The 2020–21 Future Forward Literacy Program: Implementation and Impact During the COVID-19 Pandemic

Curtis Jones, Marlo Reeves, and Dongmei Li

Abstract

Future Forward is an early elementary literacy program which, through a family–school–community partnership approach, integrates one-on-one tutoring and family engagement to support literacy development at school and at home. In the 2020–21 school year, as part of an Education Innovation and Research (EIR) Mid-Phase grant, the impact of a modified Future Forward on reading achievement was tested with a randomized control study of students in nine schools. In the context of COVID-19, implementation was modified to support virtual tutoring. Although consistent in magnitude with other studies, the modified Future Forward program was not found to have a statistically significant impact on student achievement. Sample size limitations and implementation challenges, both resulting from COVID-19, hindered our ability to measure an impact. Even considering these challenges, we still found evidence that Future Forward had a positive impact on the reading achievement of Black students (0.34 standard deviations, p =.095) and, even more so, Black male students (0.54 standard deviation, p =.052).

Key Words: tutoring, literacy, experimental research, Future Forward, family–school–community partnerships, COVID-19, implementation, impacts

Introduction

Future Forward is an early elementary literacy program that combines one-on-one tutoring with family engagement to promote student literacy development both at school and at home. In 2011 Future Forward was funded by a federal i3 grant to develop the program and test its impact in Milwaukee, Wisconsin. Two randomized control trial (RCT) studies found the program had positive impacts on literacy, reading achievement, and school attendance (Jones, 2018; Jones & Christian, 2021). In 2017, Future Forward received an Education Innovation and Research (EIR) Mid-Phase grant from the U.S. Department of Education to expand and test its impact on students in 14 schools across three states. As was the case across the entire education system, in the spring of 2020, Future Forward was shut down in response to COVID-19. To continue supporting students and families during the 2020–21 school year, Future Forward had to modify its program to allow for virtual instruction. This article presents the implementation and impact results of these efforts.

Tutoring Programs

There are a limited number of early primary literacy tutoring programs that have proven effective under rigorous scrutiny. The Evidence for Every Student Succeeds Act (ESSA) website (https://www.evidenceforessa.org/) lists only 13 tutoring programs that have, one of which is Future Forward. Tutoring programs generally focus on developing literacy skills in students behind in their literacy acquisition. Of the 13 validated programs included on the Evidence for ESSA website, seven use paraprofessionals or volunteers as tutors. Even using minimally trained college students serving as tutors has proven impactful on literacy (Lindo et al., 2018). There are some conditions of tutoring programs that are necessary for them to be effective, though. In their review of tutoring programs, Wasik (1998) concluded that successful volunteer tutoring programs are highly structured, have quality materials, and provide strong professional development and supervision to tutors. Future Forward meets these conditions and goes further. It is the only validated tutoring program included on the Evidence for ESSA website that supports literacy development at home as well as school.

The Future Forward Approach

Future Forward has a family–school–community partnership approach (Epstein, 2001) to promote student literacy development. An instructional coordinator, a family engagement coordinator, and tutors staff each Future Forward site. The instructional coordinator is typically a certified teacher who

manages one-on-one tutoring provided by paraprofessionals or volunteers. The instructional coordinator works with the school and tutors to develop a tutoring schedule. This involves identifying times students can be pulled out of class to receive tutoring and finding tutors who can work during those times. Students are tutored by the same tutor throughout their time in Future Forward. The instructional coordinator provides ongoing support, development, and supervision to the tutors. Each Future Forward student is scheduled for 90 minutes of one-on-one tutoring each week for one school year. Each tutoring session includes several phonics-based activities, such as Word Play (Wasik & Jacobi-Vessels, 2016) and Making Words (Cunningham et al., 1998). Students use graphic organizers to build comprehension skills and write sentences connected to a Word Play activity. They may also use Elkonin boxes, which involve segmenting words into individual sounds/boxes (Keesey et al., 2014).

The family engagement coordinator, who is typically a community member or parent from the school, leads family outreach and communication efforts. Although family engagement can take many forms to meet diverse family needs, there are some structured activities within Future Forward. Sites send home a monthly newsletter, hold monthly family events, send books home to help build a home library and conduct home visits. Communications that surround these activities are consistent and frequent, validating literacy development activities already occurring at home (Nieto, 2012; González et al., 2005) and updating families about the progress of their student's literacy development. Future Forward works to reduce the unequal power relationship between the school, Future Forward, and the family that is assumed by families and teachers at the start of their participation. It creates opportunities for overcoming barriers to family engagement that result from mismatches between school and home regarding language, schedules, and expectations (Lopez & Stoelting, 2010). During COVID-19, tutoring was modified to be more flexible, as further described below.

Previous Future Forward Research/Evaluations

The current impact study is the fifth of Future Forward. The i3 grant awarded in 2009 produced two. The first was a pilot evaluation as the program was developed in six Milwaukee Public Schools (MPS) during the 2011–12 and 2012–13 school years. While Future Forward had a small but significant impact on reading, it did not impact school attendance. Almost all Future Forward students received a high or moderate amount of tutoring, whereas the family engagement component was still in development (Jones, 2018). The second i3-funded RCT study tested the impact of the full Future Forward program on low-income students of color in seven MPS campuses during the 2013–14

and 2014–15 school years. Implementation was strong, with 96% and 98% of students receiving the intended amount of tutoring and family engagement, respectively. This study found positive and statistically significant impacts on literacy development and school attendance (Jones & Christian, 2021). While no significant impact on reading achievement was found after two years of tutoring, the impact after one year, with a much larger sample, was statistically significant and positive. Further, in a five-year follow-up study, Future Forward was found to have significant, sustained impacts on school attendance and reading achievement, equal to approximately one-half year of academic growth (Jones et al., in press). Further, former Future Forward participants were less likely (.30 the odds) to be receiving special education services than students assigned to business-as-usual (BAU) literacy instruction.

The EIR grant has also produced two research studies. The first of these occurred during the EIR-funded program's pilot year as it was expanded to 14 schools during the first full year of the grant in the 2018–19 school year (Jones et al., 2023). Although a regression discontinuity study did not find a statistically significant positive impact on reading achievement or school attendance, low statistical power and inconsistent implementation during the pilot year limited the study's ability to measure an impact. The second EIR study used a RCT to examine Future Forward's impact on reading and school attendance during the 2019–20 school year (Jones & Li, 2023). The nationwide shutdown of schools in spring of 2020 because of the COVID-19 pandemic limited the study to only testing its impact on school attendance. Future Forward was found to have a statistically significant, positive impact on school attendance. Overall, Future Forward participants demonstrated statistically significant improved attendance (1.4 percentage points), with greater impacts on Black students (2.4 percentage points), students with lower school attendance (2.3 percentage points), and Black students with lower school attendance (3.6 percentage points).

Current Study of Future Forward

During 2020–21, in response to school interruptions caused by COVID-19, tutoring was modified to be more flexible to the unique needs of families and schools. Sites had the option of tutoring students online or in person. Sites that chose the virtual option changed their scheduling to accommodate some of the challenges of virtual tutoring. Historically, each Future Forward tutoring session was scheduled for 30 minutes. However, virtual tutoring proved more time-consuming to facilitate. As such, sites using virtual tutoring scheduled two 45-minute sessions each week instead of three 30-minute sessions. Regardless of format, all students were provided access to the MyON online reading

platform provided by Renaissance Learning. MyON provided sites and families additional flexibility for engaging students in reading during COVID-19.

The decision to allow sites the option of providing online instruction was not made lightly. The 2019–20 and 2020–21 programs were to serve as the impact studies for the Future Forward EIR grant. Considering COVID-19 interrupted the 2019–20 program, modifying implementation during 2020–21 meant that the EIR study would end without any formal impact evaluation of the Future Forward program as it was designed. Future Forward was given the option of waiting until the 2021–22 school year in the hope that in-person tutoring and family engagement would be more acceptable to schools then. Future Forward chose to continue to work with students, though, to help mitigate (as best they could) the continued negative effects of COVID-19 on students, schools, and communities. Considering the school–family–community approach of Future Forward, program leaders felt they could not ethically put their programmatic needs above the needs of their partners.

In the current evaluation, we examine the implementation and impact of the modified Future Forward program on students in nine schools. While all nine participating schools reopened and offered in-person instruction, the implementation of Future Forward was modified to accommodate a variety of restrictions put in place by schools because of COVID-19. So while we originally planned to test the implementation and impact of Future Forward, the changes to the Future Forward model of delivery caused us to reframe our evaluation to be exploratory about the impact of a modified version of Future Forward.

Research Questions

- How was Future Forward implemented in schools during COVID-19?
- What was the impact of Future Forward participation on reading achievement?
- Did Future Forward have a differential impact on student subgroups?

Evaluation Methods

This evaluation study utilized an RCT design, with kindergarten, first grade, second grade, and third grade (K–3) students randomly assigned to receive Future Forward or only BAU literacy instruction during the 2020–21 school year.

Study Eligibility

Eligible participants were kindergarten, first, second, or third grade students without an Individualized Education Plan (IEP) and who were not English Learners. The specific number of students who were eligible is not

known because schools were instructed not to distribute consent forms to students who did not meet eligibility criteria. Those later referred for specialized services after assignment were excluded from analyses.

Informed consent was obtained from families for their students to participate in the study in the fall of 2020. A total of 464 students were consented for the study. Only students who participated in a fall reading assessment were eligible. This last eligibility criteria represented a significant barrier for students participating in the study. Of the 464 consented students, 297 completed a fall reading assessment and were enrolled in the study.

Random Assignment

In the fall of 2020, 153 of the 297 students were randomly assigned to Future Forward and 144 to the BAU reading instruction. Assignment was done within blocks, defined as grade levels within schools (each grade within a school was a block). Three schools included kindergarten through second grade students in the study, two included kindergarten through third grade students, two schools served first through third grade students, one school served first and second grade students, and one school only included two first grade students who had been attending Boys and Girls Club afterschool activities, resulting in 26 assignment blocks. The number of study participants per block ranged from 7 to 22, with an average of 11. The number of study participants within each block was twice the capacity of the program to serve, with half randomly assigned to Future Forward and the other half to BAU literacy instruction.

Participating Schools and Students

Nine schools participated in the study (see Table 1): four in Wisconsin, three in Alabama (one Alabama school included only two students who were Boys and Girls Club members), and two in South Carolina. These schools partnered with five local Boys and Girls Clubs. The three Alabama schools were located in an urban district, while the other six were in rural districts. Participating schools had a history of overall literacy performance that placed them in the lowest 20% of schools in their state or had a history of large reading achievement gaps between races or economic groups. Five schools that had previously participated in the EIR grant study were unable to participate in the current study because obtaining parent consent in these schools proved extremely difficult. The limited number of students consented was not enough to include these schools in the study. Table 2 presents characteristics of study participants. The backgrounds of the BAU and Future Forward assignment groups were similar. Among all the participants, most were economically disadvantaged (67%) and White (58%) or Black (32%).

Table 1. Participating Schools

	State	Community Type	Grades of Participating Students (26 Grades/Blocks)
School 1	WI	Rural	Grades KG–2
School 2	WI	Rural	Grades KG–2
School 3	SC	Rural	Grades 1–3
School 4	AL	Urban	Grades KG–3
School 5	WI	Rural	Grades 1–2
School 6	WI	Rural	Grades KG–2
School 7	AL	Urban	Grades KG–3
School 8	SC	Rural	Grades 1–3
School 9	AL	Urban	Grade 1

Table 2. Characteristics of Study Participants

		BAU	FF	Total
Grade Level	KG	26 (18.1%)	26 (17.0%)	52 (17.5%)
	1st	54 (37.5%)	58 (37.9%)	112 (37.7%)
	2nd	42 (29.2%)	46 (30.1%)	88 (29.6%)
	3rd	22 (15.3%)	23 (15.0%)	45 (15.2%)
School	School 1	11 (7.6%)	14 (9.2%)	25 (8.4%)
	School 2	19 (13.2%)	16 (10.5%)	35 (11.8%)
	School 3	13 (9.0%)	16 (10.5%)	29 (9.8%)
	School 4	21 (14.6%)	21 (13.7%)	42 (14.1%)
	School 5	21 (14.6%)	20 (13.1%)	41 (13.8%)
	School 6	21 (14.6%)	21 (13.7%)	42 (14.1%)
	School 7	24 (16.7%)	25 (16.3%)	49 (16.5%)
	School 8	11 (7.6%)	17 (11.1%)	28 (9.4%)
	School 9	3 (2.1%)	3 (2.0%)	6 (2.0%)
Race/ Ethnicity	Black	43 (29.9%)	52 (34.0%)	95 (32.0%)
	White	85 (29.9%)	87 (34.0%)	172 (57.9%)
	Other	16 (11.1%)	14 (9.2%)	30 (10.1%)
Gender	Female	72 (50%)	90 (58.8%)	162 (54.5%)
	Male	72 (50%)	63 (41.2%)	135 (45.5%)
Total		144	153	297
F/R Lunch	No	49 (34.3%)	49 (32.2%)	98 (33.2%)
	Yes	94 (65.7%)	103 (67.8%)	197 (66.8%)
Total		143	152	295*

Note. *F/R lunch data were missing for two students.

Instruments

Seven schools used Star Reading, a norm-referenced assessment for early literacy. Star is a short, online adaptive assessment with high internal reliability (0.95) and concurrent validity with other reading assessments such as AIMSweb, the Iowa Test of Basic Skills, and state reading tests more generally (Renaissance Learning, 2021). Two used the Formative Assessment System for Teachers (FAST) – FastBridge. The FastBridge reading assessment is also a norm-referenced assessment with strong evidence of validity and reliability (Christ, 2015). All nine schools administered assessments to students before Future Forward began serving students and again at the end of the school year.

Modeling Strategy

We used generalized linear models (GLM), which uses maximum likelihood estimation, with linear error terms and an identity link function to estimate the impact of Future Forward on reading achievement. Star Reading and FastBridge scores were standardized locally, separately within grade levels, and combined for analysis. Both measures are similar in how they assess student reading development and are nationally norm-referenced, so combining measures is justified. Combining the measures is further justified by the inclusion of block-fixed effects in the model below. What is important is that all students within a block were assessed with the same instrument. The IBM SPSS 26.0 statistical software package was used to conduct analyses.

Spring reading achievement was modeled using the following linear regression equation (1)

$$Y_{ij} = \beta_0 + \beta_1(FF_{ij}) + \beta_2(Reading_{ij}) + \sum_{m=1}^{M} \beta_{3.m} X_{mij} + \sum_{j=1}^{J-1} \beta_{4.j} Block_j + \varepsilon_{ij}$$

Where Y_{ij} is the spring reading score for the i^{th} student in the j^{th} block; β_0 is the intercept; β_1 is the impact of Future Forward; FF_{ij} is a binary indicator for Future Forward participation; $Reading_{ij}$ is the baseline reading score for either the Star or FastBridge assessment; X_{mij} is the m^{th} of M additional covariates representing demographic characteristics (e.g., gender, free/reduced lunch, and race); $Block_j$ is the fixed assignment block effect (grade by school); all Future Forward and BAU students within a block received the same literacy assessment (Star or Fastbridge); and ε_{ij} is the error term for student i in block j.

We used robust standard errors and fixed block effects (blocks are defined by grade levels within schools). We used fixed block effects rather than random effects to control for any unobserved block-specific factors. We also conducted

a robustness check of the results. For this, we stripped out all model parameters except block fixed effects and participation in Future Forward. Assuming a fixed program effect and 70% of the variance in outcomes explained by covariates, the current study, prior to attrition, had an 80% likelihood of detecting an impact of 0.187 standardized units. To test differential effects, we limited the sample of students included in equation 1 to students according to each gender, race, grade, free/reduced price lunch eligibility group, and baseline reading proficiency group. Although we typically only flag impacts that have a significance level less than .05, in the current study we flag differential effects with significant levels less than .10. This was done considering the exploratory nature of these analyses and the small numbers of students included in each analysis.

Attrition and Characteristics of Students Included in the Final Analysis

Of the 297 study participants, 267 remained at the end of the study. Nine students were referred for specialized services (five BAU and four Future Forward students) and excluded from the study. Of the remaining 288 students, 21 attrited (7.3%). These included three students who did not complete the spring assessment, and 18 who moved and changed schools. In total, seven BAU (7/139 = 5.0%) and 14 Future Forward (14/149 = 9.4%) students attrited. The combination of overall (7.3%) and differential attrition (4.4%) is within the conservative levels of acceptability as established by the What Works Clearinghouse (2020).

Table 3 presents characteristics of students included in the final analysis (after attrition). Differences in the demographic composition of the BAU and Future Forward groups were equivalent regarding gender (Ch^2 = .817, p = 0.366), race (Ch^2 = .023, p = 0.989), and Free/Reduced price lunch eligibility (Ch^2 = .016, p = .898). However, nine students (one Future Forward and eight BAU) received Tier 2 intervention during the academic year. Although schools were instructed to provide any intervention services regardless of assignment, one school treated Future Forward as a Tier 2 intervention and focused their intervention resources more on BAU students. This may have affected our ability to measure an impact in that school.

Table 3. Characteristics of Students Included in Final Analysis After Attrition

		BAU	FF	Total
Grade Level	KG	25 (18.9%)	26 (19.3%)	51 (19.1%)
	1st	50 (37.9%)	50 (37.0%)	100 (37.5%)
	2nd	40 (30.3%)	38 (28.1%)	78 (29.2%)
	3rd	17 (12.9%)	21 (15.6%)	38 (14.2%)
School	School 1	11 (8.3%)	14 (10.4%)	25 (9.4%)
	School 2	19 (14.4%)	16 (11.9%)	35 (13.1%)
	School 3	11 (8.3%)	12 (8.9%)	23 (8.6%)
	School 4	19 (14.4%)	19 (14.1%)	38 (14.2%)
	School 5	20 (15.2%)	16 (11.9%)	36 (13.5%)
	School 6	19 (14.4%)	20 (14.8%)	39 (14.6%)
	School 7	19 (14.4%)	23 (17.0%)	42 (15.7%)
	School 8	11 (8.3%)	13 (9.6%)	24 (9.0%)
	School 9	3 (2.3%)	2 (1.5%)	5 (1.9%)
Race/Ethnicity	Black	39 (29.5%)	41 (30.4%)	80 (30.0%)
	White	80 (60.6%)	81 (60.0%)	161 (60.3%)
	Other	13 (9.8%)	13 (9.6%)	26 (9.7%)
Gender	Female	69 (52.3%)	78 (57.8%)	147 (55.1%)
	Male	63 (47.7%)	57 (42.2%)	120 (44.9%)
F/R Lunch	No	44 (33.3%)	46 (34.1%)	90 (33.7%)
	Yes	88 (66.7%)	89 (65.9%)	177 (66.3%)
Total		132	135	267

Future Forward Implementation Results

To what extent was tutoring implemented as intended in spite of the disruption caused by COVID-19?

Future Forward expected to support students from October to May. As mentioned before, though, difficulties in consenting and assessing students in the milieu of COVID pushed the start date for sites further into the school year. Ultimately, two sites started working with students in November, three in December, and four in January. Five sites provided tutoring in person and four virtually. The delay represents a significant amount of tutoring not delivered during the fall of 2020 (see Figure 1).

A Future Forward participant who starts receiving tutoring in early October and continues until late May should receive at least 1,680 minutes (60 minutes

per week for 28 weeks) of tutoring. Students in sites that started in November missed approximately 240 minutes of that, which represents 14% less exposure to Future Forward. Students who started in December missed approximately 460 minutes of tutoring, representing 27% less tutoring, and students who didn't start until January missed 648 minutes, representing 39% less tutoring. As shown in Figure 2, the implementation delay resulted in very few students receiving the expected amount of tutoring (> 1,680 minutes).

Figure 1. Total Minutes of Future Forward Tutoring Provided Each Month

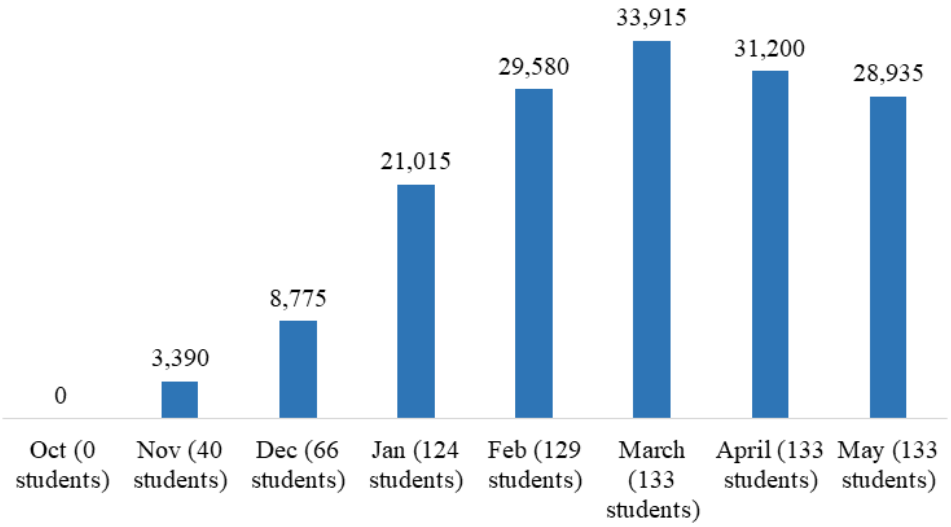
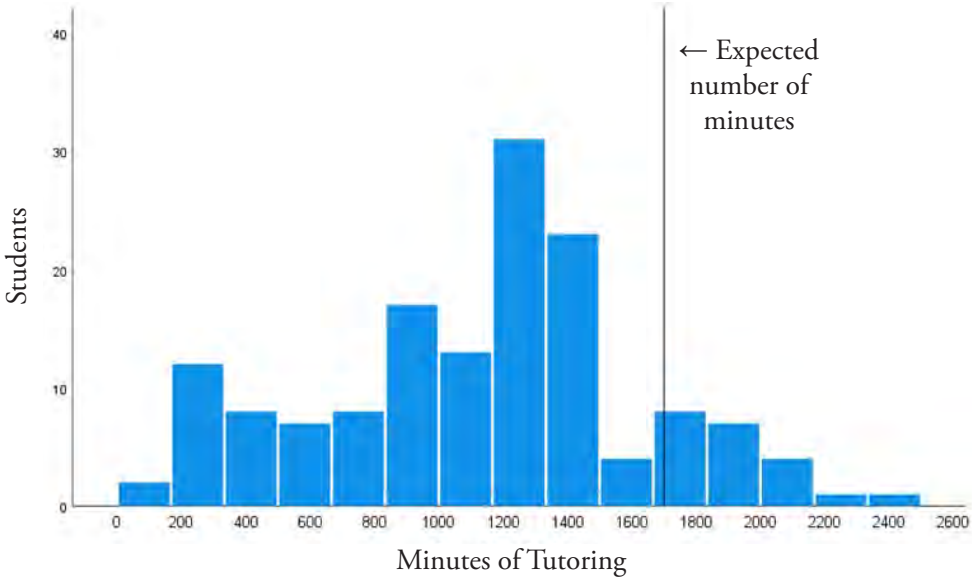


Figure 2. Total Minutes of Tutoring Received by Future Forward Participants



Once tutoring began, many students did receive the expected intensity of tutoring. Students at four sites received tutoring in person and were scheduled for three tutoring sessions per week (30 minutes per session). Students in the other five received virtual tutoring and were scheduled for two sessions per week (45 minutes per session). While historically, Future Forward provided most of its students with at least 60 minutes of tutoring each week, because of COVID-related challenges, it was not clear to what extent sites would be able to continue at this level of intensity. Ultimately, however, more than half (62%) of Future Forward students received at least 60 minutes of tutoring per week. Further, the average Future Forward participant received 64.3 minutes of tutoring per week (Table 4).

To what extent was family engagement implemented as intended in spite of the disruption caused by COVID-19?

Similar to tutoring, sites experienced a significant delay in their efforts to engage families, with very few family contacts occurring prior to January 2021 (see Figure 3). Family engagement was further inhibited by the lack of Future Forward staff presence in schools. Families of Future Forward participants are typically contacted at least two times each month. This adds up to 16 contacts during the typical program period of October to May. Again, mostly because of the delay in starting Future Forward and its virtual format, few student families were engaged at least that many times (see Figure 4). Once the program was ramped up in January, though, families interacted an average of twice per month, and 48% were contacted at least two times each month (see Table 4).

Figure 3. Total Successful Family Contacts Each Month

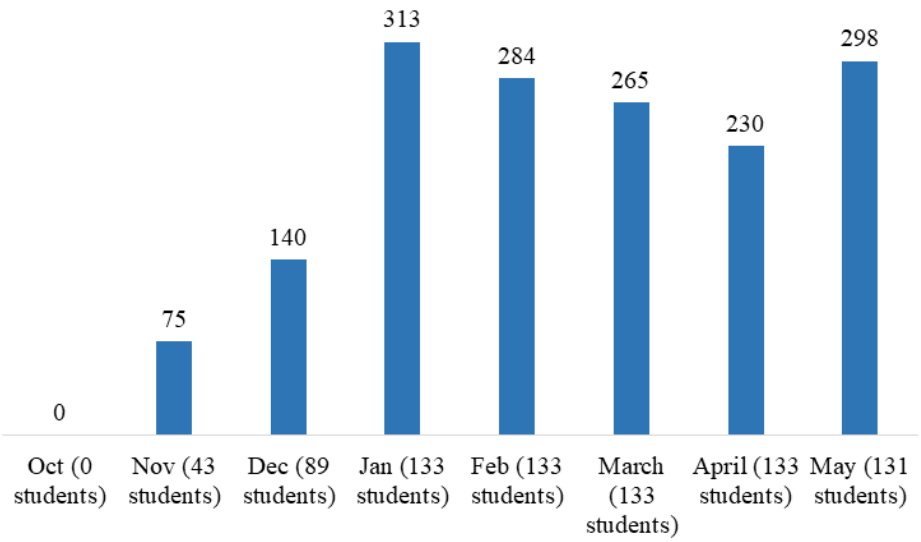
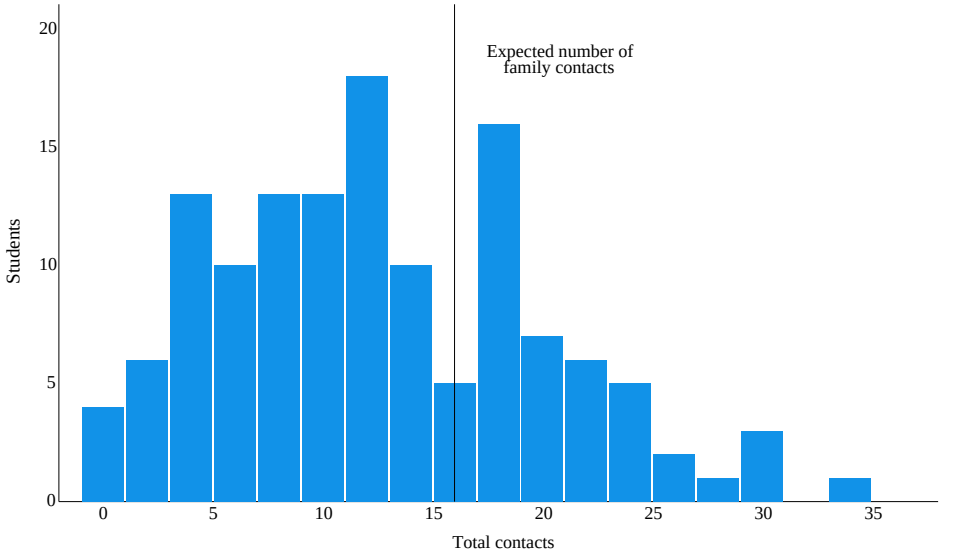


Table 4. Implementation

			Tutoring				Family Engagement	
	First Month	FF Students	Online or In-Person	Minutes Per Session	Total Sessions (*SD*)	Minutes of Tutoring* (*SD*)	Contacts Per Family (*SD*)	Contacts Per Month Per Family (*SD*)
School 1	Jan	13	Online	45	19.5 (4.4)	76.5 (17.2)	10.2 (7.0)	2.0 (1.4)
School 2	Jan	15	Online	45	18.1 (3.7)	71.0 (14.6)	5.1 (4.2)	1.0 (0.8)
School 3	Dec	12	In-person	30	32.4 (3.7)	63.1 (8.2)	23.0 (3.9)	3.8 (0.7)
School 4	Jan	19	Online	45	9.2 (4.9)	26.6 (14.1)	7.8 (5.9)	1.3 (1.0)
School 5	Jan	16	In-person	30	34.4 (3.6)	91.3 (9.5)	14.4 (8.4)	2.9 (1.7)
School 6	Nov	20	In-person	30	48.1 (7.0)	77.5 (11.4)	13.6 (6.7)	1.9 (1.0)
School 7	Nov	23	Online	45	25.6 (7.1)	61.3 (17.0)	11.7 (6.4)	1.7 (0.9)
School 8	Dec	13	In-person	30	23.0 (3.5)	44.5 (6.8)	12.9 (3.7)	2.2 (0.6)
School 9	Dec	2	Online	45	39.5 (3.5)	113.9 (10.2)	13.5 (4.9)	2.3 (0.8)
Overall		133			26.8 (12.9)	64.3 (24.1)	12.0 (7.4)	2.0 (1.3)

*Per Student Per Five School Days

Figure 4. Total Successful Family Contacts Per Future Forward Participant



Impact Results

What was the impact of Future Forward participation on reading achievement?

Table 5 presents the unadjusted baseline (before participation) and follow-up (after) reading assessment results and benchmark information for students retained in the study. The reading achievement of Future Forward and BAU students was equivalent at baseline (β = -0.02, SE = 0.11, p =.836). At follow-up however, the reading achievement of Future Forward students had improved by 0.16 standard deviations in comparison to BAU students. This change did not correspond to a differential improvement in the reading benchmark status of students in Future Forward.

Statistical modeling was used to make a more precise comparison of spring reading achievement scores between Future Forward and BAU students. After adjusting spring achievement by student characteristics, baseline achievement, and assignment block effects, Future Forward did not have a statistically significant impact (β = 0.09, SE = 0.10, p =.378; see Table 6). A simple model (Robustness model), only adjusting for fixed block effects, measured a 0.10 standardized impact (β = 0.10, p = .401), which was also not statistically significant (see Table 6).

Table 5. Reading Achievement – Students Included in the Final Analysis

	At Baseline (Fall)				
	Standardized Reading		Reading Benchmark		
	M	*SD*	Above Benchmark	Below Benchmark	Students
BAU	0.01	1.00	48 (36.4%)	84 (63.6%)	132
FF	-0.01	0.98	50 (37.0%)	85 (63.0%)	135
Total	0.00	0.99	98 (36.7%)	169 (63.3%)	267
	At Follow-Up (Spring)				
	Standardized Reading		Reading Benchmark		
	M	*SD*	Above Benchmark	Below Benchmark	Students
BAU	-0.07	1.01	50 (37.9%)	82 (62.1%)	132
FF	0.07	0.96	52 (38.5%)	83 (61.5%)	135
Total	0.00	0.99	102 (38.2%)	165 (61.8%)	267

Table 6. Full GLM Model Testing the Impact of Future Forward on Reading Achievement

Coefficient	β	Std. Error	Wald Chi-Sq.	*df*	*p* value
(Intercept)	0.302	0.537	0.316	1	0.574
Group (BAU)	-0.089	0.101	0.778	1	0.378
Gender (Male)	-0.189	0.098	3.732	1	0.053
Race/ethnicity (Black)	-0.669	0.173	15.009	1	0.000
Race/ethnicity (Neither Black nor White)	0.138	0.162	0.730	1	0.393
Free or reduced lunch status (No)	0.205	0.124	2.762	1	0.097
Standardized baseline reading	0.423	0.063	45.335	1	0.000
Overall Model Effects					
	Type III Wald Chi-Square			*df*	*p* value
(Intercept)	2.729			1	0.099
Group (FF vs. BAU)	0.778			1	0.378
Gender	3.732			1	0.053
Race/ethnicity	17.817			2	0.000
Free or reduced lunch status	2.762			1	0.097
Standardized baseline reading	45.335			1	0.000
Grade by school fixed effect	77.561			25	0.000

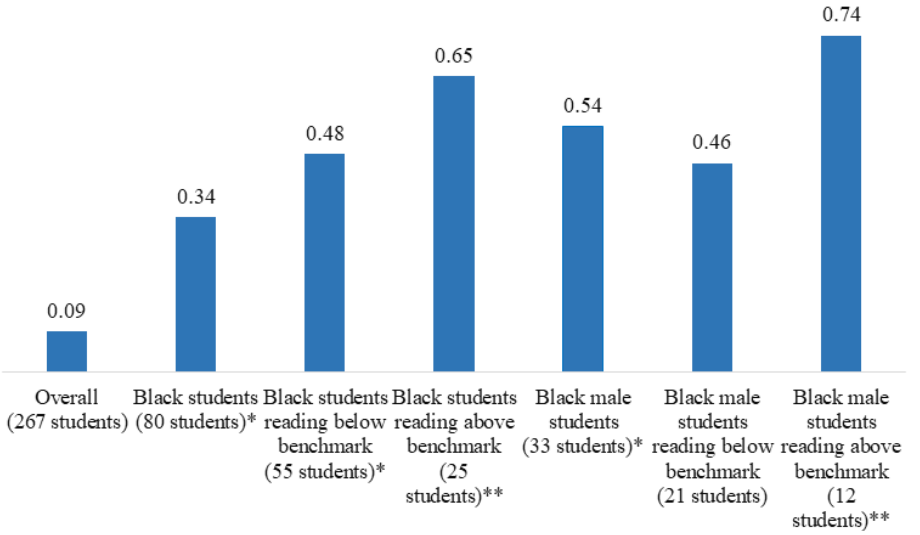
The overall results are qualified by the low level of implementation due to COVID-19. Many students received less than the amount of tutoring a Future Forward participant would typically receive. To adjust for this, we used

Treat-on-Treated modeling. This approach allows us to answer the hypothetical question about what the impact would have been if students had received the expected amount of tutoring. In the context of this study, this is strictly a formative analysis. To conduct a Treat-on-Treated analysis, first, one models the amount of tutoring students assigned to Future Forward or BAU would be expected to receive. One then uses this expected value to estimate the impact of Future Forward on reading achievement. The Treat-on-Treated model results suggest a possible larger but still not statistically significant impact (β = 0.13, p = .364; see Table 7).

Did Future Forward have a differential impact on student subgroups?

Among the tested differential effects, only Black students were found to differentially benefit from their participation; Future Forward had three times the impact on Black students (β = 0.34, p =.095) than was found overall (see Table 7). Future Forward has roughly five times the impact on Black students with reading below benchmark at baseline (0.48 standard deviations, p = .062) and seven times the impact on Black students with reading above benchmark (β = 0.65 standard deviations, p < .001) than it did across all students. Future Forward had roughly five times the impact on Black male students (0.54 standard deviations, p = .052). Even considering the small number of students (n = 12), the impact of Future Forward on Black students with reading above the benchmark was statistically significant. The impact was eight times larger than the overall impact (0.74 standard deviations, p < .001). Together, these results suggest Future Forward likely had a positive impact on underserved students facing more challenges in learning to read (see Figure 5).

Figure 5. Standardized Impact of Future Forward on Reading Achievement



Notes. *Impact approaches statistical significance (p < .10). **Impact is statistically significant (p < .05).

Table 7. Results of Models Testing the Impact of Future Forward on Reading Achievement

	Impact (β)	*SE*	*p*	*n*
Full model with fixed block effects	0.09	0.10	0.378	267
Robustness model – simple model	0.10	0.11	0.401	267
Full participation effect (Treat-on-Treated model)	0.13	0.16	0.364	267
Differential effects				
Black students*	0.34	0.20	0.095	80
White students	-0.04	0.13	0.762	161
Female students	-0.01	0.14	0.963	147
Male students	0.09	0.13	0.474	120
Kindergarten students	-0.00	0.18	0.998	51
First grade students	0.14	0.17	0.425	100
Second grade students	-0.05	0.19	0.804	78
Third grade students	0.43	0.33	0.191	38
Students reading below benchmark	0.08	0.14	0.543	169
Students reading above benchmark	0.12	0.15	0.396	98
Black male students*	0.54	0.28	0.052	33
Black students reading below benchmark*	0.48	0.26	0.062	55
Black students reading above benchmark**	0.65	0.14	<.001	25
Male students reading below benchmark	-0.06	0.18	0.719	79
Male students reading above benchmark	0.15	0.17	0.376	41
Black male students reading below benchmark	0.46	0.40	0.248	21
Black male students reading above benchmark**	0.74	0.21	<.001	12

*$p < .10$, **$p < .001$

Conclusions and Discussion

The current EIR-funded study of Future Forward adds to the growing body of evidence of the effectiveness of the Future Forward program and its partnership approach to supporting student literacy development. This was a challenging year to implement any education program, let alone one attached to a multisite RCT. Future Forward decided to continue supporting students, even considering the difficulties, motivated by an awareness that COVID-19 was causing many students to fall behind in their reading development. Future Forward's goal was to provide as much tutoring to students and support to families as

possible. Although the disruption to schools caused by COVID-19 prevented many students from receiving the full tutoring and family engagement experience, the reduced amount of Future Forward students received seems to have still been beneficial to participating underserved students and families.

Even considering the implementation challenges and associated reduced power of the study, we found evidence that Future Forward had a positive impact on Black students. Future Forward had roughly three times the impact on Black students and five times the impact on Black male students than was found overall. These results echo what we found in our 2019–20 evaluation in which Future Forward had a large positive impact on the school attendance of Black students (Jones & Li, 2023). Interestingly, the impact of Future Forward on Black students was driven by its impact on the Black students meeting the reading benchmark at the start of the year. Even though only 25 Black participants (14 Future Forward, 11 BAU) met the reading benchmark at the start of the year, the impact of Future Forward on this group was large and significant ($\beta = 0.65$, $p < .001$).

The current study's findings are also consistent with the results of a follow-up study of the i3 Future Forward grant, which was comprised primarily of students of color (Jones & Christian, 2021). In that study, students who started Future Forward with above average literacy skills continued to benefit from their participation five years after finishing the program. Students with below average literacy skills did not. However, students with above average literacy, regardless of whether they participated in Future Forward, still tended to fall further behind in their reading development over time as they progressed through their schooling (Jones et al., in press). Students in Future Forward did not fall as far behind, however.

The results of the current study, the 2019–20 evaluation, and the follow-up i3 study suggest Future Forward can be part of a solution for helping Black students develop and retain their literacy skills. However, Future Forward is not enough to overcome inequitable school quality (Hanselman & Fiel, 2017; Merolla & Jackson, 2019), the impact of a pandemic (Pier et al., 2021), and a structurally racist and biased education system (Levine, 2020). Even considering the large impact on Black students meeting the reading benchmark at the start of the year, only seven of the 14 Future Forward participants remained above benchmark at the end of the year.

Investigating how and why participation in Future Forward was particularly impactful to Black students will be part of future research. Work on how schools underserve Black students informs programs like Future Forward's approach to school–family–community partnerships. Existing research demonstrates how the implicit bias of teachers negatively affects Black students as early as prekin-

dergarten (Gilliam, 2005; Zinsser et al., 2022). Teachers expect less success and more trouble from Black students (Gershenson & Papageorge, 2018). Non-Black teachers hold lower expectations for their Black students when compared to their Black colleagues (Gershenson et al., 2016). Witnessing a student's success in Future Forward may help overcome this tendency by helping teachers in their journey to humanize all students and families in ways often antithetical to modern-day race relations (Lawrence-Lightfoot, 2004; Legette et al., 2022).

The focus of Future Forward on engaging families has the potential to mitigate barriers to their participation in their student's school often experienced by Black parents. Black parents may have histories of negative school interactions, microaggressions, stereotypes, and methods of exclusion and intimidation from school staff (Koonce & Harper, 2005; Piper et al., 2022; Posey-Maddox et al., 2021). The school and community-centered exchanges facilitated by Future Forward with families potentially counter these ongoing barriers through contextual adaptation to authentic parent engagement and facilitating collective decision-making in a student's educational experience (Huguley et al., 2021). Ultimately, all parents want to be treated with respect by teachers (Lindle, 1989), and the Future Forward partnership approach may create space for that to occur. Future research on Future Forward will explore how the school–community–family partnership approach changes the ecology around students and may provide more clarity to the results of this and other studies of Future Forward.

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Curtis Jones is the director of the Office of Socially Responsible Evaluation in Education at the University of Wisconsin in Milwaukee. He is interested in examining how the education research and evaluation enterprise can be better positioned to support communities and schools. Correspondence concerning this article may be addressed to Dr. Curtis Jones, 17 W. Main St., Suite 401, Madison, WI 53703, or email jones554@uwm.edu

Marlo Reeves is currently a researcher in youth, family, and community development at the American Institutes for Research (AIR). Her research uses sociological frameworks to study community-based youth organizations as sites of resistance and submission amidst growing social inequities.

Dongmei Li is a planning and evaluation coordinator for the Austin Independent School District. Previously, she was a senior research/evaluation associate at the Office of Socially Responsible Evaluation in Education at the University of Wisconsin in Milwaukee. Dr Li's research interests include K–16 education policy studies associated with access and equity, accountability, educational reform, and international education.