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“IT WAS NOT LIKE A NORMAL SUMMER SCHOOL AT ALL”: THE NATIONAL SUMMER SCHOOL INITIATIVE IMPLEMENTATION STUDY



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**“It was not like a normal summer school at all”:
The National Summer School Initiative implementation study**

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Executive Summary

The Covid-19 pandemic has created an unprecedented disruption to our nation’s school systems, leading to a dramatic increase in the use of virtual instruction. Researchers project that these developments will lead to large increases in educational inequality without significant innovations designed to minimize learning loss among students most negatively affected by the pandemic. This study examines the implementation of a rare early effort to develop new approaches to serving students and promoting educational equity via virtual learning: The National Summer School Initiative (NSSI).

This five-week national, largely synchronous, virtual summer program launched in the summer of 2020 with 11,769 rising 4th through 9th grade participants from schools serving large concentrations of low-income students of color. Program leaders recruited “mentor teachers” they considered to be highly talented from across the country to provide professional development to “partner teachers” from 50 participating schools or networks across 17 states and the District of Columbia. Mentor teachers also provided partner teachers with videos of themselves teaching daily lessons to their own student groups four to five days in advance of the partner teachers leading their classes through the same content. Partner teachers could play portions of these videos in class or use them to deliver the lesson entirely themselves.

We examine stakeholder perceptions of the effects NSSI had on students and teachers, as well as the strengths and weaknesses of the program. We draw on interviews with a representative sample of six mentor teachers and 22 partner teachers, as well as our analysis of NSSI’s post-program surveys of administrative coaches (n=42), and a convenience sample of partner teachers (n=188), mentor teachers (n=7), parents (n=903), and students (n=2,484). We find:

- (1) Stakeholders perceived that students made academic improvements
 - “Students learned” was among the most frequent themes that emerged from our interviews with mentor and partner teachers.
 - Among those responding to the post-program surveys, sizeable majorities of partner teachers, mentor teachers, parents, and students themselves agreed that students improved their academic skills and gained confidence in their academic abilities (ranging from 68 to 81% depending on the question and stakeholder group). For example, 81% of students agreed they grew as readers and learned new strategies to solve math problems.

- (2) Stakeholders perceived that the content was rigorous, relevant, and engaging—especially for ELA
 - Themes related to the curriculum’s rigor, cultural relevance, and ability to generate engagement were some of the most frequent teacher interview themes. This was especially true when it came to the ELA curriculum and its novel selections.

- A large majority (84%) of partner teacher survey respondents agreed that the curriculum and lesson materials provided by NSSI were strong.
- Students themselves reported high levels of engagement. By the last week of the program, for example, 88% of student survey respondents reported attending NSSI either “almost everyday” or “everyday.”

(3) Stakeholders thought that the math pedagogy was accessible and rigorous but believed the math content could have been more culturally relevant

- Teacher interviewees said the approach to math instruction was engaging and rigorous for students at a variety of skill levels. A focus on discourse and multiple methods for solving the same problem allowed lower-performing students to access the material, while a focus on developing flexibility kept the rigor high for more advanced students.
- A majority of students completing the survey agreed that they learned new strategies to solve math problems (81%) and agreed that they became increasingly comfortable solving math problems in more than one way (72%).
- Despite these strengths, interviewees believed the content of the math problems themselves could have been more exciting and culturally relevant to increase student engagement further.

(4) Stakeholders did not report high levels of student enthusiasm for the movement and mindfulness content

- Fully half of the administrative coaches who responded to the survey indicated disagreement with the statement “movement & mindfulness was effective” and student survey responses did not indicate particularly high levels of student engagement with this content. Teacher interviewees echoed this conclusion and suggested that at least part of the issue was with the asynchronous nature of this class.

(5) Partner teachers perceived that the program improved their instruction

- Partner teacher interviewees generally indicated that they believed their own teaching benefited as a result of participating in NSSI—both their ability to teach in a virtual or hybrid environment and their pedagogical skills more broadly. This was, in large part, due to their access to the mentor teachers and videos of these teachers delivering lessons in advance, which provided a notably rare opportunity to observe other educators in action.
- Among partner teacher survey respondents, 80% agreed that the “daily lesson videos and lesson flow documents provided by the mentor teacher are strong” and 79% agreed, “I am learning from my mentor teacher.” A large majority agreed with the statement, “I will be a better teacher in the 2020-21 school year because of teaching at NSSI” including 57% who strongly agreed.

(6) Mentor teachers enjoyed the program and felt their own practice improved

- Mentor teachers in both interviews and surveys indicated that they enjoyed participating in the program—despite the major commitment it involved—and even felt their own instruction improved as a result of teaching virtually and collaborating with other talented educators across the country. They also suggested that teaching the same lessons a few days before their partner teachers helped improve their ability to provide professional

development to those teachers. Our interview subjects appreciated the opportunity to extend their reach to more teachers and students without “leaving the classroom,” and survey respondents unanimously agreed the program increased their enthusiasm about teaching.

(7) Teachers appreciated receiving adaptable curricular materials

- Partner teacher interviewees expressed appreciation that NSSI provided what they perceived to be high-quality curricular materials and lesson plans that teachers could adapt to their own teaching style and student needs. They indicated that not having to craft their own lesson plans saved them significant time that they could instead devote to internalizing lessons ahead of delivery, and to providing feedback to and building relationships with students.

(8) Teachers wanted the professional development to be more differentiated

- Although partner teachers generally felt NSSI helped them improve as educators, many felt that the time devoted to professional development could have been more effectively differentiated, particularly to increase the value for experienced teachers. However, a majority of partner teacher survey respondents still viewed the professional development positively, with 61% agreeing intellectual prep was helping them become stronger teachers and 57% agreeing that the time spend analyzing student work was helpful.
- Administrators and mentor teachers were less positive. Among the administrator survey respondents, only a bit more than half (54%) agreed that the “daily intellectual prep PD made my teachers stronger” and only 41% agreed that the “daily student work analysis made my teachers stronger.” Among mentor teachers, 57% thought intellectual prep and only 29% that the student work analysis time was making partner teachers stronger.
- Some teacher interviewees wished there had been opportunities for mentor teachers to conduct classroom observations of partner teachers to inform their coaching. The virtual nature of the program could in theory have facilitated such observations, though implementation may have been challenging to scale due to competing demands on mentor teachers’ time.

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Motivation

The Covid-19 pandemic created an unprecedented disruption to our nation's school systems, leading to the near-universal closure of in-person schools for the last three months of the 2019-2020 school year. At that time, scholars projected that these closures would result in a dramatic degree of learning loss and a sharp increase in educational inequality (Kuhfeld & Tarasawa, 2020; Kuhfeld et al., 2020). Yet the disruption also generated a range of innovative efforts to use virtual or remote instruction to mitigate the effects of the closures. The best available evidence suggests in-person instruction is preferable to virtual learning for student engagement and achievement, but this research was conducted in a pre-Covid world prior to large scale closure of in-person schools (Bueno, 2020; Gallagher & Cottingham, 2020). Very few studies have emerged to date of efforts to innovate in the virtual learning space during these unprecedented times.

This study examines the implementation of a rare early effort to develop innovative approaches to serving students and promoting educational equity via virtual learning. Specifically, we study the National Summer School Initiative (NSSI), a virtual summer program run over five weeks in summer 2020 that served 11,769 3rd to 8th grade students across the nation with the goal of minimizing Covid-19 and summer learning loss. The 50 partner schools or networks serve student populations that, on average, are 90% Black or Latinx and in which 79% qualify for subsidized meals. Roughly 43% of partner schools were led by charter management organizations. The program was designed by current and former leaders of high-performing charter schools and a large school district home to a high-performing charter sector, in partnership with the national nonprofit, Bellwether Education Partners.

Leaders recruited a group of “mentor teachers” they considered to be among the nation's most talented educators to videotape themselves teaching each lesson to their own “fishbowl class” of students via Zoom. These mentor teachers were assigned to partner teachers selected by the partner school or network, with each mentor working with all of the roughly 50 partner teachers in either English language arts or math at each grade level. These partner teachers received access to lesson plans and materials as well as the video of the mentor teacher's class session before teaching the same online lesson to a group of students from their home school. They also received professional development from these mentor teachers throughout the program. Part of the goal of the program was to help prepare teachers for a possible virtual 2020-2021 school year and to take some of the burden off of individual schools and networks for planning instructional content while they were focused on operational issues and reopening plans.

For the 2020-2021 school year, a large share of districts nationwide remain reliant on virtual or hybrid instruction. NSSI leaders have now revised the NSSI model into an initiative called Cadence Learning that allows schools, districts, networks, and learning pods to gain access to the program. Data on observed—rather than projected—learning loss due to COVID-19-induced school closures in the Netherlands suggest widening inequality on the basis of social class and evidence from Germany suggests negative effects concentrated among low-performing students (Engzell, Frey & Verhagen, 2020; Grewenig, Lergetporer, Werner, Woessmann & Zierow, 2020). Therefore, it is essential for the field to learn from early efforts to implement high-quality virtual instruction and mitigate learning loss.

The National Summer School Initiative

The student day at NSSI ran about three hours and forty-five minutes and the teacher day extended for an additional 90 minutes for preparation and professional development. The program included three core academic classes: novel studies, close reading, and math stories. Novel studies focused on reading and discussing what program leaders described as an “exceptional novel” and developing pleasure in analyzing texts and writing. In close reading, students discussed and wrote about shorter texts such as great works of poetry, short fiction, and nonfiction. In math stories, students solved a problem of the day, designed to be “real world” applicable, not by using particular algorithms but rather by applying their existing knowledge of math to the context and problem. Students were then led through a “discourse” in which students discussed the different ways in which they each solved the problem, with the goal of developing the conceptual understanding of math emphasized by the Common Core State Standards-aligned curriculum. The theory of action for this design was that students at lower performance levels would have the ability to contribute ideas about how to solve the problem in their own way and could also see and grasp onto a peer student’s more sophisticated or efficient solution. At the same time, more advanced students could be challenged to think of more than one method for solving a given problem. Novel studies and math stories were held daily, while close reading was held three days a week. The other two days, students had an enrichment class that included a combination of self-directed educational activities and synchronous virtual science labs. There was also a daily asynchronous movement and mindfulness class that included a mix of yoga, fitness, and dance.

Prior to the program, teachers attended a week-long virtual training much of which was provided by the Lavinia Group, an organization that has served high-performing charter schools and networks including Success Academy, Achievement First, Ascend, Rocketship, Public Prep, South Bronx Classical, and KIPP-MA. During the program, teachers had a daily professional development session focused on intellectual preparation for the next day’s lesson and an analysis of student work. The program was operated not for profit and funded by philanthropists. Partners received the curriculum, Lavinia Group training, and mentor teacher services free of charge. The partners had to independently find the funds to pay their partner teachers and for any technology students needed to participate in the program. Partners also had to identify a local administrative coach to serve as the point of contact within their organization. Program leaders recommended 20-30 students per section with a maximum of 40.

Research Questions

We draw on survey data from teachers, students, parents, and administrative coaches, as well as interviews with partner and mentor teachers, to address the following questions:

- 1) To what extent did students, teachers, and parents perceive that NSSI affected student academic skills, interests, and attitudes toward school and learning?
- 2) How did NSSI participation affect teacher self-reported morale, self-efficacy, professional development, and likelihood of staying with teaching?
- 3) What did students, teachers, and parents perceive were strengths and weaknesses of the program? What did teachers perceive were key implementation supports and challenges?
- 4) What broader lessons for virtual learning can be drawn from the NSSI experience?

Methods

To learn about stakeholder perceptions of the NSSI program, we interviewed partner and mentor teachers and analyzed internal survey data that NSSI collected throughout the program. For the interviews, we identified a stratified sample of 60 partner teachers from the total group of 513 and 12 mentor teachers from the full group of 15 based on the teacher's subject and grade and whether the teacher worked at a school that was part of a charter management network. Our interview sample ultimately included 28 teachers (22 partner teachers and 6 mentor teachers) who responded to our interview request. The interview samples were representative of the full populations of teachers on all dimensions for which we have data including grade, subject, whether they taught at a CMO school and whether they were missing survey data.

A team of eight researchers conducted the interviews via Zoom using a semi-structured interview protocol. Interviews each lasted between 45 and 60 minutes. Teachers received a \$50 gift card for their time. Interviews were transcribed and double-coded using Dedoose coding software. The 130 codes fell into categories such as curriculum, diversity, feedback, leaders, mentor teachers, morale, operations, schedule, students, teacher collaboration, teacher development, teachers, lessons about virtual learning, and workload. We then analyzed the resulting coding for major themes summarized in the findings section below.

We also analyzed data from surveys conducted by the NSSI team in three waves: week 1, week 3, and week 5 of the program. Our focus is primarily on the week 5, end-of-program results to assess perceptions based on the full program. These end of program surveys were completed by administrative coaches who served as the primary school- or network-based contact at each of the partner schools (n=42), mentor teachers (n=7), partner teachers (n=188), students (n=2,484), and parents (n=892). There are no statistically significant differences between the mentor teacher survey sample and the full population of mentor teachers on observable characteristics. The partner teacher survey sample is generally representative although more likely to be missing data on the grade level taught (11% for the survey sample vs. 5% for the full sample) and less likely to teach at a CMO (44% for the survey sample vs. 56% for the full sample). We do not have data on the full sample of students or parents needed to assess the representativeness of those samples. As a result, survey findings should be interpreted with caution as it is not entirely clear the extent to which these responses are representative of student, parent, and partner teacher opinions more broadly.

Findings

1) Stakeholders perceived that students made academic improvements

Partner and mentor teachers overwhelmingly perceived that students learned or otherwise benefitted from participating in NSSI, although several also acknowledged that there were understandable limits to what could be accomplished in a five-week period. This theme around student learning came up for twenty-three of our twenty-eight interviewees, and our "students learned" code was tied for the most frequently used code from our interviews.

One ELA partner teacher described advancements her students made with close reading and drawing connections between texts and real life:

I honestly felt like all of my kids, they improved. I really, really do. The kids who participated in the program, this helped them. One skill that I saw that they absolutely did not have when we began was the idea of close reading. That was not there. The idea that you can read a poem, and it could have a literal meaning and a deeper meaning, or the idea that when one picks up an article to read it, you're not just reading it to get done and say I'm done and look for your teacher to ask you some very basic questions, but that this article is supposed to make you think about life, everything else is happening during this time that you're reading about, and you can apply it to things that you're experiencing today. That skill was not even there and I saw them develop that. And most of them told me—because I kind of polled them myself at the end. I said, what's the thing that you felt you improved on the most? What do you think you guys got the most out of this? And pretty much across the board they all said, I read differently now. And I pay attention to what I read. And I'm going to be thinking about what I read and what it means for my life. I thought that was pretty cool. –Partner Teacher 1

Math teachers similarly indicated that students at a variety of skill levels were able to become more flexible mathematicians:

My students benefited a ton through this program. Even my students that may have caught on to the concepts quicker, or who would finish things faster, it even pushed them in ways where I saw that they were more flexible, they weren't just jumping into like long division, they were trying multiple methods. So when they finished quicker, they actually on their own time, would try a second or third method because they had learned different ways of doing it from the discourse the day before. Even my kids who might not have had access to multiplication or division or are not as strong with those facts, they would then feel more confident with answering the questions because they would tap into like, repeated subtraction or if you did addition, like just thinking about it, they understood what the question was asking. And even though they can't do like the quicker and most efficient method, they still were able to pull out other methods that they felt more confident in. –Partner Teacher 2

The survey results echoed these interview themes. Among the partner teachers responding to the end of program survey, large majorities agreed that students improved their academic skills (82%), gained confidence in their academic abilities (83%), and became more interested in school and learning (72%) as a result of NSSI. Mentor teachers responding to the survey unanimously agreed that students gained academic skills, confidence, and interest in learning as a result of NSSI. Among both partner and mentor teachers, 86% indicated NSSI improved their perceptions of virtual learning, although in interviews some teachers were quick to point out that certain things are either not possible or not optimal in virtual settings.

A majority of student survey respondents themselves agreed that they grew as readers (81%) and mathematicians (75%), became more confident in their reading (68%) and math (65%) skills, and became more interested in school and learning (54%) during summer school, at least among

those who completed the end of program survey. Patterns were similar among the parent survey respondents. A majority agreed that their children improved in reading (75%) and math (77%), gained confidence in their academic abilities (75%), became more interested in learning (71%), and discovered something new he or she is interested in (64%) as a result of summer school.

2) Stakeholders perceived that the content was rigorous, relevant, and engaging—especially for ELA

Teachers told us that a key program strength was the content covered by the curriculum, particularly in English Language Arts. Themes related to the quality of the curriculum were among the most frequently mentioned themes in our interviews. More than twenty of our interviewees emphasized that the curriculum was engaging, culturally relevant, and rigorous.

Teachers were especially effusive about the novel choices, describing them as carefully selected, high-quality texts that elicited significant student investment. Teachers emphasized that, while engaging content is always important, this was especially critical in a virtual setting where promoting student engagement can be even more challenging than in an in-person environment, as one of the ELA mentor teachers articulated:

In an ELA classroom, the text is the most important thing. That's your starting point. You need to pick something that students are going to want to talk about, that is engaging. Being online, there are a couple of additional considerations you have to keep in mind. For example, I would argue for middle schoolers, potentially even high schoolers, you need to pick a short text. It's very difficult to tackle a text with like 500 pages. And so recognizing, not only do you want to choose content that's going to be really engaging, challenging for students, but really relevant and something that they can latch on to, it also needs to be something that they can feel like we're moving fairly quickly through this versus oh we're slogging through... The curriculum for [my grade level's] ELA class was amazing. It was an incredibly relevant and poignant text. Students were really invested. I remember they couldn't wait to see what happened to [the main character] and her family. We had a partner teacher who shared, there is a particular scene in the book where you find out that two characters have died and you've been waiting to see what happened to them and she said that as soon as they read that portion, her class was kind of silent. And then a student who just really hadn't spoken for most of the summer unmutes himself and goes, 'Really? Both of them? Both of them had to die?' and then hits mute again, and she could just tell that they were so upset... they would not talk to her in the [next] lesson, they just were so affected by what happened in the text. And I was like, that is what we want. We want students to feel that invested and that connected. And I think that the curriculum for [my grade level] did that. –Mentor Teacher 1

Several teachers emphasized the cultural relevance of the ELA curriculum and the ways in which the texts allowed students to draw connections to current events or to their own lives. Several teachers also highlighted that the novels and close reading texts were thoughtfully paired to reinforce concepts. One ELA partner teacher put it this way:

The novel we read basically was about oppression and a girl fleeing from her native land to the United States. That opened up many different conversations because we know what's going on in our world today, as far as from Covid, to black and brown people being racially profiled, racial injustice, all the different things. I feel like us reading that novel - and it was a 12-year-old girl relating to the students - this girl had times where she was hiding in a closet, not able to go anywhere. Students were like, look I'm indoors because of Covid. There were so many connections that I feel were so intentional. And I feel like the students recognized that which helped spark that interest... Also, there were nonfiction articles we read, and related to the novel. And so I feel like the students realized how intentional the lessons were. And when students know things are put together, like if they know the why behind things, they're wanting to continue to investigate and learn, but if they don't see the connection, that's where sometimes the attitudes or it's not even just an attitude, it's more like, I don't understand how these connect so why am I learning about this? So I feel like the why was clear. At first though, it was a mystery. We started out with the nonfiction piece, and they were like, whoa, this is like some deep stuff. Wow. And then they went from all these deep factual things and some of it they were like, I just don't understand. And then when I started reading novel, they're like, oh, that's who that leader was? Oh my gosh, the leader! So it's like we gave them like a suitcase filled with information. And then once they got to the to the novel, they're like, oh, I get why we packed that in our suitcase, so they started to make the connection, and it got them to the greater theme in the end. –Partner Teacher 3

Teachers further suggested that not only did the curriculum include content that was more directly relevant to their students' lives and backgrounds, it also expanded their knowledge and awareness of global historical events:

I've been in places that teach reading as like a disassociated collection of skills... A fairly straightforward strength [of the] program is they started with really good books... The book we read was about the partition of India, this super powerful and important moment in history in a beautifully told book, kids learned a lot about history, kids discussed Gandhi's ideas. I don't know, what do you want your own kids to be doing? Probably reading a really good book, discussing important ideas about the world. That was a definite strength... In the 3rd and 4th grade books, there was 'One Crazy Summer' which is about three black girls from Brooklyn who go visit their mother who they're estranged from in Oakland in like 1968. And she's a [Black] Panther. And it's an amazing book. So there's a ton about that book that kids can learn about history, and [in my home school] I teach probably 70% Black students, so they would have been like, oh, I can see aspects of my family's history in this and also, there were white kids that did NSSI, and good that they learned about that period of American history too. So I guess I kind of think, I don't know how many students of Indian descent there were at NSSI - definitely some - but isn't it worthwhile that every kid learned about this incredibly important period of history? Regardless of whether or not they're of Indian descent? I felt like reading the book, dang, I did not know enough about partition and what a globally important historical event this was - such a good thing for us. I've read... about the idea that you want books to be both mirrors for kids that they can see their own culture affirmed and honored, but you also want books that can be windows for kids and help them see into new experiences that are

different from what they know. And I thought the books that they chose did a pretty great job of providing a little bit of both. –Mentor Teacher 2

A large majority (84%) of partner teachers responding to the end-of-program survey agreed that the curriculum and lesson materials provided by NSSI were strong. Students gave additional indications that they found the program engaging, with 77% reporting that the energy in their online classrooms was positive and 65% indicating that they were happy to be participating in summer school. By the last week, 88% of students reported attending NSSI either “almost everyday” or “everyday.” School administrators, who had less direct contact with the program and students than other stakeholders, also indicated relatively high levels of engagement, with 48% characterizing their students as “somewhat engaged” with the program and 48% describing their students as “very engaged,” though no administrators indicated their students were “extremely engaged.” In sum, stakeholders perceived that the ELA curricular content and novel selection generated student engagement with learning and was a key program strength.

3) Stakeholders thought that the math pedagogy was accessible and rigorous but believed the math content could have been more culturally relevant

Teachers told our interviewers that the approach to math instruction was engaging and rigorous for students at a variety of skill levels. For example, the focus on developing flexibility and multiple methods of answering the same problem, rather than simply applying algorithms, allowed lower-performing students to engage with the material by finding their own way to solve. It also allowed higher-performing students to continue engaging even after they had discovered their first method of solving. One math partner teacher shared:

I thought the rigor level was, for the most part, ‘low floor high ceiling,’ ... so any kid can access it, and then they all allowed for multiple ways of solving which is really what made the discussion and the math really rich because even if this problem seems kind of easy on face value, some of the problems were even... more of a review, but because there were so many ways of representing all this stuff, like my high [performing] students weren't bored the whole summer. They told me that they like found it super helpful to be able to see all these strategies and stuff. That was something I really appreciated about all of the problems. If you are coming in at like a lower level, you can still access the problem. If you are coming in very strong in math already, there's still more you can do to make your work even better and to build your flexibility in solving problems. Especially because there was no order or progression in the way that they were presented. It could be anything from the whole year any day and I think that in and of itself was pretty rigorous. –Partner Teacher 4

A majority of student survey respondents, 81%, agreed that they learned new strategies to solve math problems and 72% agreed that they became increasingly comfortable solving math problems in more than one way. Teachers also argued that the discourse approach to mathematics, encouraging students to talk through their reasoning and ask questions of one another fostered high levels of student engagement. Another math partner teacher claimed:

Because the conversations were being led by [the students], I think it was just way more enjoyable for them as well. And it was so much more enjoyable for me, because I was like, 'man, this is like, actual fun and the kids don't hate it.' And the kids that would come and had no clue, if they didn't understand the question the day before, they were the ones that then came in, and were asking so many questions when other people would share their work. 'Why did you do it this way? What is that?' Usually, I'm used to those kids just sitting there silently, like, 'I didn't get it, so I'm not going to participate' but I think the discourse opened up that opportunity. If you didn't get the question, you still had so much opportunity to participate in the conversation... It was not like a normal summer school at all. –Partner Teacher 5

By the end of the program, a majority of student survey respondents, although not an overwhelming one (63%), agreed that they were more comfortable sharing ideas in math class.

Despite these strengths, teachers indicated that they believed the content of the math problems themselves could have been more culturally relevant to increase student engagement further. Interviewees described the math problems with words including, “bland,” “boring,” “standard” and “not particularly innovative.” One of the math mentor teachers described it this way:

On the curriculum side, I love the teaching approach and I thought that was a big strength, but the actual problems we put in front of kids were very 'blah,' to put it bluntly. There was a lack of cultural relevance and a lack of just like, 'I'm a teenager or preteen and I want to do math that actually is interesting to me or sparks some kind of interest versus some random problem about someone selling lemonade.' But by the time we started having those conversations about the curriculum, we already were halfway through the program. We didn't really make any moves on that, or if we did, it was done in silos, teacher to teacher, so it wasn't necessarily something that we were able to support each other with and develop. –Mentor Teacher 3

Several teachers pointed out that there was at least one mentor teacher who tried to infuse the math curriculum with greater cultural relevance. While fellow teachers appreciated the intentions behind these efforts, they acknowledged that one math problem she developed in particular—with a set up related to the “three-fifths compromise” under which enslaved people were treated as less than a full person in allocating representation under the U.S. Constitution—backfired. Without introduction to put the problem in context, some partner teachers and parents found the exercise offensive. A handful of interviewees suggested that NSSI leaders, despite their overall anti-racist orientation, could have done more in this particular case to address the incident head on. In sum, stakeholders found NSSI’s approach to teaching math to be engaging but thought one area for improvement was the cultural relevance of the math curriculum.

4) Stakeholders did not report high levels of student enthusiasm for the movement and mindfulness content

An important characteristic of the NSSI model was the major emphasis on synchronous instruction. One exception were the movement and mindfulness classes which were pre-recorded and distributed to students for independent viewing and participation. Administrators did not find

the movement and mindfulness programming to be working especially well. Fully half of the survey respondents disagreed with the statement “movement and mindfulness was effective.”

Teacher interviewees also indicated that there were low levels of engagement with this content. One math partner teacher suggested that this was due to the lack of synchronous interaction:

The one thing they could kind of beef up a bit - but it was actually a great concept - was the movement and mindfulness. We were able to eliminate that block because our scholars did not respond to it. They really were not interested in the videos, so eliminating it was very easy... when it's all just a video, and they can't have any input, our scholars tend to zone out. –Partner Teacher 6

Student survey respondents indicated low levels of engagement. When asked how many days in the past week they attended, the share answering “every day” was already low in week 1 (44%) and declined over time to 34% in week 3. By the end of the program, 27% indicated that they had never attended in the past week. The open-ended student survey responses provided some clues about why this was the case, suggesting it had to do with the asynchronous nature of the content. One student wrote, “I would go more if it was live.” Other participants described the class as “boring” or as needing more variety, “What I would improve about summer school is adding another activity for people who don't enjoy dancing and yoga.”

5) Partner teachers perceived that the program improved their instruction

Overall, partner teachers felt that they improved their own teaching as a result of participating in NSSI. Our interviews revealed that this was, in large part, due to their access to the mentor teachers. Partner teachers generally perceived mentor teachers to be talented educators and helpful in improving partner teacher practice. The most common mechanism through which they suggested this occurred was by watching the videos of the mentor teachers leading their own classes through the same lessons the partner teachers were planning to teach four to five days later. Partner teachers told us that this was helpful both in providing models for how to teach the same lesson and in helping them anticipate how students were likely to respond to particular parts of the curriculum. Representative comments from ELA partner teachers include:

It was helpful - the mentor videos especially - to watch them and learn, okay, this is when she asks this question, and those transferable questions were really helpful, that was newer to me. So it was helpful to see how they would take a paragraph or part of the book and kind of break it down and then ask a question to a student... to see another teacher who's more experienced than me teach her students and where she would pause and what the key points were... a lot of other people who were doing it with me enjoyed that too, to get a new perspective on places to stop. Even if they were more experienced, I knew they talked about enjoying that to just have another teacher, someone different from who they're used to working with to learn from. –Partner Teacher 7

It was great to see someone else already roll out the lesson. In part because seeing other students' responses helped me anticipate what direction my kids may or may not take. And then I think it's always helpful to watch other teachers teach. That's actually not

something we have a ton of time or opportunity to do in a regular school setting. So having that was actually really cool. Those mentor teachers are now some of the people I've observed teaching the most, in my entire six years of teaching, because I got to see them do a full 45-minute lesson every day. Whereas really thinking about like any colleagues I've had over the past six years, I've never seen anyone do a complete 45-minute lesson, let alone every single day. And so I think just having that experience of getting to observe another really excellent teacher, was just great. –Partner Teacher 8

The survey data echoed these themes. Among partner teacher survey respondents, 80% agreed that the “daily lesson videos and lesson flow documents provided by the mentor teacher are strong” and 79% agreed with the statement, “I am learning from my mentor teacher” including 53% who strongly agreed. Among administrators, 67% agreed that the “daily videos and lesson flow documents provided by mentor teachers are strong.”

These benefits were not limited to novice teachers. Even experienced partner teachers indicated that these videos were valuable, as one math teacher explained:

The other strength, at least for me, was the mentor teacher and being able to watch how he did it. Because I've been teaching for so long that I feel like sometimes you get stuck in the way that you do it. And then to see somebody who has been doing it even longer and more successfully. Instead of them just saying, 'do it this way.' You had all those videos, and they continued through the entire summer. And sometimes when I wasn't super confident about the conversations I was going to get from my kids, I really relied on those videos... when I wasn't feeling super confident, I could see what his kids talked about and then gear my conversation similar to that. –Partner Teacher 5

Importantly, some partner teachers indicated that access to mentor teachers from across the country was particularly valuable for those whose home schools and districts had a limited supply of highly effective teachers. One math partner teacher explains how this was especially true when it came to hard-to-staff subjects:

I don't know what it's like other places, I can just tell you about where I live. The math teachers I feel generally don't really understand the Common Core content. And I think there's a shortage of math teachers. So I think [NSSI] gave teachers a time to learn from people who really, really understand the content... and who really could teach them how to teach. –Partner Teacher 6

Other partner teachers emphasized the power of combining the video-based models with the opportunities to obtain synchronous support from their mentor teacher, as one ELA teacher explained:

...being able to see it in action and being able to take - I was writing things down from sentence stems or phrases that the teachers were using and made it my own, so that I can ignite what the point was, 'oh, they're getting deeper meaning from their students when they say this' and then I'm like, 'alright, let me try that.' And if it doesn't work, then I can ask tomorrow like, 'hey, [mentor teacher], when you use when you said these words, I

see you got to the deeper meaning - it didn't work for me - what might I be missing?' Those thinking questions you have for yourself, but you actually can talk to someone... I felt more guided with NSSI and I felt more like let me try this and come back with ways that I need help or pitfalls I had. And then I felt uplifted the next day. I just felt they supported and gave pointers. They also said things like, 'your style might have been different than mine. It's not wrong or right.' But it was more, 'so what do you want the outcome to be?' ...and then they gave me pointers. –Partner Teacher 3

Partner teachers also appreciated that mentors taught the same lesson they were planning to teach four to five days before the partner teacher and informed them about what worked well and what did not. The mentor teachers also indicated that actually teaching these lessons was valuable in building credibility with partner teachers and helping the mentors provide better professional development and support to their partner teachers, as one math mentor teacher explained:

It was really profound this idea that you would have a mentor teacher working with this nationally assembled group of teachers who are then working with their kids, and how you can change teacher practice just by the simple fact of me teaching a lesson four days earlier than somebody else. I kind of painted this picture as - I've done some whitewater kayaking in my in my life - and it's like the first run, right? You go out there, you get knocked over, you figure out where the eddies are, where the rocks are, and the currents, and then you come back and you say, 'look, I survived the thing and let me tell you all about it.' So I think the teachers on the whole really appreciated that approach. I wasn't with them. I was one of them. I was just going four days earlier, trying to try things out, and some work, some didn't. I came back and reported on it, showed them the video, and then they could learn in that way. And I would say you know never in the history of education has every second of every piece of instruction been recorded. Right? And that's what we what we accomplished in this ... little project... the promise for teacher development in that is really powerful.” –Mentor Teacher 4

In terms of the specific skills that partner teachers developed, interviewees indicated that the program helped them prepare to teach more effectively online in preparation for a virtual or hybrid 2020-21 school year. Many suggested that they went on to become leaders at their home schools, providing guidance and support to colleagues who were less experienced with virtual learning. A large majority (87%) of partner teacher survey respondents agreed with the statement, “I will be a better teacher in the 2020-21 school year because of teaching at NSSI” including 57% who strongly agreed.

Teachers said they improved their ability to promote student engagement, something they saw as a major challenge of virtual instruction. In fact, our code called, “virtual lessons – engagement is key” (indicating a takeaway about virtual learning) was among the most commonly applied codes across interviews. Partner teachers further argued that they improved on dimensions including analyzing student work, giving feedback to students, featuring examples of student work to increase engagement, creating joyful classrooms online, and raising their own expectations for what students could accomplish virtually. Others suggested that the program helped them realize that culturally relevant curriculum is important and possible to implement.

6) Mentor teachers enjoyed the program and felt their own practice improved

Mentor teachers were some of our most enthusiastic interviewees, suggesting that they greatly enjoyed and appreciated the opportunity to participate in the program—despite the heavy commitment it involved—and even that their own teaching practice improved as a result. Mentor teachers especially appreciated the ability to develop relationships with and learn from a community of other excellent teachers across the country, as two mentor teachers (one math and one ELA) explained:

The quality of people that were hired was unbelievable—a lot of really talented, smart, thoughtful, hardworking folks of a variety of different backgrounds really helped us have a pretty rich conversation about many topics, ranging from pedagogical approach to what does our organization stand for when we talk about fighting for racial equity and this that and the other. The people component was really wonderful. –Mentor Teacher 3

I really loved it. It was not easy. I would not say that it was just a walk in the park but one of the things that I really enjoyed was the chance to collaborate with other educators and to hear their perspectives from a number of different contexts... being able to learn from [a fellow mentor teacher] and the vast amount of experience that he has and being able to collaborate together. I feel like the professional relationships that I developed, I wouldn't trade those for anything. That alone made the summer worth it. I think that the growing pains are probably growing pains at any startup, especially a startup trying to begin very quickly, you're going to experience. –Mentor Teacher 1

Mentors also indicated that they enjoyed working with partner teachers, and providing guidance based on their own efforts to implement the NSSI curriculum:

Probably my favorite thing was working with all these teachers from all over the country, and hearing about their classrooms and talking to them about teaching and the novel and being like, 'oh my god, I did this thing, and it was so great,' or, 'oh, I did this, and it was kind of a disaster. So you guys should all know not to do that.' The thing that I loved was just the dynamic of, I'm gonna scout ahead and I'll let you know what obstacles are coming, and then you are able to take this thing that I did and hopefully do better. Take the skeleton and go beyond it. And I'm also realistic. Some of you are absolutely brand new teachers so this is going to be a struggle. So what you're going to do is try to have a model to follow. And that's totally good. But there are a few just clearly phenomenal teachers I worked with who were partner teachers. And they were able to be like, 'great, here's some resources that I'm going to make my own. And this just saves me some work. I don't need to come up with questions.' ... So I thought that was great. –Mentor Teacher 2

Mentor teachers further suggested that participating in NSSI, through teaching the lessons ahead of the partner teachers, improved their own teaching. As one math mentor teacher explained:

I learned so much, right? It's my 18th year, I'm a little bit of a dinosaur compared to some other people in my field. I had not used a number of the technological tools and so

to be thrust into this environment, and said, hey, where you see me sitting now is where I taught, and hundreds of kids across the country were able to participate. It's kind of amazing. I just learned what works or doesn't work... how would I use zoom? How would I use breakout rooms? How would I use the chat? How do you build community? How do you come across in the screen? I learned a ton just from doing it. –Mentor Teacher 4

Mentor teachers also appreciated having a role in co-creating the program with NSSI leaders and felt they were given substantial autonomy to experiment:

What I loved about the organization was that it basically said, look, we have an idea of what we think the model is, but a big part of the model is hiring what we think are amazing teachers and letting them run with it. And that was a big bet, right? Because some of the history of the organizations that many of the leaders of NSSI came out of are maybe in their previous approach a little bit more prescriptive... I really do feel like there was this kind of founders, innovation kind of spirit that was pervasive. There was a structure, and then within that structure, I felt like a musician who could riff. I could be like, 'oh, I'm going to try this, I'm going to put on a costume, I'm going to say this thing, I'm gonna spend eight minutes on this or 12 minutes tomorrow. I felt a real sense of freedom and innovation in the model that was really, really powerful. And that innovation done in small ways over and over led to a better and better experience for the kids over time. And because of our size, relatively small, the sharing of those best practices across the teachers, you just saw things get adopted and shared really quickly. So those two those two things were really powerful –Mentor Teacher 4

Finally, mentor teachers appreciated that NSSI allowed them to expand their reach and have greater impact on students and other teachers without leaving the classroom:

I think [NSSI] fits well with what I think my contribution is to the work, which is, I'm a classroom teacher, and it provides a really big platform for a classroom teacher. This whole debate in my field of, well, if you teach in the classroom, you only get to teach this many kids but if you become the superintendent or the director of this or that, you teach thousands of kids, but you don't really teach them you do things that allow them to learn more. This is a way to stay in the classroom but then have way more kids be impacted by the stuff you're doing, which is unique. –Mentor Teacher 4

Survey data was consistent with the interviews. Mentor teacher respondents unanimously agreed with the statement “I am happy that I am a mentor teacher this summer with NSSI,” including 57% who strongly agreed, and also unanimously agreed that “NSSI increased my enthusiasm about being a teacher.” Satisfaction appeared to increase over time. When asked to rate on a scale of one to ten their likelihood of recommending being a mentor teacher at NSSI to others, the average rating went from 7 (week 1) to 8 (week 3) to 9 (week 5). Based on our interview data, this was likely, at least in part, due to the heavy workload as the inaugural program launched as well as mid-program adjustments leaders made in response to early feedback.

7) Teachers appreciated receiving adaptable curricular materials

Another key program strength that partner teachers highlighted was the fact that NSSI provided them with what they perceived to be high-quality lessons and materials ahead of time rather than asking individual teachers to develop their own lessons. This saved them a significant amount of preparation time that they could instead use on other aspects of their teaching. However, they appreciated the flexibility they had to use these materials as they saw fit and to adapt the materials to their own teaching style and student needs. While some teachers actually played parts of the mentor teacher videos for their students, hit pause, ran the discussion, and then returned to the lesson, others simply watched the videos on their own in preparation for teaching their classes. As three partner teachers – one math and two ELA – explained:

It was really great to have such high quality lessons. And they were so relevant for the time period. And so kids were immediately engaged. The content of what we did with NSSI was so great, because I think if we had had to create our own—and I've taught summer school loads of times through those 31 years and most of the time I had to just create stuff—so being able to have access to high quality materials really streamlined what we were doing at summer school. We were really able to focus on meeting kids where they were at and meeting their needs, and really providing some extra education, especially... the remote teaching in the spring in [my district] was a joke, so I think the kids really needed something substantial. Kids were hungry for it. Attendance was higher than I—there was a chunk of kids who said they wanted summer school but never came—but the kids who came, came pretty regularly. And they loved the book. As soon as we start reading, kids would type in the chat. 'I love this story so much.' The boys too. And I was like, 'man!' So when I think about NSSI, the first thing that comes to mind is just the quality of the curriculum that we had. That was such a gift to me as a teacher, and even more so to kids as learners. –Partner Teacher 9

Definitely having all of the materials from like our mentor teachers helped a lot and not having to create a lot of it and just having to tweak it according to your students. Even when you did the tweaking it was done in a really good way. The only thing that we really had to do was the grading part and coming up with interventions for our kiddos. – Partner Teacher 10

Not only did we have a very detailed and well thought out lesson plan to read, we also had a video of a person actually teaching this lesson. And so that just made preparation, I honestly don't know what more you could want... Teaching is hard and there's not enough time. That's a general thing. I think having all the materials there and the prep done by someone else is really helpful. Just knowing how much time goes into crafting lessons and planning. If more teachers had all of that time to (1) really internalize the lessons, (2) really focus on student work, give feedback and adjust for the next day, I think the student outcomes would be more meaningful... Having really strong materials ahead of time, and then having the time to prep them appropriately is really important. I think NSSI and the Lavinia Group who did the curriculum did really seem to put a lot of focus on teacher intellectual prep time... That's how you get the best outcomes for students is when the teachers really deeply know what they're teaching and where they're going with it. And I still think the NSSI model is adaptable and leaves lots of room for

people to be teachers in their own way. It's not scripted... I could see the same lesson being carried out different ways at different schools or classrooms. –Partner Teacher 8

One of the ELA partner teachers (Partner Teacher 11) who taught a group of students at NSSI who he had not worked with in the past, when asked whether he was able to build a relationship with them over the course of the program responded, “Totally. And part of that was because I wasn't spending so much time setting up lesson plans and worried about this and that. The fact that I knew certain things are already set up for me, it allowed me to spend time just getting to know the kids, their strengths, their weaknesses, their likes, and it just kind of flowed.”

8) Teachers wanted the professional development to be more differentiated

Although partner teachers generally felt NSSI helped them improve as educators, they and the mentor teachers still had suggestions for how to improve the pre-program and daily professional development sessions. At the start of the program, teachers felt there was too much time built into the schedule for PD. Leaders responded by reducing the time – which was appreciated – but some teachers indicated that it was still too frequent and the placement in the schedule made it difficult to get the most of the PD sessions because there was limited time between class and PD sessions. Partner and mentor teachers agreed expectations for PD attendance were also unclear.

Furthermore, several teachers suggested that these components of the PD could have been further differentiation by teacher experience level, particularly to increase the value for the more experienced partner teachers. Two ELA partner teachers explained:

Everyone I worked with from my particular school, most all of us are veteran teachers. And I remember going through even the trainings and we were like saying this was not catered to teachers who've been core veteran teachers. This is catered to teachers who don't really have content knowledge. The questions that were being brought up by some teachers from other networks were questions about like, how do you do these simple things that are first year teacher questions. So all of us had similar feelings that this was not differentiated. –Partner Teacher 12

The professional development - I liked it but didn't like it. Like I said, I'm 20 years in, so there's a lot of things I feel like I know that would just be kind of repetitive to hear or, just kind of like, 'I know this. I know this,' but I definitely could get tidbits from it. It's always good to hear other teachers speaking or talking about what they're experiencing and how they kind of like a fixed date or got around a problem. It was okay...it was something that I think definitely for a teacher who was just learning the system I think it definitely was useful. –Partner Teacher 11

Mentor teachers we interviewed agreed that this was an area that could have been improved in terms of both differentiation and in using the time in a less top-down way in order to engage the partner teachers more actively. One math mentor teacher argued:

I think if they were to do it again the areas of improvement would just be around like, differentiation for teachers in terms of how we supported them in supporting providers

was more geared towards novice teachers, and not kind of like support for more veteran teachers, or at least space for collaboration for veteran teachers. –Mentor Teacher 5

The survey data also suggested that this was an area for improvement. Among the administrators, only a bit more than half (54%) agreed that the “daily intellectual prep PD made my teachers stronger” and only 41% agreed that the “daily student work analysis made my teachers stronger.” Among the mentor teachers, 57% thought the intellectual prep was making teachers stronger, and only 29% agreed that the student work analysis time was making partner teachers stronger. The partner teachers themselves were a bit more positive about these components, with 61% agreeing the intellectual prep was helping and 57% agreeing that the student work analysis time was helping. Unfortunately, we do not have data on teacher experience for the survey sample to test whether newer teachers were more satisfied with the PD.

A few teachers mentioned that there was a missed opportunity for mentor teachers to conduct classroom observations of the partner teacher classes to inform their PD and coaching. These observations could have been facilitated by the virtual nature of the program but did not end up happening on a consistent basis mostly due to all the other tasks that mentor teachers had on their plates as the program launched.

Implications

This study of the implementation of the virtual National Summer School Initiative suggests that the program succeeded in providing what participants generally perceived to be a high-quality learning experience for thousands of students whose schooling had been interrupted by the Covid-19 pandemic while also providing a unique professional growth opportunity for participating educators. Partner teachers and those students who completed surveys reported marked growth in student learning and intellectual confidence, as well as high levels of attendance and engagement. Participants perceived the curricular content to be high-quality, engaging, and culturally relevant, especially in ELA. Partner teachers valued the chance to work in sustained partnership with an expert mentor who was teaching the same content, while the mentor teachers appreciated the unique opportunity the program provided for them to grow and extend their reach. These same stakeholders perceived aspects of the program that could be improved: The choice of daily story problems in math could have been more engaging. The asynchronous movement and mindfulness component does not appear to have been particularly effective. Teachers wanted the professional development to be more differentiated according to their experience level. Even so, virtually all participating and mentor teachers reported that they were glad to have participated and would recommend it to a colleague.

Our study is limited to self-reported perceptions and additional data on changes to participating students’ academic performance would be a welcome addition to this implementation report. We also urge caution in drawing conclusions from our survey data since the representativeness of the sample is not entirely clear. Nonetheless, our findings on stakeholder perceptions of this unique programmatic effort to innovate in a time of widespread online schooling suggest several lessons for the field regarding virtual learning. First, teachers, students, and parent participants believe that learning is indeed possible in a virtual environment and generally felt that the program improved their perceptions of what can be accomplished with online education. Our results also

highlight the importance and challenge of promoting student engagement in virtual settings and seem to suggest the superiority of synchronous classes to asynchronous content for cultivating engagement.

One of the rare advantages of virtual over in-person learning is that physical geography is not a constraint. At NSSI, talented mentor teachers from across the country were able to extend their reach, working with students and teachers outside of their home states through an online platform. Given the widespread use of virtual learning during the COVID-19 pandemic, educational leaders could more creatively capitalize on this feature of online learning to increase the equitable distribution of access to highly effective teachers.

The study also speaks to teacher development in virtual environments. Mentor teacher videos provided powerful models for partner teachers. This could be accomplished within in-person settings but virtual learning facilitates the creation of videos which could be collected into libraries of teaching practice. In the future, online learning could facilitate more systematic observation of partner teachers by talented coaches than has historically been possible in traditional in-person schools given there is no need for geographic proximity in a virtual world. However, there may be challenges associated with bringing such observations to scale.

Our study also reveals potential lessons for teaching and learning more generally, regardless of whether it be in a virtual or in-person setting. Our findings suggest that high-quality, rich, culturally relevant, timely content can be useful for generating student engagement, at least when it comes to ELA. Pedagogy that allows students at multiple levels to access the content is also valuable for promoting engagement, at least in math. While the results suggest that teachers perceive culturally relevant math content to be helpful for student engagement, they also imply that efforts to incorporate such content can backfire and therefore should be implemented with care. One step a mentor teacher took to address this concern during the program, while well intentioned, only seemed to aggravate the problem. This suggests the need for thoughtful design from the start, and that cultural relevance can be challenging to accomplish on the fly.

Importantly, our findings strongly suggest that teachers need not reinvent the wheel when it comes to curriculum and planning. Instead, centralized efforts to provide high-quality—but still adaptable—lessons to teachers can save them valuable time that they can instead devote to other important teaching tasks such as internalizing lessons, providing feedback to students, and building relationships with children. This seems especially relevant in the times of coronavirus when teachers and administrators are overwhelmed with the logistical challenges of physical distancing and/or learning new virtual teaching skills but is probably a useful lesson for educational leaders regardless of the broader circumstances.

We also see implications for teacher development within and beyond virtual learning environments. Mentor teachers' experiences with the program suggest that career ladder-like programs that seek to differentiate teachers' roles based on experience and merit can generate enthusiasm among talented educators and multiply their impact. Partner teachers' experiences suggest that sustained partnership with a talented mentor who shares teaching materials and practices was perceived as a powerful instructional improvement strategy, with potential for both online and in-person instructional formats. Our results further suggest that teachers appreciate

professional development that is differentiated to their needs and levels of experience—the single mentor teacher for teachers in a particular grade regardless of experience level was perceived as less valuable for veteran teachers. Teachers also appreciate coaching that is delivered by someone who has previously taught the material and can therefore provide instructional guidance with credibility.

Our study cannot speak to the effectiveness of virtual learning as a whole, nor do they provide a comparison between the efficacy of virtual versus in-person instruction. However, our findings do suggest promising practices and provide some room for optimism about what can be accomplished through virtual learning in a world where in-person schooling is restricted.

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