related to summer learning and enrichment activities," the City's ESSER III application does not include any funding in these categories; however, a narrative description of City uses of federal funding allocates $798 million (17 percent) of its ESSER III funding to "academic recovery." The division of funds detailed in the City's most recent narrative does not match the breakout provided in the application. Furthermore, the City has noted that certain funds allocated in categories other than "academic recovery" could be counted toward the

20 percent of spending to address learning loss required by the federal government. The applications submitted by the Big Four were more robust and descriptive. For example, Buffalo allotted funding to 19 out of the 20 available federal categories in its ESSER III application, but even with that, the means by which this funding is applied to local priorities can be opaque.

In addition, New York State law required school districts and other local educational agencies to submit and publish updates to their ESSER III spending plans by July 1, 2022. The State's template provides nine categories into which districts can report spending and, while some opacity and interoperability remain, the classifications are more easily applicable than the categories enumerated in the federal application. Three categories in particular (addressing the impacts of COVID-19 on students; implementing evidence-based strategies to meet students' social, emotional, mental health and academic needs; and providing extended learning opportunities) have some significant overlap and all potentially address using federal funds for academic recovery. Nevertheless, these updates provided supplemental standardized comparisons of the uses of ESSER III funds, but their contribution to the analysis is limited to New York State school districts only. (See Appendix C for detail on the State's comparable ESSER III funding uses).

In addition, the report examines the five largest school districts in the country by student enrollment. School districts examined outside of New York State provided even less uniform data, so discretion was used to align their broad spending categories (as made publicly available and linked by the federal Department of Education) as closely as possible to those publicized by New York City. Additional documents on school district websites provided a more comprehensive discussion of funding as it applied to locally determined objectives. When close alignment was not possible, the funding

was grouped under the "Other" category. (For additional notes on OSDC's specific methodology, see Appendix D).

New York City

The largest school district in the country, the New York City Department of Education served more than one million 3-K through grade 12 students in more than 1,800 schools (including 267 charter schools) in the 2020-21 school year. The NYC DOE employs more than 140,000 full-time and full-time equivalent staff to serve these children - 73 percent of whom are economically disadvantaged, 20.8 percent of whom have a disability and 13.3 percent of whom are English Language Learners.

The NYC DOE's budget in FY 2022 was $37.9 billion including fringe costs and pension contributions, nearly $32 billion of which is considered used for operations. Of that $37.9 billion, more than $5.8 billion, or 15.4 percent, was supplied by the federal government. This is an abnormally large federal share, driven by the massive influx of nearly $7 billion in combined ESSER II and III funding between FY 2021 and FY 2024. During the decade prior to the pandemic, the average federal share of the NYC DOE's budget was 6.8 percent, and the share is expected to drop back down to 5.4 percent in FY 2026, after the emergency federal aid expires.

The City has released a plan for spending this federal aid, though it acknowledges that spending plans may be altered and unspent money reallocated if priorities change over the course of the recovery. The largest allocation of federal aid is to what the City describes as "Instructional Supports, Information Technology and Programmatic and Operational Support," which accounts for $1.3 billion worth of ESSER III funding and $834 million from ESSER II, 30.6 percent of the total supplied by both rounds

FIGURE 2
NYC Allocation of Federal ESSER Funds
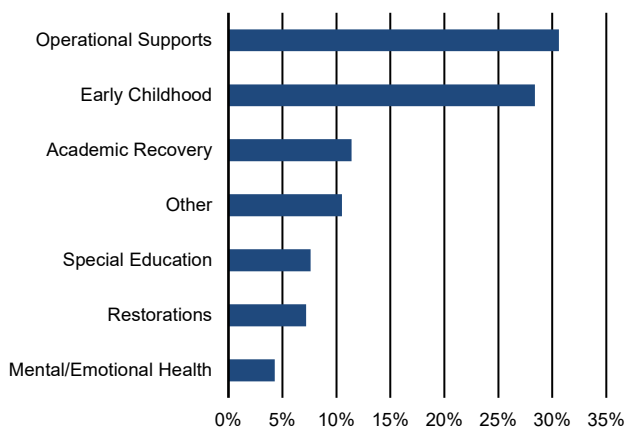
Sources: NYC Department of Education; OSC analysis

(see Figure 2). This rather broad and nebulous category includes supports for existing programs; school reopening costs; teacher recruitment and retention; the purchase of new learning technology; federally regulated accessibility improvements; other infrastructure compliance work; and family and student outreach; among other things. It has significant overlap across a number of categories of allowable expenditures under the federal legislation.

The second-largest single chunk, $1.98 billion, or 28.4 percent of combined ESSER II and III funding, is devoted toward early childhood education – specifically the full expansion of the City's 3-K initiative, which the City was in the process of phasing in before the pandemic began. Most of the funding ($1.6 billion) is supported by the district's ESSER III allocation, amounting to nearly one-third of the City's ESSER III funds.

The program would be directed at students who were not yet in public school at the onset of the pandemic, when those already enrolled in experienced the most significant disruption to their education. Additionally, while the federal funds will support the program's expansion, the City estimates that the annual recurring cost of the expansion after the federal funding expires will amount to $752 million, which the City will

have to fund itself or find other sources to support. The City has already accounted for half of the necessary annual funds in the current budget plan's out-years (FY 2025 and FY 2026).

The third-largest type of spending, Academic Recovery, amounts to $798 million worth of ESSER III funding. This is the clearest educational goal of the ARP legislation and the only category of aid across all ESSER funding rounds on which the federal government mandates districts spend a portion of their aid. However, the City's initial plan allocation fell short of the 20 percent minimum required by law, amounting to just 16.5 percent of the City's ESSER III funding. The City's adopted FY 2023 budget included repurposing an additional $176 million of ESSER III funding in FY 2023 to support its Summer Rising program for academic recovery for another year, which would, if included, reach the required threshold.

Also worthy of note is the City's allocation of $499 million of ESSER II funds for the restoration of programs the City had cut during the pandemic (though the total cost of these restorations tapers off in later years). This amounts to 7.2 percent of the City's combined ESSER allocation. Major restorations funded with ESSER II money included cuts to the City's Equity and Excellence program and a temporary reduction in discretionary funding to hundreds of schools, as well as a delay in the planned expansion of the 3-K program. The City argued that these cuts

FIGURE 3
Big Five Cities, Share of Children Aged 5-17 in Poverty

School District	2019	2021
New York City	22.4%	24.2%
Buffalo	45.2%	37.2%
Rochester	48.2%	42.8%
Syracuse	44.8%	42.1%
Yonkers	22.1%	26.2%

Source: U.S. Census Bureau, American Community Survey 1-year estimate

were necessary to counteract shortfalls in State aid and the economic impacts of the pandemic. However, because the programs are ongoing, the recurring cost to the City, when added to those imposed by the 3-K expansion, amount to over $1 billion annually.

New York City and the "Big Four"

Unlike other school districts in the State, the so-called "Big Five" districts (the State's five largest school districts, consisting of the New York City Department of Education, Buffalo City School District, Rochester City School District, Syracuse City School District and Yonkers City School District) are all fiscally dependent on their respective cities. This means they cannot independently levy taxes or determine how much they will have to support instructional programs and services. It also means that education in these cities must be funded within constitutional tax and debt limits for the big cities. Nevertheless, they are generally subject to the same basic State aid formulas as all other smaller school districts across the State.

New York City's school district is unique in that it is essentially a department of the municipal government and is much larger than any other district in the State, with more than 1 million students. Therefore, the four other dependent school districts, none with more than 40,000

Adjusted Annual Charter School Enrollment in the Big Five Districts - Compared to 2011-12

Sources: New York State Education Department; OSC analysis
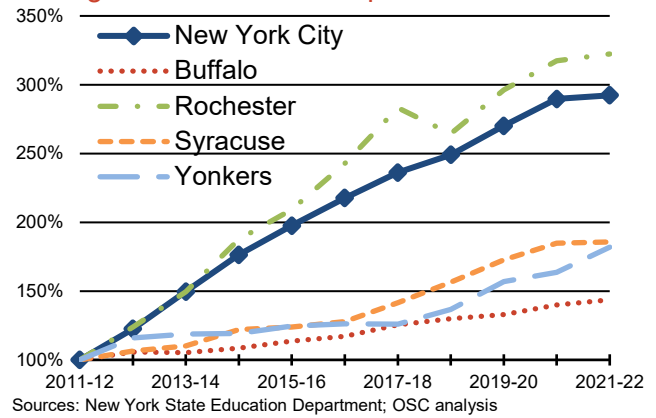
students and all controlled by school boards, are often referred to as the Big Four. The Big Four cities are also, unlike New York City, subject to the State's real property tax cap.[7]

New York City also has a significantly lower share of children aged 5-17 who are below the poverty line than Buffalo, Rochester or Syracuse (see Figure 3, previous page). The City's share does, however, remain significantly higher than the statewide average of 17.7 percent. Poverty rates factor significantly into aid formulas, both for State aid and for the formula at the root of calculating ESSER distributions.

After a period of growth for all but Rochester, enrollment in the Big Five districts leveled or

FIGURE 4

Adjusted Annual PK-12 Student Enrollment of the Big Five Districts - Compared to 2011-12

Sources: New York State Education Department; OSC analysis

Report 12-2023
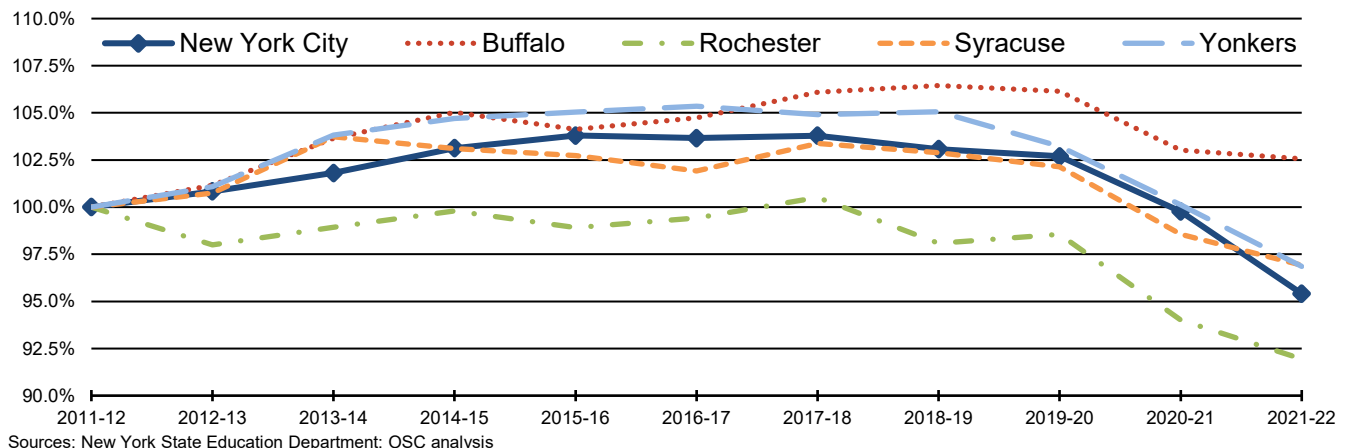
declined slightly in the years immediately preceding the pandemic. However, the pandemic exacerbated those trends. In the 2021-22 school year, Buffalo was the only district to have more students enrolled than it did 10 years prior (see Figure 4). Rochester, which had been experiencing the worst enrollment trends, and New York City both experienced particularly sharp declines. Despite the general decline in enrollment in recent years, charter school enrollment in all five districts has continued to climb dramatically, even during the pandemic (see Figure 5). In New York City, which, along with Rochester, has seen the most prolific growth in charter enrollment, that growth has begun to level off, curtailed by a State-mandated cap on the number of charters that can be issued to serve students in the City.

With its significantly larger tax base, unique industry characteristics and exemption from the State's real property tax cap, New York City is also by far the least reliant of the Big Five on State education aid. Historically, State education aid has accounted for slightly more than one-third of the NYC DOE's total funding (an average of 35.8 percent annually over the 10 years prior to the pandemic).

Comparing the Use of ESSER Funds Among the Big Five New York State Districts

Because each of the Big Four is considerably smaller than New York City by enrollment, they received significantly smaller amounts of ESSER aid. Buffalo, the largest of the Big Four, served more than 30,000 K-12 students in 2021-22 (see Figure 6), and received a total of $290 million combined ESSER II and III funding. Syracuse, the smallest, served under 20,000 students and received a combined $157 million. Yonkers, though larger than Syracuse, has less than half as many students living in poverty and received $102 million in combined ESSER II and III funding.

Each of New York State's largest school districts had substantial flexibility to allocate their federal aid as they saw fit to address their unique challenges leading to some variation based on the local needs of each school district. It is also notable that in 2020, New York State required school districts to create and publicize reopening plans detailing how they intended to address COVID and its impacts on students and schools in the coming school year. Of the Big Five, New York City's plan included the least specific intentions to use student assessments to ascertain the level of learning loss students had suffered up to that point.

FIGURE 6
Characteristics of Big Five New York State School Districts
($ in millions)

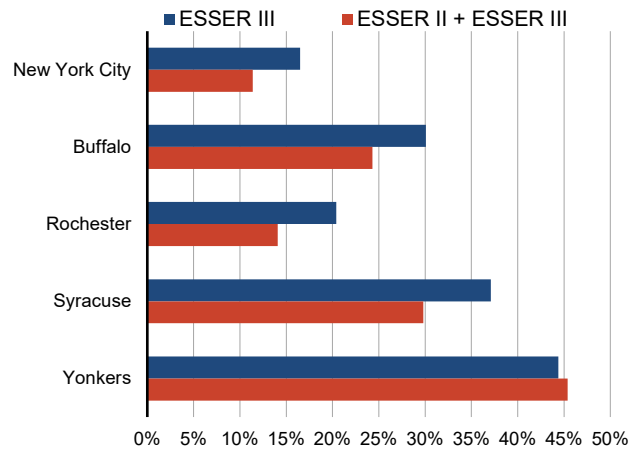|	FY 2022 Budget	2021-22 K-12 Student Enrollment	Education Department Employees	Number of Schools Operated	Control Structure
New York City	$31,938	966,833	141,928	1,881	Mayoral Control
Buffalo	$973	30,495	4,875	66	Elected School Board
Rochester	$840	24,930	5,584	46	Elected School Board
Yonkers	$665	24,420	3,216	40	Appointed School Board
Syracuse	$472	19,435	3,333	30	Elected School Board

Notes: Budget total for New York City represents reported estimated actual all-funds operating budget. Budget totals for the other four districts represent estimated actual general fund budgets.
Sources: New York City Department of Education; New York City Office of Management and Budget; New York State Department of Education; Buffalo City School District; Rochester City School District; Syracuse City School District; Yonkers City School District; OSC analysis

New York City is also unique among the State's major districts in its explicit commitment of such a large share of ESSER II and III funding to early childhood education and the use of funds for the restoration of prior programs. Apart from New York City, Rochester (which was experiencing significant fiscal difficulty just prior to the pandemic) is the only member of the Big Five that allocated less than 30 percent of its ESSER III funding to academic recovery, albeit still meeting the federal requirements to set aside a minimum of 20 percent of ESSER III funding for this purpose. New York City's plan does not yet do so, according to the latest reporting in its online COVID Funding Tracker (which has not been updated since February 2022). Yonkers set aside the largest share of funds for academic recovery (44.4 percent of ESSER III funds), followed by Syracuse (37.1 percent) and Buffalo (30.1 percent) (see Figure 7, previous page).

In their ESSER III applications, approved in January 2022, Big Five school districts commonly cited graduation rates, student assessments, and standardized testing as part of their measures for identifying those most in need of, and assessing progress of, academic recovery. To this point, regular public reporting on the identification of those students and their progress has been limited, although Yonkers and Rochester have each suggested they are using internal systems to track these measures. Buffalo does maintains a public-facing website which includes assessment, attendance, behavior, enrollment, and school climate data.

Each of the "Big Five" districts set aside a substantial portion of its ESSER II and III funds for "Operational Supports." Both Rochester and Buffalo set aside around 62 percent of their combined funding for this purpose and Syracuse and Yonkers 36 percent and 38 percent, respectively. New York City shows just 30.6 percent intended for "Operational Supports." However, this may exclude some spending reported in other categories. For example, if the City's spending on "Restorations," which could be considered "Operational Support," were included, the City's combined allocation would amount to 37.8 percent.

The districts' updated state reporting from July 2022 sustains these prioritizations. New York City

FIGURE 8
District Expenditures as a Share of Total ESSER III Funding

Expenditure Type	New York City	Buffalo	Rochester	Syracuse	Yonkers
Personnel Costs	46.7%	59.2%	44.1%	46.0%	99.2%
Contractual Costs	51.7%	31.5%	46.6%	34.7%	0.0%
Equipment & Capital Costs	0.0%	0.6%	2.0%	9.9%	0.0%
Indirect Costs	1.7%	8.6%	7.3%	9.4%	0.8%

maintains that it intends to spend more than 34 percent of its ESSER III funding on early childhood education – none of the Big Four intends to use more than two percent for this purpose. This comes at the expense of academic recovery, as the NYC DOE allocates just over 30 percent of ESSER III spending to the three categories that could address the impact of COVID on students. For comparison, Buffalo allocates nearly 40 percent to these categories, followed by Rochester at 44 percent, and both Yonkers and Syracuse allocated more than 60 percent of their ESSER III funding to these categories.

Based on their ESSER III applications, four of the "Big Five" districts intend to fund significant new recurring staff. The City plans to hire new staff for its mental health initiative and 3-K expansion, but projections also expect staffing levels to ramp back down as federal funding runs out. Likewise, Rochester plans to hire nearly 320 full-time equivalents using its ESSER III funding, but just 102 of them will remain after the funding is expired; Syracuse plans to employ 221 new staff, all of which have been designated as one- to three-year hires.

Yonkers, however, plans to spend nearly all its ESSER III funds (69.8 million, over 99 percent) on new hiring, but has not made clear how it plans to sustain this investment after the expiration of federal support. Buffalo plans to spend a significant portion of its ESSER III funding (59.2 percent) on personnel costs, which supports both new and existing employees. New York City's allocation of ESSER III funds to personnel costs was similar to Rochester and Syracuse (see Figure 8). The City chose to allocate the highest share to contractual costs and less than 1 percent to equipment and capital costs and indirect costs.

Four of the five districts have also earmarked funds for special education, including New York City. According to State Education Department data, New York City has a comparable share of students with disabilities to the other "Big Five" districts, at around 20 percent. That number, following general trends across the country, has been increasing slightly over the past decade, rising from 17.4 percent in 2011-12 to 21.6 percent in 2021-22. Likewise, the share of students who are economically disadvantaged, 79.1 percent in 2021-22, was comparable to all of the other "Big Five" districts except for Rochester, which has a significantly higher share. That number has been stable in New York City over the past decade. OSC has noted in past reports that students with disabilities statewide lost partial or full special education services because of school shutdowns and therefore did not receive their individualized education program (IEP) mandated services.[8]

Among the "Big Five," New York City and Rochester's budgets best recognize the out-year costs of their programs, with both planning to downshift hiring or anticipating new funding sources to cover expenditures once they can no longer be supported by federal aid. The City's out-year planning is more robust than the other members of the Big Five, though it has reasonably stated that out-year plans may be subject to change given the developing needs of the City and the ability to meet planned spending in FY 2022 and FY 2023. Indeed, the City was slow to spend its FY 2022 allocations of federal aid and faces the prospect of rolling significant spending into later years.

Comparing the Use of ESSER Funds Among the Nation's Largest School Districts

In addition to comparing school districts in New York State, this analysis also compares the use of funds to the four other largest districts in the country, which are more commensurate with the City in terms of student enrollment, staffing and number of school locations (even as they operate under different state regulation, funding formulas

FIGURE 9
Share of ESSER III Spending by Program Area, Selected National School Districts

	New York City	Los Angeles	Chicago	Miami-Dade County	Clark County (NV)
Early Childhood	33.2%	1.1%	17.1%	0.4%	1.0%
Operational Supports	26.9%	16.1%	51.7%	18.4%	64.9%
Academic Recovery	16.5%	60.5%	18.5%	34.1%	20.6%
Special Education	11.0%	5.0%	n.d.	n.d.	n.d.
Mental/Emotional Health	6.2%	7.4%	0.4%	25.3%	10.0%
Other	6.1%	9.9%	12.3%	21.7%	3.6%

Notes: Chicago data does not provide a separate breakout of ESSER II and ESSER III funds, or detail of fund use in budget years other than FY 2023. Priorities are extrapolated into other budget years and assumed to be shared equally between ESSER II and ESSER III.
Totals may not add due to rounding. N.d. is nondisclosed.
Sources: NYC Department of Education; Los Angeles United School District; Chicago Public Schools; Miami-Dade County Public Schools; Clark County School District; OSC analysis

and operating environments). Once again, New York City was an outlier in its use of funds for early childhood education. The NYC DOE was also the only district among the top five nationally that did not, according to its NYC COVID-19 funding tracker, initially allot 20 percent of funds to academic recovery. An extrapolation of Chicago's data also indicates that its combined ESSER II and III expenditures are falling short of that goal, but that district's data does not specify which ESSER fund the academic recovery dollars are sourced from. While the utility of Chicago's data is limited, it also appears that the district has allocated a portion of its ESSER II and III funding to early childhood education, with $100 million earmarked for that purpose in FY 2023.

It is also notable that most districts allocated a significant share of their funds to operating supports, creating a lack of clarity regarding the ultimate intention of the funding. In addition, several districts have expressed that they will be rolling over funds planned for FY 2022 into FY 2023 and later years after FY 2022 allocations were not completely exhausted.

The Los Angeles Unified School District (LAUSD) had, by far, the largest share dedicated to student learning recovery plans. Los Angeles is pursuing a two-part recovery plan. The first part, scheduled for the 2021-22 school year, amounts to $2.12 billion; $1.15 billion of which is the district's

ESSER II funding, while the remainder is drawn from other sources. It includes 62 different initiatives, but more than half of the funds are allocated to 39 of them which the district identifies as "Acceleration of Learning." These include the district's "Primary Promise" plans to improve literacy and math proficiency.

The second part allocates $2.5 billion of the district's ESSER III funding to support initiatives throughout FY 2023 and 2024. Two-thirds of that funding is directed toward "addressing lost instructional time" – that is, addressing the learning loss brought on by the pandemic.

Additionally, the school district's "Path to Recovery" plan includes the hiring of approximately 5,600 new full-time equivalents (FTEs), more than half of whom would be attached to the effort to address learning gaps. A further 1,400 new hires would be part of the mental health supports LAUSD intends to put in place. It is unclear whether the district intends to keep this additional staff on payroll after the federal funding used to hire them expires, or what resources it would use to support them if it did.

Most districts included some extra classroom time in their recovery programs to help students catch up on the learning they missed out on during the pandemic. New York City's "Summer Rising" program is projected to cost NYC DOE $176

million in FY 2023, for example, while LAUSD devoted $108 million for summer school expansion and $213 million in FY 2023 through FY 2024 for expanding the school calendar. Miami-Dade County, in Florida, allocated $121 million in combined ESSER II and III funding for expanding summer school in 2021 and 2022, as well as another $40 million to extend school days an extra period for two years. Clark County School District, in Nevada, plans to devote $23 million of its ESSER III funding to institute six-week summer courses to address learning loss.

While New York City has not yet identified all the ways in which it intends to help children recapture lost learning, other districts plan to embark on a variety of additional programming. Los Angeles plans to allocate $125 million for additional learning and targeted literacy supports. Chicago plans to send $193 million of its ESSER III allocation directly to schools to support their localized unfinished learning plans. Miami-Dade County set aside $30 million of ESSER III funding to pay hourly tutors and interventionalists to work with students who have fallen behind and another $14 million for campaigns and attendance specialists designed to help ensure children attend classes. An additional $17 million will fund reading and math coaches at schools identified as being most in need.

All five of the largest districts in the nation are setting aside significant portions of the federal funding for technology upgrades. New York City has identified around $200 million of its ESSER II funding for information technology supports; LAUSD allocated $252 million of its ESSER III funding for technology, devices and online learning content; Miami-Dade allocated $101 million for mobile devices for students and $34 million for teacher technology in classrooms, and Clark County allocated $209 million to upgrade technology in classrooms.

Another area of commonality is in support for students' mental and emotional health. New York City is allocating $300 million (6.2 percent) of its ESSER III funding for this purpose. Los Angeles and Clark County expect to devote $186 million and $77 million, respectively, to the same cause. Miami-Dade allocated $319 million of its combined ESSER funds to student physical and mental health, but this includes a $200 million investment in indoor air quality and building envelope improvements.

Conclusion

The federal government provided significant one-time aid to school districts to help them continue functioning through the uncertainties and disruptions of the pandemic and enable districts to better help students recover the loss of learning many experienced. While New York City's plan lays out the medium-term uses of these funds better than many of its peers, further refinement is needed to be sufficiently clear about how the City is addressing the academic recovery of its students and linking the use of federal relief to these efforts. In its adopted FY 2023 budget, the City proposed reallocating $176 million of the stimulus funding to provide another year of its "Summer Rising" academic recovery program. Recently, City officials also confirmed that they intend to provide $200 million in unspent ESSER aid to schools that would otherwise have seen a reduction in local formula-based funding due to declining enrollment; the extent to which such an allocation might count as supporting academic recovery is unclear. This change indicates that the NYC DOE recognizes the need to direct efforts toward addressing learning loss. However, even with this change the City has devoted a much smaller share of its funds to this purpose than many of its national and state counterparts.

The starkest difference between New York City and other districts, both within New York State and across the country, is the City's focus on early childhood education. It is devoting nearly $2 billion, or more than one quarter of its ESSER II and III funds, to expanding and operating its 3-

K program, which will help students who were not yet in the school system during the height of the pandemic and the switch to remote schooling. The 3-K expansion, which is projected to cost $752 million annually, also accounts for the majority of the recurring costs the City is creating with this one-time infusion of federal dollars. The City has identified half of the required funding once the federal support expires in FY 2025 but must still identify a further $376 million annually.

New York City is not unique in creating recurring costs with the one-time federal funds, but there are some other districts that have avoided this approach altogether or have planned reductions in spending, including for academic recovery, as the federal aid expires. City officials have recently acknowledged the need for long-term funding sources to maintain the 3-K program (the largest single recurring expense supported by federal relief funds) and have indicated that they may slow its planned expansion to help defray costs, focusing instead on ensuring the seats are "high-quality." Further complicating the issue is that current staffing trends seem to be adversely impacting the City's ability to meet staffing targets for some of its new initiatives, including its early childhood programs.

In addition to questions about how it will use federal funds in the near future, the City has not yet fully identified how it will pay for all of the recurring programs it is funding with federal dollars, or whether it will need to end or trim some of these programs as the one-time funds are exhausted. For some programs, the City has taken the step of identifying a portion of the non-federal revenue necessary to fund new or expanded services in the later years of its financial plan.

Overall, the "Big Five" school districts in New York State provided a more balanced allocation of federal funds (by New York City's classification system) then some of the City's national contemporaries; however, some of this may be due to a lack of transparency in other school districts' allocation proposals. Additionally, there appears to be a general lack of clarity across many school districts as to how funds will be used in the out-years in order to address the continuing impacts of learning loss. In fact, though its specific plans for the money are sometimes vague, the City has done better than most at reserving significant portions of this federal funding for FY 2024 and FY 2025. More clarity on how specifically the City plans to use these out-year funds is expected as the NYC DOE identifies and addresses areas of greater need and its respective budget years draw closer. Already, it has devoted larger and more detailed shares of the federal funding for the mental and emotional health of students and for special education purposes than several of its national peers.

Though the federal government requires districts to reserve at least 20 percent of their ESSER III allocations "to address the academic impact of lost instructional time through the implementation of evidence-based interventions," districts in general were not particularly clear on how they are using evidence, such as absentee numbers and remote learning data (including learning disruptions) in providing funding to schools. Recent standardized testing and survey data also suggest that there is much that still needs to be done in terms of improving the academic, social and emotional recovery of students.

Despite including measures for identifying student needs and tracking academic recovery as part of the ESSER III application process, only one of the Big Five districts reviewed, including New York City, has provided regular public updates on the status of those measures at the individual school level, which are important for helping parents understand the effectiveness of fund distribution to individual schools. Common indicators for this type of tracking include graduation rates, absenteeism, teacher-prepared assessments, out-of-school hours, standardized assessments, matriculation data and course

requirements. All districts, including New York City, can also provide better clarity on how funds are being linked to addressing actual lost instructional time rather than backfilling existing operations, particularly for those schools with larger disadvantaged populations.

The quality of the City's public education system is an important contributor to civic engagement, quality of life and the local workforce and economy, not to mention the lives and prospects of its children. A quality education system can influence whether people move into or out of the City and is necessary to maintain a growing workforce and tax base. Recent trends in enrollment suggest parents are exploring alternatives to traditional public schools, which may be counterproductive to attempts to strengthen the public school system over time. The City can improve and advance these efforts while working to better improve educational outcomes for all of its students by providing greater clarity and direction in its uses of these historic federal funds.

Appendix A
Allowable expenditures of ESSER II (CRRSA) Funding

Activity #	Allowable Activity
1	Any activity authorized by the ESEA of 1965. Including the Native Hawaiian Education Act and the Alaska Native Educational Equity, Support, and Assistance Act (20 U.S.C. 6301 et seq.), the Individuals with Disabilities Education Act (20 U.S.C. 1400 et seq.) ("IDEA"), the Adult Education and Family Literacy Act (20 U.S.C. 1400 et seq.), the Carl D. Perkins Career and Technical Education Act of 2006 (20 U.S.C. 2301 et seq.) ("the Perkins Act"), or subtitle B of title VII of the McKinney-Vento Homeless Assistance Act (42 U.S.C. 11431 et seq.).
2	Coordination of preparedness and response efforts of local educational agencies with State, local, Tribal, and territorial public health departments, and other relevant agencies, to improve coordinated responses among such entities to prevent, prepare for, and respond to coronavirus.
3	Activities to address the unique needs of low-income children or students, children with disabilities, English learners, racial and ethnic minorities, students experiencing homelessness, and foster care youth, including how outreach and service delivery will meet the needs of each population.
4	Developing and implementing procedures and systems to improve the preparedness and response efforts of local educational agencies.
5	Training and professional development for staff of the local educational agency on sanitation and minimizing the spread of infectious diseases.
6	Purchasing supplies to sanitize and clean the facilities of a local educational agency, including buildings operated by such agency.
7	Planning for and coordinating during long-term closures, including how to provide meals to eligible students, how to provide technology for online learning to students, how to provide guidance for carrying out requirements under the Individuals with Disabilities Education Act (20 U.S.C. 1401 et seq.), and how to ensure other educational services can continue to be provided consistent with all Federal, State, and local requirements.
8	Purchasing educational technology (including hardware, software, and connectivity) for students who are served by the local educational agency that aids in regular and substantive educational interaction between students and their classroom instructors, including low-income students and students with disabilities, which may include assistive technology or adaptive equipment.
9	Providing mental health services and supports, including through the implementation of evidence-based full-service community schools.
10	Planning and implementing activities related to summer learning and supplemental afterschool programs, including providing classroom instruction or online learning during the summer months and addressing the needs of low-income students, students with disabilities, English learners, migrant students, students experiencing homelessness, and children in foster care.
11	Addressing learning loss among students, including low-income students, children with disabilities, English learners, racial and ethnic minorities, students experiencing homelessness, and children and youth in foster care, of the local educational agency, including by – (i) administering and using high-quality assessments that are valid and reliable, to accurately assess students' academic progress and assist educators in students' academic needs, including through differentiating instruction; (ii) implementing evidence-based activities to meet the comprehensive needs of students; (iii) providing information and assistance to parents and families on how they can effectively support students, including in a distance learning environment; and (iv) tracking student attendance and improving student engagement in distance education.
12	School facility repairs and improvements to enable operation of schools to reduce risk of virus transmission and exposure to environmental health hazards, and to support student health needs.
13	Inspection, testing, maintenance, repair, replacement, and upgrade projects to improve the indoor air quality in school facilities, including mechanical and non-mechanical heating, ventilation, and air conditioning systems, filtering, purification and other air cleaning, fans, control systems, and window and door repair and replacement.
14	Developing strategies and implementing public health protocols including, to the greatest extent practicable, policies in line with guidance from the Centers for Disease Control and Prevention for the reopening and operation of school facilities to effectively maintain the health and safety of students, educators, and other staff.
15	Other activities that are necessary to maintain the operation and continuity of services in local educational agencies and continuing to employ existing staff of the local educational agency.

Source: CRRSA Act combined funding applications

Appendix B
Allowable expenditures of ESSER III (ARP) Funding

Activity #	Allowable Activity
1	Any activity authorized by the ESEA, including the Native Hawaiian Education Act and the Alaskan Native Educational Equity, Support, and Assistance Act (20 U.S.C. 6301 et seq.).
2	Any activity authorized by the Individuals with Disabilities Education Act (IDEA) (20 U.S.C. 1400 et seq.).
3	Any activity authorized by the Adult Education and Family Literacy Act (AEFLA) (29 U.S.C. 3271 et seq.).
4	Any activity authorized by the Carl D. Perkins Career and Technical Education Act of 2006 (Perkins V) (20 U.S.C. 2301 et seq.).
5	Any activity authorized by subtitle B of title VII of the McKinney-Vento Homeless Assistance Act (McKinney-Vento) (42 U.S.C. 11431 et seq.).
6	Coordinating preparedness and response efforts of LEAs with State, local, Tribal, and territorial public heath departments, and other relevant agencies, to improve coordinated responses among such entities to prevent, prepare for, and respond to COVID-19.
7	Providing principals and other school leaders with the resources necessary to address the needs of their individual schools.
8	Activities to address the unique needs of low-income children or students, students with disabilities, English learners, racial and ethnic minorities, students experiencing homelessness, and children and youth in foster care, including how outreach and service delivery will meet the needs of each population.
9	Developing and implementing procedures and systems to improve the preparedness and response efforts of LEAs.
10	Training and professional development for staff of the LEA on sanitation and minimizing the spread of infectious disease.
11	Purchasing supplies to sanitize and clean the facilities of the LEA, including buildings operated by such LEA.
12	Planning for, coordinating, and implementing activities during long-term closures, including providing meals for eligible students, providing technology for online learning to all students, providing guidance for carrying out requirements under the IDEA and ensuring other education services can continue to be provided consistent with all Federal, State, and local requirements.
13	Purchasing educational technology (including hardware, software, and connectivity) for students who are served by the LEA that aids in regular and substantive educational interaction between students and their classroom instructors, including low-income students and students with disabilities, which may include assistive technology or adaptive equipment.
14	Providing mental health services and supports, including through the implementation of evidence-based full-service community schools.
15	Planning and implementing activities related to summer learning and supplemental afterschool programs, including providing classroom instruction or online learning during the summer months and addressing the needs of low-income students, students with disabilities, English learners, migrant students, students experiencing homelessness, and children in foster care.
16	Addressing the academic impact of lost instructional time among an LEA's students (including low-income students, students with disabilities, English learners, racial and ethnic minorities, students experiencing homelessness, and children and youth in foster care) by: a) Administering and using high-quality assessments that are valid and reliable to accurately assess students' academic progress and assist educators in meeting students' academic needs, including through differentiating instruction; b) Implementing evidence-based activities to meet the comprehensive needs of students; c) Providing information and assistance to parents and families on how they can effectively support students, including in a distance learning environment; and d) Tracking student attendance and improving student engagement in distance education.
17	School facility repairs and improvements to enable operation of schools to reduce risk of virus transmission and exposure to environment health hazards, and to support student health needs.
18	Inspection, testing, maintenance, repair, replacement, and upgrade projects to improve the indoor air quality in school facilities, including mechanical and nonmechanical heating, ventilation, and air conditioning systems, filtering, purification and other air cleaning, fans, control systems, and window and door repair and replacement.
19	Developing strategies and implementing public health protocols including, to the greatest extent practicable, policies in line with guidance from the Centers for Disease Control and Prevention for the reopening and operation of school facilities to effectively maintain the health and safety of students, educators, and other staff.
20	Other activities that are necessary to maintain the operation of and continuity of services in the LEA and continuing to employ existing staff.

Source: ARP Act combined funding applications

Appendix C
NYSED categories of ESSER III (ARP) Funding Use

Activity #	Allowable Activity
1	Safely returning students to in-person instruction.
2	Maximizing in-person instruction time.
3	Operating schools and meeting the needs of students.
4	Purchasing educational technology.
5	Addressing the impacts of the COVID-19 pandemic on students, including the impacts of interrupted instruction and learning loss and the impacts on low-income students, children with disabilities, English language learners, and students experiencing homelessness.
6	Implementing evidence-based strategies to meet students' social, emotional, mental health, and academic needs.
7	Offering evidence-based summer, afterschool, and other extended learning and enrichment programs.
8	Supporting early childhood education.
9	Other.

Source: New York State ARP LEA State Budget Reports, July 2022.

ENDNOTES

Appendix D
Notes Regarding Data Reporting and Methodology for Los Angeles, Chicago, and Rochester

School District	Note
Los Angeles	While LAUSD's "Path to Recovery" plan clearly indicates where the district intends to target its expenditures, it does not make clear the exact source of funding for each component. Approximately 54.2 percent of the plan's total cost is supported by ESSER II funds, and OSDC has assumed the funding is split evenly across all initiatives.
Chicago	Chicago's FY 2023 Budget includes detail about specific programs only in FY 2023. For example, while it specifies that $100 million out of its $404 million allocation for "School-Level Funding for Local Priorities" is earmarked for "early childhood programs" in FY 2023, it does not provide a breakout of total "School-Level Funding for Local Priorities" in the years before and after. Because the annual allocations to general program areas are projected to change in each year of the financial plan, OSDC has assumed that funding for specific programs remains at a constant FY 2023-level share.
Rochester	Rochester CSD applied for CRRSA funding in two rounds. NYSED did not require Rochester to complete a full application for the second round, amounting to $42.5 million, so a funding breakdown is not available. The full amount of Rochester's second-round CRRSA funding was classified as "Other" spending as a result.

Sources: Los Angeles United School District, Chicago School District, Rochester City School District, OSC analysis.

APPENDIX E
Detailed Uses of ESSER Funds for Education in NYC (in millions)

	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total
CARES Act (ESSER I)	**$649**	**72**	- - -	- - -	- - -	**$721**
Emergency School Aid*	649	72	- - -	- - -	- - -	721
CRRSA (ESSER II)	**265**	**1,262**	**509**	**114**	**- - -**	**2,151**
Restorations	- - -	336	121	84	- - -	541
Curriculum Supports	- - -	200	119	- - -	- - -	319
3-K Expansion (New)	3	334	- - -	- - -	- - -	337
Programmatic Support	2	202	52	15	- - -	272
Enrollment Changes	- - -	- - -	160	9	- - -	169
Information Technology Supports	2	155	- - -	1	- - -	158
Operational Supports	1	146	5	5	- - -	157
Hold Harmless Mid-Year Adjustment	130	- - -	- - -	- - -	- - -	130
Contracted Nursing	- - -	- - -	49	- - -	- - -	49
Positive Learning Collaborative	5	5	- - -	- - -	- - -	10
Community Schools Sustainability	3	3	3	- - -	- - -	9
Other Adjustments	119	(119)	- - -	- - -	- - -	- - -
ARP (ESSER III)	**- - -**	**1,757**	**1,260**	**1,269**	**530**	**4,817**
3-K Expansion (New)	- - -	- - -	469	753	376	1,598
Operational Supports	- - -	931	181	34	7	1,153
Academic Recovery/Student Supports	- - -	500	1	1	- - -	502
Mental Health for All	- - -	80	86	86	48	300
Special Education Services	- - -	176	104	- - -	- - -	280
Preschool Special Education	- - -	22	88	94	47	251
Summer Rising (2022)	- - -	- - -	176	- - -	- - -	176
Community Schools Expansion	- - -	10	51	51	26	138
Pathways Expansion	- - -	- - -	33	52	- - -	85
Enrollment Changes	- - -	- - -	- - -	71	- - -	71
Restorative Justice Expansion	- - -	12	15	15	7	49
Programmatic Support	- - -	- - -	- - -	37	- - -	37
Curriculum Supports	- - -	20	- - -	- - -	10	30
Bilingual Education Expansion	- - -	- - -	11	13	- - -	24
PSAL Expansion	- - -	6	6	7	4	23
Digital Learning	- - -	- - -	10	13	- - -	23
Safe Supportive Schools	- - -	- - -	9	9	- - -	18
Literacy and Dyslexia Screening	- - -	- - -	7	8	- - -	15
Translation and Interpretation	- - -	- - -	7	7	- - -	14
Restoration: Comm. Schools OTPS	- - -	- - -	- - -	6	3	9
Parent and Family Engagement	- - -	- - -	4	4	- - -	8
Gifted and Talented Programs	- - -	- - -	2	5	- - -	7
Community Schools Sustainability	- - -	- - -	- - -	3	2	5
Total ESSER	**$914**	**$3,091**	**$1,769**	**$1,383**	**$530**	**$7,689**

*New York State used this federal funding to supplant a portion of its own school aid in FY 2021.
Note: Totals may not add due to rounding.
Sources: NYC Office of Management and Budget; OSC analysis

1   Megan Kuhfeld, James Soland, Beth Tarasawa, Angela Johnson, Erik Ruzek, and Jing Liu, *Projecting the Potential Impacts of COVID-19 School Closures on Academic Achievement,* NWEA and Brown University, May 2020 at https://www.nwea.org/research/publication/projecting-the-potential-impacts-of-covid-19-school-closures-on-academic-achievement/.

2   Raj Chetty, John N. Friedman, Nathaniel Hendren, Michael Stepner, and the Opportunity Insights Team, *The Economic Impacts of COVID-19: Evidence from A New Public Database Built Using Private Sector Data,* Harvard University and Brown University with the Bill and Melinda Gates Foundation, May 2020 at https://opportunityinsights.org/wp-content/uploads/2020/05/tracker_paper.pdf.

3   Emma Dorn, Brian Hancock, Jimmy Sarakatsannis, and Ellen Viruleg, *COVID-19 and Student Learning in the United States: The Hurt Could Last a Lifetime,* McKinsey & Company, June 1, 2020 at https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19-and-student-learning-in-the-united-states-the-hurt-could-last-a-lifetime.

4   Goldhaber, D, Kane, T., McEachin, A., Morton E., Patterson, T., Staiger, D., *The Consequences of Remote and Hybrid Instruction During the Pandemic* Research Report, Cambridge, MA: Center for Education Policy Research, Harvard University, 2022.

5   National Center for Education Statistics, press release (Effects of Pandemic on U.S. Public Schools), July 6, 2022 at https://nces.ed.gov/whatsnew/press_releases/07_06_2022.asp.

6   Office of the State Comptroller, *Fiscal Stress Monitoring System – School Districts: Fiscal Year 2020-21 Results* at https://www.osc.state.ny.us/files/local-government/publications/pdf/fsms-school-districts-fiscal-year-2020-21-results.pdf.

7   Office of the New York State Comptroller (OSC), *Real Property Tax Cap and Tax Cap Compliance* at www.osc.state.ny.us/local-government/property-tax-cap.

8   Office of the State Comptroller (OSC), Disruption to Special Education Services: Closing the Gap on Learning Loss from COVID-19 at https://www.osc.state.ny.us/files/reports/pdf/special-education-report.pdf