

## Team of Caring Educators Delivering a Specialized Math Curriculum for Racialized Youth During COVID-19

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### Abstract

This study examined the efficacy of an afternoon and weekend academic program called the *Community School Initiative* (CSI) during the COVID-19 pandemic. CSI was offered to racialized students and families from the Jane and Finch community in Toronto which is one of the most under-resourced neighbourhoods in Canada. It involved a partnership between private social enterprise *Spirit of Math* and non-profit organization *Youth Association for Academics, Athletics, and Character Education* (YAAACE). Seven teachers participated in a focus group and 33 students and parents completed a survey to express their experiences attending the CSI. Findings were identified using thematic analysis from a Critical Race Theory paradigm. Key characteristics of effective structural community-programming were identified. The results highlight the importance of access to opportunities in a culturally reflective manner to ensure student success through continuity of care particularly on evenings and weekends involving a team of caring educators.

**Keywords:** math curriculum, poverty, achievement gap, community-based programming

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The COVID-19 pandemic created significant disruptions to education systems worldwide. Approximately 1.6 billion learners across the globe were impacted because of school closures and the abrupt shift to remote learning (Paudel, 2021; Pokhrel & Chhetri, 2021), some of which were without adequate support systems in place to engage learners equitably in virtual spaces. Although educational disturbances impacted many students during the pandemic, community leaders and scholars have called for urgent action to address the growing achievement gap for marginalized students who did not have the same opportunities to engage in remote and virtual learning. For example, racialized students from low-socioeconomic families were without the prerequisites for virtual learning, including access to devices, reliable internet connections, or an environment conducive to learning such as private spaces. Left unaddressed, these opportunity gaps accelerated the widening of achievement gaps due to a lack of optimal conditions for teaching and learning.

This study examined the efficacy of an afternoon and weekend academic program called the *Community School Initiative* (CSI) during the COVID-19 pandemic. CSI was offered to racialized students and families from the Jane and Finch community in Toronto which is one of the most under-resourced neighbourhoods in Canada. It involved a partnership between private social enterprise *Spirit of Math* and non-profit organization *Youth Association for Academics, Athletics, and Character Education* (YAAACE). In our study, seven teachers participated in a focus group and 33 students and parents completed a survey to express their experiences attending the CSI. Findings were identified using thematic analysis from a Critical Race Theory paradigm. Key characteristics of effective structural community-programming were identified.

This is the first study examining structured programming which was designed for elite, gifted students in mathematics adapted to be delivered to under-achieving students, many of

whom have special education needs and facing greater socioeconomic barriers. Our study in the midst of the pandemic explored the following questions: (1) What are the key characteristics of structured programs that effectively support racialized and low-income students during the pandemic? And (2) What are the impacts of accessible and affordable structured programs from the perspective of racialized students and parents on the achievement and opportunity gap?

Structured programs may not be effective without consideration for the local needs and circumstances of students. Findings from this study can help inform policymakers and stakeholders in mitigating barriers to high-quality supplementary programming for racialized and low-income communities.

### **COVID-19 and Education Disruptions Intensifying the Opportunity Gap**

Throughout this article, we refer to the achievement gap as the persistent disparity in academic performance between different groups of students, such as between white and minoritized students and those from higher-income and lower-income households (Hartney & Flavin, 2014; Rozek et al., 2019). With robust evidence that suggests the achievement gap has since widened due to the additional barriers created by the pandemic (Goudeau et al., 2021), there is a need to provide more extensive support for Black and marginalized students to mitigate such systemic barriers and inequities. In Canada, similar to other countries, public health measures were repeatedly adjusted over time in response to COVID-19 ranging from masking and social distancing to school closures, leaving very young children and those from marginalized groups (e.g., immigrants, racialized minorities) most affected (Gallagher-Mackay et al., 2021; Royal Society of Canada, 2021; Toronto Foundation, 2021).

The Toronto District School Board, one of the largest school boards in North America, has experienced ongoing closures and multiple transitions to online, remote learning since March

2020 (Gallagher-Mackay et al., 2021). Low-income and racialized students were impacted more severely by such changes to remote learning as racialized neighbourhoods had the most severe COVID-19 outbreaks. The result of these educational inequities negatively affects the academic pursuits of students, thereby generating lifelong impacts on the academic and career pathways of students, their families, and the broader community. Educational policies typically regulate school learning resources, and thus greatly influence outcomes related to education including health and wellbeing. Without intentional targeted policies to mitigate on-going inequities that have intensified due to COVID-19, there may be an unintended shift of priorities that focus on a narrow range of student knowledge and literacy and/or numeracy, placing more students in danger of academic regression. It is essential to understand the technological barriers and challenges associated with remote learning to increase engagement and online participation in distant learning, and on a larger scale mitigate opportunity gaps, particularly for students from racialized and under-resourced communities.

The shift from in-person to remote learning revealed that elementary and secondary schools were differentially equipped to minimize the disruptions caused by COVID-19, with technology either previously embedded into the curriculum (e.g., use of smart boards, use of online learning platforms, and student designated worksites for homework) or readily available for students who had to switch to distant learning. Schools in the Jane and Finch neighbourhood, located geographically in northwest Toronto, experienced added challenges due to pre-existing historical disparities relating to more limited access to resources and funding. Such schools did not have sufficient and consistent access to resources and technologies for distance learning. As it concerns youth and adolescents in particular, schools in the Jane and Finch community have the highest ranking on the Toronto District School Board's Learning Opportunity Index (LOI),

which means they face the greatest systemic challenges in their community as it relates to educational achievement and barriers to effective teaching and learning (Eizadirad, 2019). For example, three of the top five schools most in need of additional resources are located in the Jane and Finch community. Families from these schools have a lower median income, a greater percentage of adults with lower educational attainment, fewer adults with university degrees, and more single-parent families than in other communities across Toronto. Thus, structurally students attending schools from lower socio-economic backgrounds continued to grapple with more barriers.

### **The Community-School Initiative: A Public-Private Partnership Between YAAACE and Spirit of Math**

The Youth Association for Academics Athletics, and Character Education (YAAACE), a non-profit founded in 2007, created a program to help mitigate the inequality of opportunity that was prohibiting student success given the plethora of risk factors facing the Jane and Finch youth and the schools within the community experiencing disruptions due to COVID-19. The objective of YAAACE is to help marginalized, racialized children and youth from under-resourced communities through comprehensive year-round programming and activities in a manner that is affordable and accessible to create continuity of care (Eizadirad, 2020). YAAACE strives to close the achievement gap by focusing on minimizing the opportunity gap through its social inclusion strategy. YAAACE's social inclusion strategy was co-constructed by key stakeholders from the community to prioritize the interests and needs of children and youth. Some of the programs offered by YAAACE includes academics, athletics, recreation, technology, and the arts. You can learn more about the programs offered and the social inclusion strategy via the YAAACE website: <https://yaaace.com/>

The Community School Initiative (CSI) was initiated as a supplementary academic program offered to residents of the Jane and Finch community in partnership with the for-profit enterprise Spirit of Math (SoM). Together they delivered a structured math curriculum to students in grades two to eight, ages eight to 14 years old, from September 2020 to May 2021. SoM is an international enterprise servicing over 11,000 exceptionally performing students across 40 hubs in North America and Pakistan. The CSI provided alternative academic support for racialized students afterschool and on weekends to improve their math skill guided by the curriculum, resources, and pedagogies provided by SoM. The cost of the program was subsidized at \$100 per person, although the program typically costs \$3000 as a private sector service. The aim was to continue to deliver high-quality supports and resources for children and youth to mitigate larger systemic inequities impacting the residents throughout the pandemic rooted in the inequality of opportunity.

### **Theoretical Frameworks**

Two fundamental ideas guided the theoretical framework for this study. The first draws from Critical Race Theory (CRT) in education. CRT centres the cultural disconnect and the barriers in classrooms and schools, particularly for minoritized students and educators, associated with systemic racism and its intersection with colonial logic and white supremacy. Given the widening achievement gap and overall lower expectations held for students of colour, it is important to engage in anti-racist work in education research. By using CRT, it is possible to analyze the social conditions that perpetuate racism and systemic inequities within institutional policies and practices that lead to achievement disparities across different social groups. The second theoretical framework draws from YAAACE's social inclusion framework. YAAACE seeks to engage students and families in the Jane and Finch neighbourhood through socio-

culturally relevant, responsive, and sustaining year-round programming (see Eizadirad, 2020, for a more in-depth history of YAAACE; Paris, 2012). The social inclusion framework is operational and ensures that programs and services are delivered in a way that is affordable, accessible, and socio-culturally relevant to the needs to mitigate the opportunity gap impacting community members.

### **Methods: Research Setting, Design, and Participants**

The present study investigated the experiences of seven Ontario Certified Teachers (OCT) and 33 racialized students and families from under-resourced communities attending the CSI during the pandemic. In particular, we were focusing on identifying key characteristics and strengths that contributed to an enjoyable virtual learning experience as well as barriers and challenges that persisted during program implementation. Early in the research design phase, a decision-making committee of 10 people was created with two students attending YAAACE programs, two parents who were actively involved in YAAACE, two research associates, the director of YAAACE, the principal investigator, and two SoM executive board members. The decision-making team was critical for establishing a plan for knowledge translation, creation of survey and focus group questions, and consulting. For example, youth and parent advisors emphasized the importance of making information available in formats that are accessible to the community and non-academics. In response, we created various infographics and posted them on the website for the research project ([www.communityschoolinitiative.com](http://www.communityschoolinitiative.com)) periodically to make the information accessible in community-oriented language. The meetings were conducted remotely via Zoom to make them more accessible. All stakeholders were part of discussions and decision-making about collecting the data and sharing the findings and resources with the community. It was agreed that surveys and a focus group with the teachers would complement

one another and address the research objectives. SoM teachers rigorously trained the teachers prior to start of the program to ensure they were delivering the program as it was intended. Teachers were asked only to use the pedagogies and lessons from SoM guided by the Ontario math curriculum. Overall, four teachers and 33 students and parents completed the survey portion of the study and nine teachers participated in the virtual focus group.

### **Data Collection and Analysis**

The CSI program ran from September 2019 to September 2020. Data were collected between June to July 2021 upon completion of the CSI program. The survey was administered to teachers, students, and parents through Qualtrics, a secure data collection website, and took approximately 30 minutes to complete. They were completed anonymously and included a combination of open-ended and Likert scale questions. Questions captured demographical data about participants and information about their experiences attending the CSI. Parents and students were sent a link to complete the survey on their personal devices; however, in the case that was not feasible, laptops were provided to parents and students to complete the survey while attending the program (at the time, it was allowed by health guidelines). A \$30 Amazon gift card was provided to those who participated as a token of appreciation for their time. The decision-making committee advocated for Amazon gift cards, identifying them as practical given the pandemic conditions and the needs of the families in the community.

A focus group was conducted on Zoom with all the teachers implementing the SoM curriculum to gather more information about their experiences delivering the program in alignment with SoM pedagogies. The duration of the focus group was 90 minutes and conducted with two research assistants and the principal research investigator. Responses were examined by the core research team using CRT as a paradigm and thematic analysis as a methodology (Clarke

& Braun, 2017; Denzin & Lincoln, 2000). The research team read the focus group transcripts and survey responses to identify codes. Related codes were then grouped to formulate more prominent themes that aligned with key trends identified in the literature review guided by CRT and YAAACE's social inclusion framework. The narratives expressed by the teachers helped identify inequities that served as barriers to student achievement, impeding their progress to achieve their full potential, as well as barriers to confidence in teaching in the specialized math curriculum. Descriptions of the participants can be found in Appendices A and B at the end of this paper.

### **Results**

The CSI provided a structured math curriculum to participants in the program in a manner that was affordable, accessible, and socio-culturally relevant and sustaining to the needs of the racialized students and families (a combination of in-person and remotely due to COVID-19 health guidelines). Each student was placed in a grade based on diagnostic assessments and given a personal binder to keep track of their progress. Teachers described many positive aspects of the SoM program that were appreciated. For example, teachers appreciated having step-by-step structured math lessons beforehand. This made it possible for teachers to devote more time to assisting students and less time on planning and prepping lessons. Teachers also mentioned how the structured nature of the program made it easier to identify kids who required more supports. Further, teachers agreed that it was not difficult to implement the program, with one teacher noting:

I'm not having that much difficulty in terms of providing the program to my students. My students seem to still be pretty engaged. I do have some of the junior kids and a lot of them said their favorite subject is math, so you guys are definitely doing something that's

engaging them in Spirit of Math for them to start turning around, because most kids do not say that. I mean, yes, they said basketball too, but they also said my favorite subject is math.

SoM's math curriculum is designed in progressions such that students continue to advance on the previous knowledge learned each time they revisit the subject matter. This way it is inherently student-centred and works with the students' unique strengths in the program. One parent stated that the strength of the CSI was that "the teachers and staff reflect the cultural backgrounds of the students." Further, there was a shared sentiment that the program was family-centred, supportive, and community-focused. An example of family-centred learning was illustrated when one parent stated in the survey that:

Virtual learning at home has given me an opportunity to observe the teacher's methods and strategies for the work. There are also videos on the SOM portal that break down the strategies for each lesson so I can ensure I'm reinforcing the same techniques without confusing my son with different strategies.

The second most significant finding evident from the focus group was the strength of the teacher's working as an interdisciplinary team with coaches and volunteers to support students and improve their engagement and overall experience in the program. The teachers agreed that coaches in particular increased student engagement and accountability in virtual platforms. This contributed to creating continuity of care in alignment with the YAAACE's social inclusion strategy. For example, one teacher said, "the coaches helped huge in that aspect and getting them there and to help us monitor whose cameras are on or off." One teacher described coaches as the surrogate parents of YAAACE stating, "the coaches are pretty much the YAAACE surrogate parents. They make sure the kids are engaged."

Similarly, parents shared immense praise for the program and the and sports incentive aspect of the program. As a survey response, one parent noted:

The academic portion is just as (if not more) important for obvious reasons. It reinforces that they are more than just athletes. It teaches them that they are able to accomplish difficult things if they try hard. And it shows them that they are valued which encourages them to try harder. The public school system often does not provide this, especially in lower-income neighbourhood which are predominantly Black.

The presence of the coaches was instrumental as the students had existing relationships with them rooted in common interests and respect. Coaches provided mentorship in and out of the classroom. One parent reflected on the difference in their child's engagement in public school compared to attending the CSI:

Virtual learning is tough for both students and parents. It's not as effective nor as motivating as in-person learning. The students learn virtually for school all day which is hard enough as it is. When they are in person, the masks are awkward and some kids are probably scared of getting sick which is a distraction. Having said that, the SoM teachers are amazing at keeping the boys motivated and engaged whether online or in person.

Very different experience than the public-school virtual experience.

The effectiveness of coaches being involved was ranked very high at 9.33 by the parents. As a collective, the continuous access to teachers and coaches and their direct on-going communication, support, and collaboration helped increase student engagement. For example, student cameras were turned on more consistently for online classes and tasks were completed more on time due to the trusted rapport and the high expectations set by the team of teachers and coaching working together to support students.

Differences in marking student work was an area identified with conflicting expectations between YAAACE teachers and SoM instructors. As part of the SoM expectations, students either get the question right or wrong without partial marks given. Teachers expressed frustrations about not being able to give partial marks or more time to students to complete certain tasks. They felt getting it all right or wrong did not align with best practices and may contribute to reducing students' confidence in trying to master the content. As one teacher explained:

The student got 30% on the work, and why did they get 30%, not because their answers weren't correct, but because they didn't do it the way expected. Therefore, if they do too many steps it's a mark deducted, or if they do too little, also marks off.

Teachers felt that the SoM pedagogy needed more adaptations and flexibility to meet the needs of YAAACE students. As another teacher states, "the issue is they don't allow us to use external resources or even resources within our own daily practices as part of the curriculum". Overall, numerous teachers attributed this barrier to the typical curriculum and pace of the SoM programs being tailored towards gifted, high-achieving students. As one teacher explained:

This program is definitely geared towards kids that excel in math and most of our kids are struggling and most of them are on IEPs [Individual Education Plans]...a lot of these kids need the extra time for processing. So you know as a teacher, do I kind of follow the Spirit of Math guidelines or do I follow the needs of my child, so that's sort of what I try to figure out.

Overall, teachers felt the benefits of the program outweighed the processes that could have been improved. Clarifying these expectations and further adapting the SoM curriculum, expectations,

and assessment procedures to meet the needs of lower achieving students is an area that needs further exploration to improve the effectiveness of the CSI.

Many challenges were associated with teaching, learning, and parenting in a remote and blended learning model associated with technology access and challenges with getting their child/children to navigate the remote educational platforms. As the survey results indicated, most parents, students, and teachers preferred in-person learning. One parent observed that “remote learning is not an ideal model for a child with ADHD [Attention Deficit Hyperactive Disorder],” and another parent shared that for their children it was “harder to focus and learn compared to in-person learning.” For students, more than 70% said they prefer in-person learning with one student stating that, “I can’t enjoy certain subjects where I do not get to do hands-on activities which then makes learning those subjects very boring and makes it a burden to complete those online worksheets and do the work”. Teachers stated that teaching remotely made assessing student engagement, their ability to support students one-on-one, and the collection of student work more difficult. Teachers also noticed more inconsistent attendance from the students in a remote context, which made it challenging for teachers to progress through the SoM curriculum expectations. There were also challenges with assessing student engagement remotely with cameras off, as body language was not observable since many cameras and mics were turned off during the online learning sessions.

Overall, although there were many challenges and obstacles due to COVID-related disruptions, the CSI played a positive role for participants by offering students extra-curricular programming and academic support that was culturally relevant, instructed by certified teachers, basketball coaches, and volunteers that were representative of the mainly Black student demographics. Overall, teachers, parents, and students as a whole frequently stated that the CSI

provided students who were having difficulty in the educational system with a chance to improve and grow socially, emotionally, and academically even during the pandemic on evening and weekends. By the completion of the program, the majority parents and students reported having increased confidence in their numeracy abilities.

### **Discussion**

This study employed thematic analyses guided by CRT tenets to understand teachers' experiences delivering a structured math curriculum to racialized students from low-socioeconomic backgrounds. Moreover, student and parent perspectives were explored to better understand the effectiveness of the program and the systemic barriers impacting teaching and learning conditions during the pandemic. The thematic analysis revealed that culturally relevant and responsive pedagogies, along with cross-professional teams (e.g., coaches, support workers, volunteers), were critical factors for student success through creation of continuity of care on evenings and weekends.

### **Effective Program Implementation**

A critical examination of initial digital pedagogy adoption by Greenhow et al. (2021) found that many tensions have arisen between teachers, parents, and policy-makers due to major differences in educational experiences for students who were subject to different deliveries of remote digital pedagogy. With the prevalence of online and blended models of education projected to increase in the future (O'Keefe et al., 2020), pedagogical approaches such as culturally responsive, student-centered, hands-on, inquiry-based, critical, and other currently utilized pedagogies are important in our classrooms. The challenge will be designing and implementing high-quality instruction, online and in-person, that supports diverse cultures and learning styles that align with best practices. This is significant to meet the needs of all students

from various social groups and communities, particularly equity-deserving students who experience more systemic barriers in schools. There is no such thing as a one-size-fits-all solution in education and understanding how to implement new innovative instructional practices and pedagogies will take some experimentation. Responses will be varied depending on resource availability, student and community needs, and teachers' capabilities. This may have a positive impact on teaching as teachers have been challenged to rapidly develop skills and adapt their pedagogies (Greenhow et al., 2021). In conclusion, opportunities for structured programming must be accessible financially and geographically to eliminate the barriers that exist in the community to attend such programs.

### **Culturally Relevant and Responsive Pedagogy**

The need for culturally relevant pedagogy to reduce gaps in student achievement, especially for Black students, is needed given their long history of educational struggle and poor achievement due to systemic barriers and colonial practices (Maynard, 2022; McLaughlin, 2014; Wint et al., 2022). Educators need to understand their own and other cultures and understand the importance of culturally relevant teaching to reduce the academic disparities along socio-economic class, racial, ethnic, and cultural characteristics that have been observed for decades (Howard, 2003; Prater & Devereaux, 2009). When race, power, and privilege are not critically analyzed and deconstructed in classrooms, teachers risk marginalizing other cultural perspectives while sanctioning the dominant Eurocentric ideology prevalent in Canadian schools (Allen et al., 2017; Eizadirad, 2019). Critical examination of race and other sociocultural concepts that disenfranchise K to 12 students in schools must be an integral and reflective practice for teachers and administrators, including within teacher education programs. It requires teachers to get a deeper understanding of their students and the communities and families they serve. Requiring

teacher candidates to gain skills in critical reflection and critical consciousness to deconstruct the existing social order is imperative to support culturally relevant and responsive pedagogy in teacher education programs and the courses they offer.

Student-centered learning is a pedagogy that places students at the centre of their educational engagement and active meaning-making. It is a more collaborative teaching strategy than a teacher-centered classroom (Knowlton, 2000). A teacher-centered class is one where the teacher introduces “specific things that are worthy of being studied, and students are told how to interpret them” (p. 6). As part of student-centered pedagogies “learners construct their understandings through their actions and experiences on the world” (Mascolo, 2009, p.1). This is a shift away from the traditional “lecture-and-test” modes of instruction. In a student-centered classroom the relationship and role between students and teachers is more dynamic and less regimented than the more rigid teacher-centered approach (Mascolo, 2009). Studies have shown that student-centered learning environments have a positive effect on students’ motivation to learn and be engaged (Pedersen & Williams, 2004).

### **Delivering Cross-Sectoral Structured Programs**

The CSI addressed a need for affordable and accessible programming to mitigate opportunity and achievement gaps in racialized and under-resourced communities through continuity of care delivered by a team of caring educators and professionals. Teachers were challenged to alter their teaching practices and find new strategies and digital applications to engage their students and communicate with parents (e.g., Kahoots, Brightspace, Khan Academy, WhatsApp), and educate themselves in finding “new ways to get students more involved and excited about their education” as one teacher explained. In terms of implementing the SoM curriculum, a curriculum that is geared towards gifted and high-achieving students,

teachers felt like the curriculum moved too fast for some of the learners, particularly older children who needed more time to adapt to a new system. Teachers felt there was not enough time to effectively learn the curriculum as part of the SoM teacher training and expressed wanting more training to help them feel more confident implementing the expectations.

Strained parent-school relationships in racialized and low-income communities are influenced by teachers' "deficit" thinking, shaped by years of marginalization, ineffective policy, high poverty, limited funding, and other stresses that further strain teachers' relationships with families and communities (Flores & Kyere, 2021; Gorski, 2012). Traditionally, the education system situated student difficulty by framing students and their families as lacking some of the academic and cultural resources necessary to succeed in society (Smit, 2012). This is deficit thinking, which focuses on student shortcomings from a stereotypical lens, and does not examine lack of access to opportunities as a driving force behind such shortcomings. Furthermore, deficit thinking ignores the role of institutional racism and other systemic barriers impacting student learning in schools (Shizha, 2016). Viewing students and parents through a deficit lens perpetuates racist and/or classist stereotypes, and subsequently alienates students from high educational attainment, creating more barriers to achieving a high-quality life and becoming an active community member.

Despite the challenges experienced, intentional partnerships such as the one between YAAACE and Spirit of Math can not only act to mitigate the impact of structural inequities on learners, but position schools at the centre of communities and build community resilience and capacity. Regular participation in after-school programming is associated with improved health outcomes, civic engagement, and occupational attainment later in life (Snellman et al., 2015). Further, research on after-school programming emphasizes the importance of peer

relationships, youth engagement, and leadership, which are all associated with positive developmental outcomes (Dawes et al., 2017; Hurd & Deutsch, 2017). When after-school science, technology, engineering, arts, and math (STEAM) programs are embedded in community schools, and affordable and accessible to community members, they can promote upward mobility for families and students. This is essential for promoting safer communities and robust societies (Duodu et al., 2017). Schools that implement supplementary educational programs in ways that are affordable and accessible have been able to narrow the opportunity gap significantly, leading to positive outcomes for the students, families, and the larger community they are situated within (Reich et al., 2020).

### **Conclusion and Next Steps**

In conclusion, the CSI was effective in delivering a structured community-based program during the COVID-19 pandemic aimed at mitigating the opportunity gap for racialized youth from low-socioeconomic status who may not have been afforded the opportunity to participate in a program due to costs and structural inequities. It did this by delivering the structural math curriculum through culturally relevant and responsive pedagogy along with cross-professional teams to create continuity of care for students, particularly on evenings and weekends. Further research on the effective implementation of teaching and learning strategies is needed as the effects of the pandemic on students, families, and communities continue to emerge.

A number of limitations may be associated with this study. First, many parents and students did not complete the survey sent out by the research team. This could be due to competing priorities that were more important for parents and students during the pandemic. Second, self-report surveys are subject to biases where subjects may rate their experience more positive due to it being more socially acceptable. These one-time measures may also be

influenced by external factors such as where the survey was completed and how their experience was at that moment. In the future, having pre- and post-survey responses from students and families to compare experiences before participating in the program would be beneficial to attribute skills, impact, and personal attributes (e.g., confidence in math) more strongly to the program. Second, for a more integrative account of the program, coaches, the program director, SoM strategists, and support workers could be asked to provide their experiences of the program. This would help form a more holistic account of the benefits and challenges as each role interacts with students in a different capacity. This may contribute to understanding the program better and identifying ways to strengthen it.

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**Appendix A: Characteristics of Parents who Completed the Survey (n = 33)**

Characteristics		Number
Race	Black	24
	Pilipino	1
	Mixed	5
	Other	3
	Individual Education Plan (student identified with an exceptionality & requiring additional supports by their school)	
	Yes	7
	No	26
Housing Status	Own	14
	Rent	17
	Subsidized housing	2
	Setting	Apartment
Condo		2
Townhouse/detached		20
Who lives		2-Parent
	Single Parent	15
	Other	2
	Education	< Grade 12
High school		2
College		17
Undergraduate		7
Graduate		4
Other		
Access to personal computer		Always
	Often	2
	Sometimes	5
	Rarely	2
	Never	0
	What delivery methods for your child needs	In-person
Online		0
Hybrid		10
Unsure		1
How often do you communicate with teachers		Always
	Often	5
	Sometimes	17
	Rarely	6
	Never	1

**Appendix B: Characteristics of Educators Who Completed the Survey (n = 4)**

Characteristics		Educators (n = 4)
Age		39 (8.4)
Ethnicity		
	Black	3
	South Asian	1
Years of experience		11 (4.9)
Years at YAAACE		9 (4.9)
Educator felt supported (on a scale of 1 to 10)		8.25 (0.4)
Educators felt connected to parents/caregivers (on a scale of 1 to 10)		7.25 (1.1)
Educators felt coach had positive influence ((on a scale of 1 to 10))		7.25 (4.2)