Connections, Contributions, Courage, and Curiosity:

Review and Analysis of Illustrative Mathematics Curriculum Implementation at Flint Cultural Center Academy

Impact Research
Illustrative Mathematics
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Executive Summary

To better understand the factors that contribute to mathematical confidence and positive academic outcomes for students, we conducted a yearlong study of the Flint Cultural Center Academy (FCCA) in Flint, Michigan. The school piloted the Illustrative Mathematics (IM) curriculum in 2023 and formally adopted it during the 2024 academic year.

We concluded that positive student outcomes in mathematics at FCCA were not the result of any single factor, but of a set of conditions that were intentionally aligned and mutually reinforcing. Central to this work was the adoption of IM K–12 Math®, which provided a coherent, problem-based instructional model that shaped expectations for teaching and learning.

This model was put into practice through aligned efforts across the school, including:

- leadership committed to creating the conditions for effective implementation
- teachers who shifted instructional practices and collaborated across grades
- ongoing professional learning and implementation support
- an engaged and active student and family community

Following the adoption of IM Math, students at FCCA not only demonstrated academic growth compared to their previous curriculum, they also significantly outperformed their Flint peers who were not using IM Math. This case study highlights what is possible when a high-quality curriculum like IM Math is implemented as part of a purposeful, schoolwide instructional strategy.

Introduction

Student success in mathematics begins with access to high-quality instructional materials (HQIM). Research indicates that when students have access to HQIM, positive mathematical outcomes follow (Hill et al., 2020; Jackson & Makarin, 2018; Kane et al., 2016; Sahm, 2015).

At the same time, the impact of any high-quality curriculum depends on how it is implemented. Adopting new instructional materials requires shifts in practice as teachers and students adjust to new structures and expectations. Without a clear and sustained implementation plan, even strong curricula may not reach their full potential in the classroom.

EdReports recently shared that, while over 70% of the surveyed U.S. districts felt confident in their selection of HQIM, nearly 50% reported struggling with implementation (EdReports and DecisionLab, 2025).

Given these prior findings, our study aimed to answer the question, "What conditions support the successful implementation of a high-quality curriculum like IM Math?" To answer this question, we conducted qualitative and quantitative research on the implementation process at FCCA between October 2024 and October 2025.

Findings indicate that when IM Math is adopted as part of an aligned set of instructional supports—active school leadership, sustained professional learning and coaching, committed teachers, and an engaged student and parent community—successful curriculum implementation is achievable, and student outcomes in mathematics improve.

Background

Located in Flint, Michigan, the Flint Cultural Center Academy (FCCA) is a tuition-free, STEAM-focused K–12 charter school. The school was founded in 2019 with grades K–8 and began expanding to 9–12 in 2024.

Over the past decade, the city of Flint has experienced economic, health, and educational challenges. The creation of FCCA was part of an effort to revitalize the city and improve student educational outcomes. Built with support from the Charles Stewart Mott Foundation, FCCA is intentionally surrounded by the Flint Institute of Music, the Flint Institute of Arts, the Flint Public Library, the Sloan Museum of Discovery, and the Longway Planetarium. FCCA is a Microsoft Flagship School of 650

students and serves a roughly 75% Black and Hispanic student population. Students are selected via a statewide lottery, and prior academic performance is not considered in selection.

In 2023, FCCA piloted IM Math in the second, fourth, and sixth grades, before adopting the curriculum in 2024 at all grade levels.

Methodology

With FCCA as our research case, we took a mixed-methods approach, using qualitative and quantitative methods. These methods consisted of:

- **In-depth case study interviews:** These were roughly 30-minute interviews of administrators, a math coach, a professional learning coach, teachers, students, and parents. During that time, we asked about their experiences with IM Math, including their implementation plan, what was working well, and where there were challenges. These interviews were recorded and transcribed. (See Appendix for details.)
- **In-person observation**: Two IM employees specializing in curriculum implementation conducted formal and informal classroom observations. They used the IMplementation Reflection Tool (IRT). These observations were recorded and transcribed. (See Appendix for details.)
- **Analysis of Teacher and Student Beliefs survey data:** Each autumn and spring both students and math teachers at FCCA take a beliefs survey that measures their expectations of learning, math confidence, and belief of improved math outcomes. (See Appendix for details.)
- **Analysis of benchmark and summative data:** Student test scores were used to determine if using IM Math combined with a holistic plan of implementation led to improved student outcomes. (See Student Learning Outcomes.)

Findings

Administration Actions—Cultivating an Environment of Success

Student success in mathematics is not simply reliant on adopting a high-quality curriculum like IM Math. How a curriculum is enacted and incorporated into the larger school system and environment is critical.

When Eric Lieske became the founding CEO/Superintendent of FCCA, he wanted the school to be part of the greater revitalization of the city of Flint, while also serving the students. Lieske said:

> *Education has been tough in the Flint area. The water crisis wasn't helpful and we knew our kids were going to be [feeling] low, looking at just their previous experiences in school. Whether that was the case or not the case, we believed and continue to believe that building an amazing school culture for all stakeholders, especially the students and their families as well as the staff was our number one priority. So realistically, we put all of our energy into building a school where everybody feels seen and heard, everyone has a sense of belonging and feels special [and] that they're engaged in joyful, meaningful and relevant work.*

At FCCA, there is a shared tradition of high expectations combined with high levels of support. As former Math Instructional Coach and Coordinator and now Principal of FCCA Heather Cichon explained, “We are built on relationships between the staff and the students. Between the staff and the staff administration. That is like the foundation for everything that we do here. We want to have positive relationships with the families, with the students. We know that students learn best from somebody that they respect and that they know cares about them.”

Those expectations do not end when the bell rings. Further academic enrichment is provided after the school day ends with support from the Flint Center for Educational Excellence. The center also provides professional learning support for FCCA teachers.

Even though the structure for success was in place since the school’s founding, a different math curriculum was being used, and the expectations surrounding student learning and teacher support were not being met. FCCA teachers were the first to sound the alarm that the mathematics instruction needed to change. They said it was not meeting the needs of students or teachers.

In response to this feedback, school leaders conducted classroom observations along with careful data analysis. They reported not seeing improved student performance or positive shifts in how students' view themselves as math learners.

Lieske explained, "I thought we were selecting high-quality curriculum materials, [but] the student engagement wasn't there. The connections to their experiences weren't occurring. I don't think the teachers were set up as well as they should have been for success."

School and district leaders decided to search for a new math curriculum. To guide that search, they developed a Vision for Mathematics statement that reflects their values and expectations:

> *At FCCA, math instruction is engaging and accessible to all our learners. Our student-centered classrooms are rooted in rigorous grade-level math experiences, promote real-world problem solving, and support all learners in becoming confident, critical, and efficient mathematicians. Our team fosters rich math discussions and pushes themselves, their students, and each other to take risks, make mistakes, and grow each and every day.*

As Principal Cichon noted, "We want the kids engaged, we want them dealing with everyday math, we want them talking, we want them to build those relationships and connections."

After reviewing several alternative curricula, leaders decided that IM Math best reflected their vision statement, offering a coherent, problem-based instructional model aligned with their goals for teaching and learning. FCCA adopted IM Math via IM Certified® partner Kendall Hunt for all grades.

Professional Learning and Implementation Support

Selecting a high-quality curriculum is one of the most important steps in a journey towards successful implementation. As EdReports (2021) notes, "The body of research and data on the impact of high-quality instructional materials is clear: curriculum choices matter. But how teachers use curriculum matters even more." The educators at FCCA understood this and developed a plan to support implementation of the IM Math curriculum.

Sustained, practice-based professional learning helped FCCA educators enact the IM Math instructional model in their classrooms. In summer and school-year sessions,

teachers also reviewed content needs and explored common student (and teacher) misconceptions.

Dr. Rachel Smilowitz, who led professional learning and coaching efforts at FCCA for three years, shared her strategy and observations:

> *When I arrived at FCCA, I immediately saw a strong school culture and teachers who were eager to strengthen their math instruction and willing to embrace Illustrative Math. My initial implementation plan focused on shifting classroom practice so that students did the heavy lifting while teachers served as facilitators, using the curriculum's math language routines and structured math talk to empower students to share their thinking. As we worked together, it became clear that teachers also needed deeper content support—particularly with visual models—so we dug into tape diagrams, number lines, hanger models, and the progression of additive, multiplicative, fractional, and proportional reasoning across grade bands. Through ongoing classroom observations, we continuously refined professional learning, and we incorporated student-work sorts using cool-downs to ground our decisions in what students were actually doing and understanding.*

Part of that refined professional learning involved teachers taking on the role of students and viewing the lessons from that perspective. As Cichon explained, this meant "taking the end-of-unit assessment ourselves, taking the cool-downs, and actually *doing* the math."

As teachers progressed into the second year of implementing IM Math, support focused more on encouraging student mathematical discourse and better understanding resources like Math Language Routines. Getting students comfortable with using mathematical language was a main goal. As teacher Darbie Barkman noted, "One of the barriers I think at the beginning is kind of getting the kids comfortable with talking about math. I think a lot of them either think that they're math people or they think that they're not math people. And kind of learning to teach them all that you can be a math person and talk about math even when they're not the most confident is really important."

Pacing was another focus of implementation. Fourth-grade teacher Evan Vandeputte said her breakthrough came when she shifted from teaching with "fidelity" to teaching with "integrity." In other words, she used her training to adjust and adapt lessons where it made sense, based on student needs. Vandeputte explained, "It's definitely an

adjustment. But it's going really well now, and it's way easier to manage my time. Especially when you've been through it once. I mean, it's easy to see what's coming."

Principal Cichon agreed: "As we grow with IM, we can flex to the students' needs and how we can adapt those lessons if necessary for our students who are either struggling or for our students who are excelling."

FCCA continues to provide professional learning support to teachers as they implement IM Math, while also consistently evaluating progress using measures such as surveys and focus groups. FCCA also collects and shares implementation data through the Networked Improvement Community (NIC) program at the Flint Center for Educational Excellence.

Teacher Actions

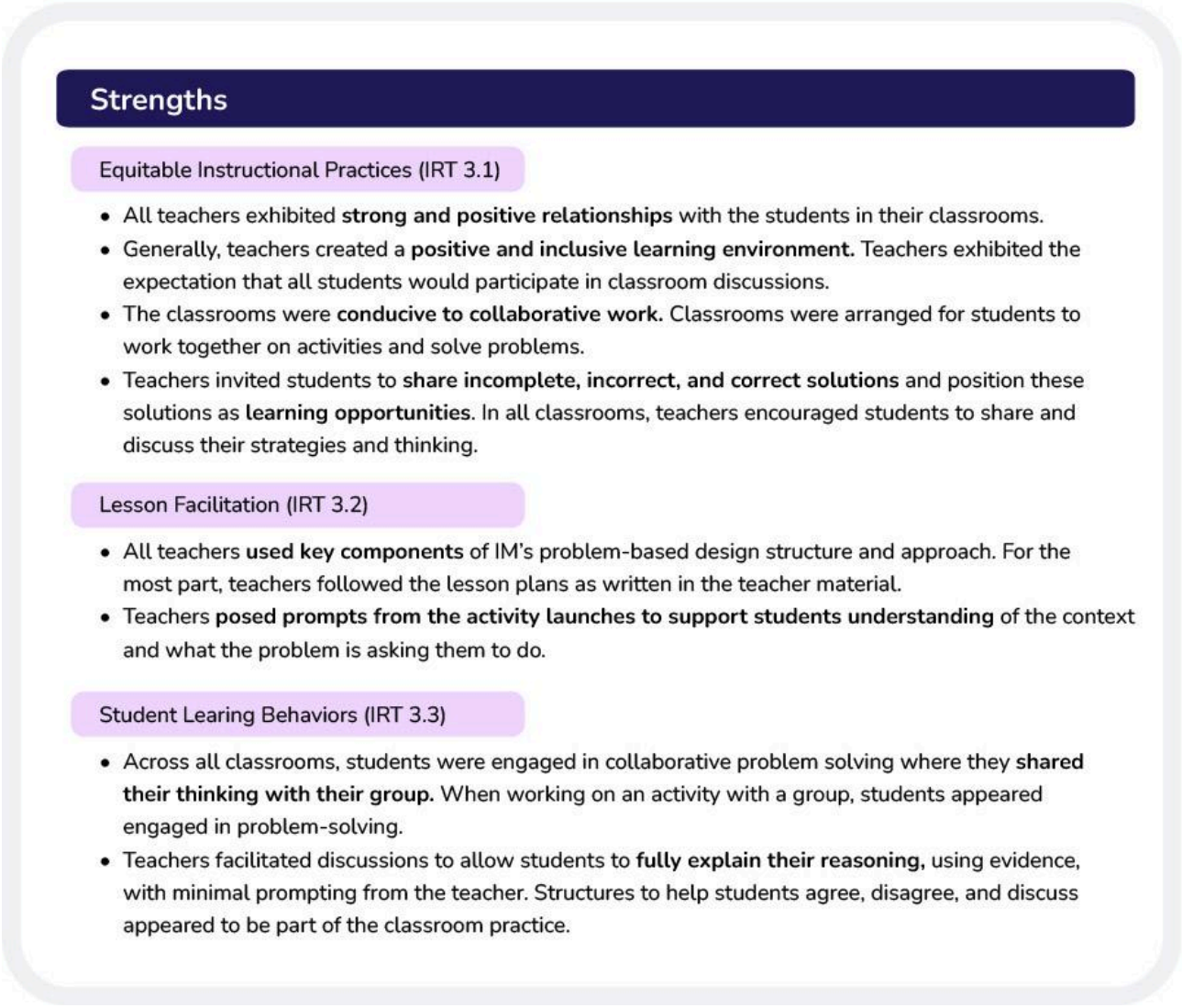
Early in the process of adopting IM Math, teachers were brought into the discussion. This active inclusion of teachers helped create a shared sense of ownership, although not everyone was in favor of adopting IM Math. One teacher was so concerned, she wrote an email to Eric Lieske explaining why an alternate curriculum should be chosen. However, after implementation, that teacher is now one of the biggest proponents of using IM's curriculum.

Several FCAA teachers volunteered to pilot IM Math. After witnessing the student engagement and the academic improvement during the pilot year, those teachers were convinced it was worthwhile. As Barkman pointed out, "When the students are the ones talking, they're the ones who are learning."

The following year, the pilot teachers reassured and supported the teachers who were new to the curriculum. Barkman explained: "A benefit this year [was that] when we actually got the curriculum and started it, the pilot teachers were very supportive of it and got to tell the new teachers, 'just trust the process.' Trust the process over and over again. So it helped a lot. I think it made it easier for those teachers to see."

One of the ways to evaluate the implementation process is through observation. In March, two IM staff members trained in using the IMplementation Reflection Tool (IRT) observed three math sessions while on site at FCCA. (See Appendix for details.)

Following these IRT sessions, IM staff found that the observed classrooms had their top strengths in three main categories:



Strengths

Equitable Instructional Practices (IRT 3.1)

- All teachers exhibited **strong and positive relationships** with the students in their classrooms.
- Generally, teachers created a **positive and inclusive learning environment.** Teachers exhibited the expectation that all students would participate in classroom discussions.
- The classrooms were **conducive to collaborative work.** Classrooms were arranged for students to work together on activities and solve problems.
- Teachers invited students to **share incomplete, incorrect, and correct solutions** and position these solutions as **learning opportunities**. In all classrooms, teachers encouraged students to share and discuss their strategies and thinking.

Lesson Facilitation (IRT 3.2)

- All teachers **used key components** of IM's problem-based design structure and approach. For the most part, teachers followed the lesson plans as written in the teacher material.
- Teachers **posed prompts from the activity launches to support students understanding** of the context and what the problem is asking them to do.

Student Learing Behaviors (IRT 3.3)

- Across all classrooms, students were engaged in collaborative problem solving where they **shared their thinking with their group.** When working on an activity with a group, students appeared engaged in problem-solving.
- Teachers facilitated discussions to allow students to **fully explain their reasoning,** using evidence, with minimal prompting from the teacher. Structures to help students agree, disagree, and discuss appeared to be part of the classroom practice.

These strengths were also reflected in how students discussed their experiences with learning math.

Student Engagement

At FCCA, identifying and acknowledging every student is a priority. During our study, we witnessed staff addressing students not by the generic "scholar" or "kiddo" but by their actual names. We observed how the staff seemed to know and understand their students' interests, allowing students to feel seen and valued as individuals. This is a

concrete way to tie acknowledgement to accountability. For example, when an FCCA student is absent, multiple adults notice. In the classroom, students are less able to hide or avoid engaging. This level of awareness may be more difficult to maintain in larger classes. (At FCCA, the student-to-teacher ratio is 19:1.) Still, FCCA offers a model that all schools can aspire to.

Each class we observed incorporated math—whether it was a dedicated math lesson or not. In orchestra class, students counted notes. In dance class, students counted out steps to the beat. Students even recorded a math rap video. At FCCA, math is integrated across all content areas, which gives all students touch points with math throughout the day. This aligns with IM Math's emphasis on real-world problem solving and the development of students' ability to communicate their thinking.

With IM Math, students were more engaged in the learning because there is an emphasis on, and appreciation of, more than one way to tackle a math problem. One student described working on a story problem involving two bags and 14 apples. She noted that when she shared how she got her answer with two partners, each student used a different method to arrive at the same answer.

FCCA has found that IM Math's emphasis on challenging students and holding them to high expectations is a key driver of student engagement. Rather than discouraging students, it seems to drive them forward. As one eighth-grader at FCCA noted, "The favorite part about my math class is how I get pushed to do the work. Because a lot of my prior classes, I didn't get pushed. So I like how this [math] book pushes me to be better."

According to FCCA leaders and staff, the rigor of IM Math is part of why FCCA students are able to grow academically. Teacher Darbie Barkman explains:

> *They learn to kind of get these difficult problems that they might not know an answer or strategy to and kind of sit with it and struggle with it for a little bit and they come up with more solutions. So, because they're kind of forced to grapple with themselves or with a partner, when it comes to those NWEA tests or those state standardized tests, when they see questions they don't know, I think that they have a better understanding and confidence to try a few different strategies instead of just guessing right away and moving on to the next question. So I think in that way there is a lot of growth because they can sit there and challenge themselves a little bit instead of just guessing.*

Does all of this engagement translate into increased math confidence? The evidence is not entirely clear based on student survey responses. When asked, "How much do you

see yourself as a math person?" the percentage of students who responded "often" only rose from 42% to 44% between the fall and spring of 2023–2024. However, that percentage will likely grow as students continue engaging in positive mathematical actions. This coincides with what we heard from FCCA students. As one eighth-grader said:

> *So I'm like, learning the function and the dependent and independent and all that stuff right now. So I'm getting better at it. I remember when I first started, I didn't know anything about it. But now I'm starting to learn a little bit more about it. It's kind of cool because I could just, like, I could see myself developing as a math student.*

In addition, the 44% result may be an underestimation. In many interviews, students said they did not see themselves as math people or mathematicians. However, they would then share all of the ways they actively use math in their daily lives.

Many interviewed students also described how they can use math in the future. One third-grader said she definitely saw herself as a mathematician and added: "I want to work at the family company. We help people with taxes. They figure out how much the tax cost and how much the bills will cost and how much equals a dollar."

Through IM Math, FCCA provides students with lessons that are relevant to their lives, challenge them academically, and encourage them to use multiple approaches to problem-solving. These are some of the ways FCCA students are prepared for mathematical success.

Family Engagement

In our conversations with districts across the country, we have found that families are not always viewed as active partners in student learning. Interactions are often limited to a parent-teacher conference in the fall, or the occasional phone call home when there is a behavioral concern.

In contrast, FCCA has a mission statement that begins with "We are family," and that includes parents and caregivers. "We know our families, we know their kids, we know they're significant people in their lives," Lieske explains. "You feel that when you walk through the doors, you feel that when you talk to our students, you feel that when you talk to our staff that this is our family and their families are our family."

We observed those relationships during student drop-off when caregivers were welcomed and addressed by name, and staff knew each caregiver's student. In

interviews with families, it became apparent that what we had observed was part of an ongoing, concerted effort to include families in student learning. These efforts support IM Math's emphasis on building a math community.

Interviewed families explained that they wanted their students to attend FCCA because of the proximity to home, the STEAM emphasis, and the community-based approach to education. Families also liked the problem-based curriculum from Illustrative Mathematics and the fact that it can be delivered with print materials. Many families want less screen time and more use of physical manipulatives for their children.

The use of manipulatives is also supported at home, with one parent noting she used marbles or aquarium rocks with her child for counting activities. That parent pointed out how her older student, who also attends FCCA, uses what he has learned through IM Math to help her kindergartener with math activities. She explained:

> *I loved that it was [problem] project-based learning. So that I kind of embrace a little bit of the unschooling culture where you take them into what they love and learn and then you go around that concept and you learn all the other things around it. So the idea of [problem] project-based learning lined up with that idea of like, let them see how one subject can expand to a thousand others.*

This emphasis on connecting math to all aspects of life is a core feature of IM Math and is well-aligned with how families support their students at home. One parent explained, "In nature, I love that there's math happening all the time. Like, I want them to be thinking about, like, the world is full of all these amazing things. And, like, look at the rings on that tree."

Another parent also emphasized the importance of connecting math to everyday life. She described using a snack budget to incorporate math at home:

> *So I buy a box of snacks, and I'm like, okay, there's 52 bags in here, you guys. If you get a bag a week, how many days is this box gonna last? You know what I mean? Remember, there's three of you guys, right? You guys are each getting a bag every day. So when will this box be gone? That whole aspect of trying to figure out, like, absolutely split that stuff up so that we can make it last. Because if you guys are grabbing two, three bags a day, it's gone.*

What these parents said aligns with the philosophy of IM Math, which is the idea that math is all around us, and when students recognize that, they are more invested in doing math. By incorporating families into math learning, and through the selection of

a curriculum that resonates with the type of math education that parents desire, FCCA has created a space that encourages continued math learning at home to reinforce the skills learned in school.

Student Learning Outcomes

FCCA made an intentional, sustained effort to create an environment that supports effective implementation of IM Math and student learning and fosters a positive mathematical mindset. This multipronged plan led to improved student outcomes in mathematics.

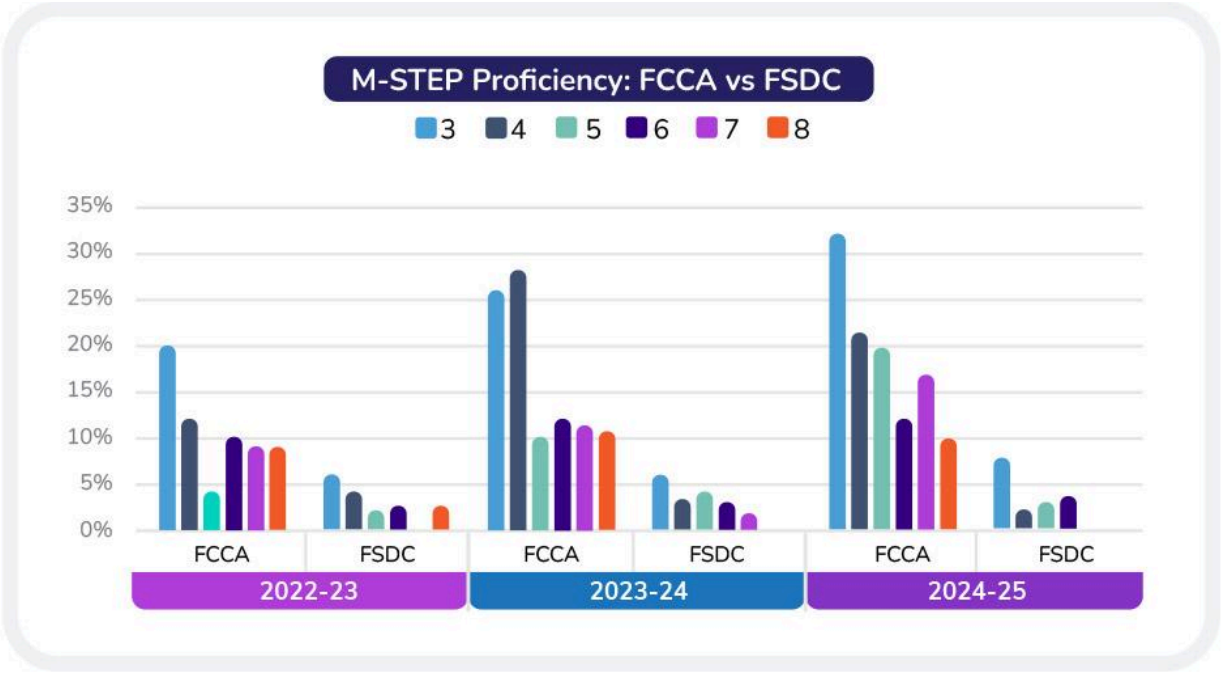
Fall and spring formative assessment data for 2024–2025 showed growth in the percentage of students at an achievement percentile rank of 41% or above in nearly all grades at FCCA, as shown in this table.

FCAA 2024-2025 NWEA Proficiency
(formerly known as Northwest Evaluation Association)

	Achievement Percentile Rank of 41% and Above	
	Fall 2024	Spring 2025
Grade K	61%	82%
Grade 1	64%	66%
Grade 2	53%	81%
Grade 3	38%	63%
Grade 4	46%	70%
Grade 5	30%	45%
Grade 6	29%	22%
Grade 7	35%	31%
Grade 8	24%	26%
Grade 9	43%	54%

The chart and table on this and the next page show the percentage of students who obtained either advanced or proficient scores on the Michigan Student Test of Educational Progress (M-STEP), the state's summative assessment.

Note that from 2022 to 2025, scores for Flint School District of the City (FSDC) stayed the same or declined. This district-wide lack of improvement was a major reason why FCCA decided to pilot IM Math in 2023. With the system-level support of school leaders, that decision appears to have led to clear improvement in student proficiency. Scores for FCCA students have consistently improved since adopting IM Math.



M-STEP Proficiency: FCCA vs FSDC

	2022–23		2023–24		2024–25	
	FCCA	FSDC	FCCA	FSDC	FCCA	FSDC
Grade 3	20%	6%	26%	6%	32%	7%
Grade 4	12%	4%	28%	3%	22%	2%
Grade 5	4%	2%	10%	4%	20%	3%
Grade 6	10%	3%	13%	3%	12%	4%
Grade 7	9%	*	12%	2%	17%	*
Grade 8	9%	3%	11%	*	10%	*

*too low for inclusion

However, improving test scores is only part of the formula for building confident math learners prepared for future mathematical success. Equally important are FCCA's coherent implementation plan for IM Math and its consistent support of classroom discourse and collaborative learning behaviors. Student Beliefs Survey data show the positive results:

- "How often does your teacher make you explain your answers or your thinking in math?"
    - Fall 2024: 49% said "often"
    - Spring 2025: 66% said "often"
- "How much does your teacher encourage you to try your best in math?"
    - Fall 2024: 86% said "often"
    - Spring 2025: 87% said "often"

Conclusion and Key Takeaways

FCCA has shown that with a clear and intentional approach, schools can successfully implement a new curriculum while improving both student experiences and outcomes. This success is not the result of having extraordinary resources or selective hiring. Nor is it from self-selecting only the top-performing students (FCCA's enrollment comes from an open lottery for all students in Michigan). Rather, it reflects a deliberate effort to align leadership, educators, students, and families around a shared vision for student

learning grounded in the IM Math instructional model, while using feedback to continuously strengthen instruction.

At FCCA, leaders recognize the importance of a high-quality, standards-based curriculum like IM Math and understand that choosing the best curriculum is only the first step in the journey. In practice, adopting IM Math involved committing to a coherent instructional model. Professional learning, leadership decisions, and structures for collaboration and family engagement were most effective because they were shaped by the IM instructional model.

For other schools, these findings suggest that successful curriculum implementation depends not on any single strategy, but on the coherence of the overall approach. When schools maintain a clear focus on instructional goals and ensure that structures, supports, and practices are working in concert over time, they create the conditions for both effective implementation and improved student learning.

Appendix

Interview Questions

Please note that the following represent all available questions. It does not mean that all interviewees were asked the full question list.

Staff

- What is your position?
- How many years have you been with the district? School?
- In what building do you work?
- As we learn about your district/school, what makes your school community unique?
- Tell us anything! What should we know about your school?
- To your understanding, how and why was the decision made to adopt the IM curriculum?
- To your knowledge, was the curriculum purchase a result of an RFP (request for proposal)? Do you know how it was funded?
- What do you like about the IM curriculum? How do you think it benefits students?
- Having implemented the IM curriculum for [x] years now, what would you identify as weak points/barriers to success with IM Math?
- What professional learning did you offer/receive before using the curriculum? Have you offered/received any PL since?
- In your opinion, how have teachers responded to the curriculum? Did their opinion change over time?
- Has teacher retention impacted your experience with implementing the curriculum?
- If you could give a piece of advice to a new teacher using the curriculum for the first time, what would that be?
- How often are teachers using the slides?
- From what you've heard or observed, how have students responded to the problem-based instruction?
- To your knowledge, how have parents/families responded to IM?
- Have you found there to be a relationship between the curriculum and student outcomes on the state assessment?
- Big picture: When implementing a curriculum, what elements do you think need to be in place for staff and student success?
- If you could ask IM for any type of support or resource, what would that be?

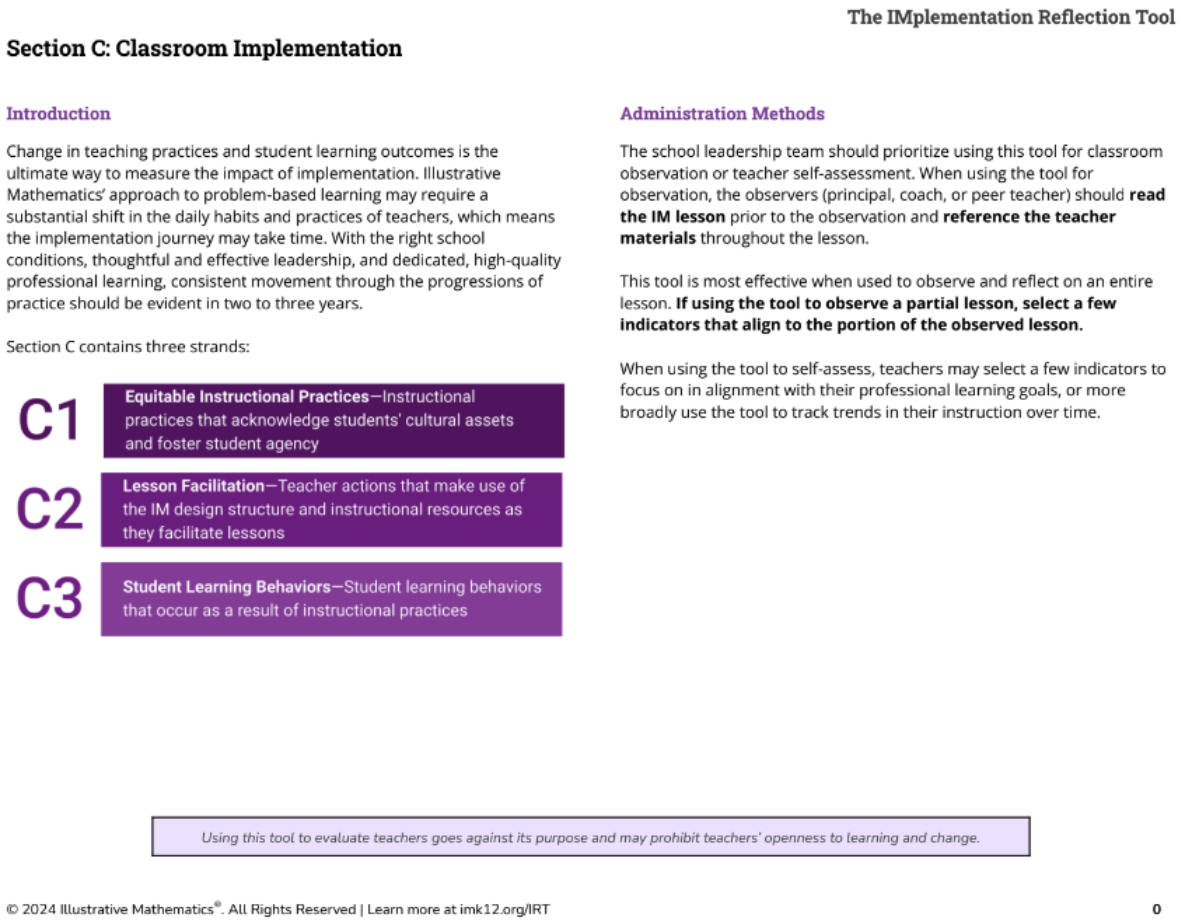
Students

- What do you like about your school? What makes it special?
- What do you like about learning math?
- What's your favorite part of math class?
- What do you like about doing the warm-ups?
- Do you see yourself as a "mathematician?" That is, a person who uses math in everyday life.
- How does your teacher help you learn math?
- If you get stuck on a math problem, what do you do?
- How do you share what you know about math with other students?
- How do you share what you know about math with your family?
- When do you use math outside of school?

Families

- You participated in the lottery for your student to join FCCA. What made FCCA an appealing place to send your child? What makes this school special/unique?
- What was learning math like for you when you were your student's age? Do you think the math experience for students is better now?
- Before entering kindergarten at FCCA, did your student have any formal pre-kindergarten education, such as Pre-K or TK, or attending an early childhood center?
- How do you and your student use math at home? [Prompt if needed] Do you use any real-world examples? Activities such as cooking or games?
- What has been your kindergartener's experience with math in school this year?
- Do you feel like your student was prepared for kindergarten? Share how you felt they were ready? What were some of the signs?
- Looking back, is there anything you would have wanted to better prepare them?
- How familiar are you with the Illustrative Mathematics (IM) curriculum that your child is using in school? What information or communication have you received from the school about the IM curriculum? How does your child feel about their math class using the IM curriculum? Have you noticed any changes in their interest or attitude toward math?If you could ask IM for any type of support or resource to support your child's learning, what would that be?

Section C of the IMplementation Reflection Tool: Classroom Implementation



The IMplementation Reflection Tool

Section C: Classroom Implementation

Introduction

Change in teaching practices and student learning outcomes is the ultimate way to measure the impact of implementation. Illustrative Mathematics' approach to problem-based learning may require a substantial shift in the daily habits and practices of teachers, which means the implementation journey may take time. With the right school conditions, thoughtful and effective leadership, and dedicated, high-quality professional learning, consistent movement through the progressions of practice should be evident in two to three years.

Section C contains three strands:

C1 **Equitable Instructional Practices**—Instructional practices that acknowledge students' cultural assets and foster student agency

C2 **Lesson Facilitation**—Teacher actions that make use of the IM design structure and instructional resources as they facilitate lessons

C3 **Student Learning Behaviors**—Student learning behaviors that occur as a result of instructional practices

Administration Methods

The school leadership team should prioritize using this tool for classroom observation or teacher self-assessment. When using the tool for observation, the observers (principal, coach, or peer teacher) should **read the IM lesson** prior to the observation and **reference the teacher materials** throughout the lesson.

This tool is most effective when used to observe and reflect on an entire lesson. **If using the tool to observe a partial lesson, select a few indicators that align to the portion of the observed lesson.**

When using the tool to self-assess, teachers may select a few indicators to focus on in alignment with their professional learning goals, or more broadly use the tool to track trends in their instruction over time.

Using this tool to evaluate teachers goes against its purpose and may prohibit teachers' openness to learning and change.

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The full listing of strands and indicators can be found here:
https://tinyurl.com/c2hah2f9

Teacher Beliefs Survey Questions (courtesy of TNTP)

Asked in fall and spring, *n* = 17 (fall), *n* = 21 (spring)

Response categories are: never, sometimes, often

- All students in my class(es) can master the grade-level standards by the end of the year.
- The activities and routines in my curriculum are appropriate for the students in my class(es).
- One year is enough time for all the students in my class(es) to master the grade-level standards.
- It is fair to expect all my students to master the grade-level standards as measured by the curriculum's unit assessments.
- All my students are "math people."

Student Beliefs Survey Questions (courtesy of TNTP)

Asked in fall and spring, *n* = 387 (fall), *n* = 386 (spring)

Response categories are: never, sometimes, often

- How often does your teacher make you explain your answers or your thinking in math?
- How much does your teacher encourage you to try your best in math?
- How interesting do you find the things you learn in math class?
- How useful do you think math will be to you in the future?
- How much do you see yourself as a "math person?"

Further Reading

Illustrative Mathematics Case Studies: https://illustrativemathematics.org/impact/

IMplementation Reflection Tool (IRT):
https://sites.google.com/illustrativemathematics.org/irt/

IM's Quick-Start Guide for Implementation:
https://accessim.org/implementation/quick-start-guide

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