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Illustrative Math Implementation Study 2023-24: Focus Group Findings

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THE SCHOOL DISTRICT OF PHILADELPHIA

About this Slide Deck

Purpose:

- To share findings and recommendations from teacher, school-based teacher leader, professional learning specialist, and school leader focus groups related to SDP's Illustrative Math (IM) K-12 curriculum implementation in 2023-24

This deck includes:

- Summary of research in the field about math curriculum implementation
- Background on SDP's adoption of IM and the implementation evaluation
- Findings from teacher, teacher leader, and school leader focus groups
- Recommendations to improve implementation based on findings

Closing the feedback loop:

- ORE presented findings to District leaders in summer 2024, who used feedback to inform Year 2 (2024-25) decision-making and supports.
- This slide deck of results is being published on the ORE website to reach a wider audience to inform our collective continuous improvement efforts.

Overview

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Overview

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Existing literature points to historical inequities in math education.

Historically, mathematics instruction has reproduced societal inequities. Scholars and practitioners argue:

- Mathematics has been used as a tool **to maintain white supremacy** and other systemic hierarchies. (AMTE, 2022)
- Differences in the curriculum and "curriculum-in-use" (or as implemented) **reproduce** and **perpetuate** inequitable economic and political structures. (Anyon, 1981)
- Mathematics teaching emphasizes repetition, drill, right-answer thinking, and predictability, and **fails to consider** the profound impact of **culture, context, and caring relationships**. (Ladson-Billings, 1997)
- **Inequitable approaches** are still entrenched in high-poverty urban mathematics classrooms:
    - **Deficit-based instruction** emphasizes procedures disconnected from students' contexts, focuses on one strategy, limits student interactions, and assessment is based on following steps rather than explanations. (Battey & Neal, 2018)

In working- and middle-class schools, knowledge was presented as "fragmented facts, isolated from context and connection to each other or to wider bodies of meaning, or to activity or biography of students" and "knowledge of 'practical' rule-governed behaviors – procedures by which the students carry out tasks that are largely mechanical." In contrast, in affluent schools, "students were taught to 'think for themselves'" and that "mathematical knowledge is supposed to come from discovery and direct experience." (Anyon, 1981)

Scholars and practitioners call for more equitable approaches.

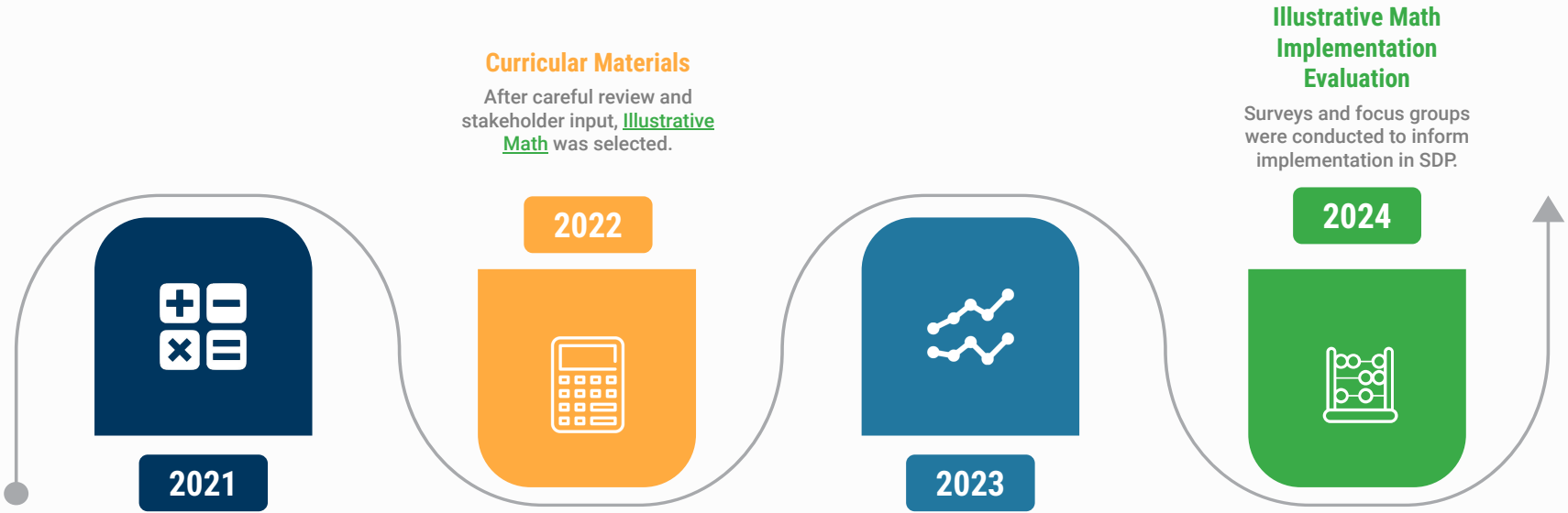
Scholars and practitioners call for more equitable approaches:

- Rejecting the “culture of exclusion” in mathematics, they advocate for more equitable approaches to mathematics curriculum and instruction. (Battey & Leyva, 2016; Joseph et al, 2019; Ladson-Billings, 1997; Louie, 2017; Rigby & Forman, 2023; Raygoza, 2019; Young et al., 2022)
- Collaboration among diverse stakeholders is required to achieve equity, as are more nuanced understandings of specific implementation issues, and research recognizing the urban context. (Gold et al., 2023; Tate, 2018; Young et al., 2022)

Mathematics is about identifying connections, recognizing patterns, and making sense of the world around us. Doing mathematics is about engaging in exploration, problem solving, and sensemaking, rather than simply rote memorization, calculations, and procedures. Mathematical literacy empowers individuals to reason and interpret mathematics to solve authentic real-world problems. Student experiences should include engaging in mathematical concepts, procedures, and approaches to make well-founded judgements and decisions to understand and contribute to an informed democratic society. All students are doers and creators of mathematics. (Association of Mathematics Teacher Educators, 2022)

The Illustrative Math curriculum was adopted in SDP in 2023-24.

As part of an ambitious vision for mathematics equity and achievement, the School District of Philadelphia (SDP) adopted Illustrative Math (IM) as the district-wide K-12 math curriculum in 2023-24.



ORE developed a curriculum implementation evaluation plan.

Year 1 (2023-24): Early Implementation & Inputs

Guiding Research Question:

Do teachers, school leaders, and central office support staff believe they have enough materials, training, and support to implement Illustrative Math with integrity/fidelity (as intended)?

This deck's results

Research Activities:

- **Focus groups**
- Teacher, teacher leader, and parent annual surveys
- School leader survey

Year 2 (2024-25): Mid-stage Implementation & Outputs

Guiding Research Question:

Are teachers and school leaders implementing Illustrative Math curriculum with integrity/fidelity (as intended)?

Planned Research Activities:

- Observation data
- Teacher, teacher leader, and parent annual surveys
- School leader survey

Year 3 (2025-26): Late-stage Implementation & Outcomes

Guiding Research Question:

Do student math test scores improve over time when and where Illustrative Math is implemented with integrity?

Planned Research Activities:

- PSSA & Star analyses
- Observation data
- Teacher, teacher leader, and parent annual surveys
- School leader survey

In this slide deck, we summarize findings from the Year 1 focus groups.

Year 1 Research Question:

What were barriers and facilitators to implementing IM with integrity?

Study was developed in collaboration with the Office of Curriculum and Instruction and the Office of Professional Learning.

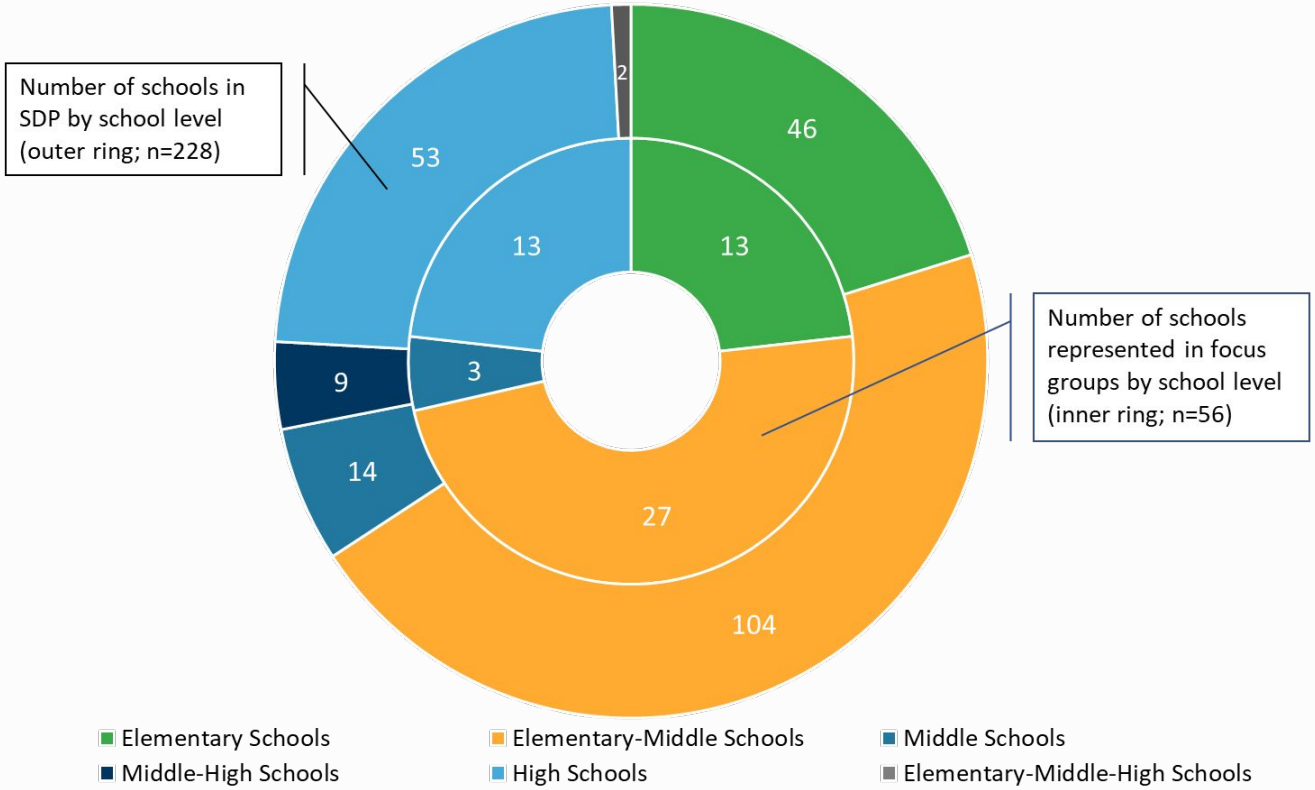
82 teachers, teacher leaders, and school leaders participating in **33** **focus groups** were asked about their:

- ➔ Feelings about IM lessons, materials, and resources
- ➔ Perceptions about support and training received
- ➔ Experiences with Professional Learning Cycle (PLC) time
- ➔ Understandings about their role in implementation
- ➔ Preparedness to support diverse learners

82 teachers, school leaders, and PLSs participated in focus groups.

Role		Elementary	Elem-Middle	Middle	High	Total Participants
Teachers		**10**	**32**	**5**	**18**	**65**
	School-Based Teacher Leaders	6	9	1	1	17
	Algebra Teachers	0	3	0	8	11
	ESOL Teachers	1	5	2	0	8
	Special Education	1	3	0	3	7
	Geometry Teachers	0	0	0	3	3
School Leaders		**6**	**4**	**0**	**1**	**11**
Professional Learning Specialists (PLSs)		**N/A**	**N/A**	**N/A**	**N/A**	**6**
Total		**16**	**36**	**5**	**19**	**82**

56 unique SDP schools were represented in focus groups.



Finding 1

Overall, most participants felt positively about the curriculum choice.

Participants felt SDP's adoption of IM was a step in the right direction to improve student outcomes.

- Participants described many benefits, including increased student engagement, confidence, and collaboration.

Key Takeaway: Overall, participants felt SDP's adoption of IM was a step in the right direction to improve student outcomes.

Participants:

- Found IM materials to be **comprehensive** and **cohesive**.
- Appreciated the emphasis on **conceptual understanding**.
- Appreciated **multiple access points** for students.
- Liked that it is rich with "**real-life experience**."
- Saw it as a **positive shift** away from "skill and drill."
- Noted the benefits of having a **consistent curriculum** across all K-12 SDP schools.
- Hoped the District would "**stick with it**" long enough to see results.

I've been waiting for something like this. The whole problem-solving approach to mathematics is huge. [teacher]

I really hope we continue using it and not switch to something brand new in one or two years. [teacher]

Key Takeaway: Participants see many benefits to IM for SDP students.

- Participants said IM increased:
  - Student **engagement**.
  - **Confidence** and **risk-taking** in solving math problems.
  - Excitement and **joy** about math.
  - Math **conversations**.
  - **Collaboration,** group work, and positive relationships.
- Participants said IM develops students' "**math identities**" and helps them see themselves as **mathematicians.**

I see kids talking, talking and explaining their thinking, talking to each other. Classrooms are noisy — good noise coming from classrooms. [principal]

I've seen more engagement this year than I ever have in 20 years of teaching. Kids really asking really good authentic questions. [teacher]

I definitely think that it's creating more confident students. I think it's creating collaboration and ownership over their learning. [teacher]

I totally enjoyed seeing the student joy in the classrooms [PLS]

Finding 2

PLCs were a key facilitator.

Professional Learning Cycles (PLCs) were a key space to build teacher buy-in and “trust” in IM, and to help teachers shift from teacher-directed practices to inquiry-based learning.

- PLCs are:
  - Collaborative time built into teachers’ schedules, typically for one period per week.
  - Facilitated by a school leader, teacher, or SBTL.
- Participants said:
  - Teachers who struggled the most with IM were least comfortable with a problem-based learning approach in general.
  - PLCs provide an ongoing, supportive structure for teachers and leaders help each other make instructional shifts.
  - PLCs reinforced District-led PD learnings; participants want more District-led PD provided directly to teachers.

Key Takeaway: IM requires a significant shift in teacher mindset.

- Participants recognized that most teachers learned math "**procedurally**," and that IM is a **significant shift** in how most learned to teach math.
- Teachers must have a **solid understanding of the math concepts** in order to effectively implement IM.
    - Some teachers need more **grade-level and role-specific PD** to strengthen their own math knowledge.
    - Teachers must also spend planning time engaged in the "**intellectual planning process**" in order to implement lessons with integrity.
    - Other challenges include effectively preparing emergency-certified and new teachers, as well as vacancies and other staffing issues.

I think it was definitely a shift for teachers. I think the teachers who understood the mathematical framework as it stood were able to easily transition into illustrative math because they understood the framework, but I think that those teachers who were very direct instruction heavy, very sage on a stage — they struggled the most with [IM] because their math familiarity wasn't there. [school leader]

I love the project base, but I think from a coaching aspect, it was difficult to get a lot of buy in. Once we are seeing buy in from teachers, we're also seeing a lot of math joy. [PLS]

We have to continuously build, I think, teachers' content knowledge and conceptual understanding of math because…we're still in the world where most of us learned one way, procedurally. [PLS]

Key Takeaway: PLCs are a key space to shift teacher practice.

PLCs help to:

- Build “**trust**” and **buy-in** for IM.
- Make the shift from teacher-directed lessons and practice to an inquiry- and problem-based learning approach.
- Address **instructional needs** unique to each school.

Helpful strategies included:

- Video recording teachers implementing lessons, and playing them back during PLC time in order to debrief and provide feedback.
- Modeling how to do the “intellectual planning process” and “annotate” individual lessons.
- Analyzing student work.
- Long-term planning and/or making adjustments to prepare for upcoming standardized assessments.

Teachers don't need someone to stand and deliver PD. That's not what they need. They need the time to sit as a grade group and annotate lesson by lesson by lesson. [principal]

PLC time's been very useful in that sense that we're able to all sit together. [teacher]

I don't need more people coming in with clipboards and seeing what I am or I'm not doing. I just need more time to talk to my other teachers because – I promise you we're not trying to do anything crazy. I just need more time. I think if that goes – the one or two PLCs that I had where I was able to sit down with the eleventh grade Geometry teacher and she told me what she did and what lessons to keep and not keep, that was invaluable. [teacher]

Key Takeaway: Teachers want more District-led professional development.

In addition to PLC, participants benefited from PD led by District staff, unpacking workshops, and Tune Up Tuesdays.

- SBTLs and PLSs felt the PDs they themselves received were very helpful, but were not always sure how to “turnkey” the information and wished that teachers had received the same PDs directly.

Teachers wanted more:

- Comprehensive information on the specifics of each curriculum component (e.g., activity launches; using Math Language Routines; identifying the purpose of warm up within the lesson progression).
- Grade-level and role-specific district-wide PD to support their Intellectual Planning Process and unit/lesson unpacking.
    - For example, PDs specific to Algebra or ESOL teachers
    - Opportunities for departmentalized teachers to plan with grade-level colleagues at other schools
- Optional sessions offered virtually (traveling to in-person PDs is prohibitive for many teachers after school or on weekends).

the series of PDs that were offered wasn't scaffolded enough…Let's talk about all the components of IM and how to bring each component in. What you must use, what you cannot use. [SBTL]

if we really want to implement a program well, there needs to be [time] dedicated to that deep professional learning, not just here's the big picture and here are a couple of strategies… this needs to be district wide for teachers…to really dig deep into what they're actually teaching. [school leader]

When I went to that PD downtown on a Saturday, she sent me a bunch of documents that we do not get as classroom teachers. I'm sure that the SBTLs get a lot and they are trimming down what they think is the most important, but…they're not using the program. They don't know what's the most important thing day to day. The woman downtown at the PD she nailed it. It was very helpful. [teacher]

Finding 3

Materials prep was a barrier.

Time preparing IM materials was a main barrier to effective lesson planning.

- Participants described how time consuming it was to make copies, acquire required supplies for lessons, and prepare materials.
- Some classrooms did not receive enough materials and supplies, requiring additional prep time to find workarounds.
- Because of this, often teachers had less capacity to do the intellectual planning necessary to facilitate IM lessons with integrity.

Key Takeaway: Teachers understand that effective IM lesson planning requires "intellectual preparation."

Participants recognized that they must "sit down and really study and understand" IM lessons ahead of time in order to effectively deliver lessons to students.

- However, the time it took to effectively plan lessons was overwhelming to some, particularly teachers who taught multiple subjects or grades.

You can't just pick this up and start the lesson. You have to read it ahead of time. You have to really analyze what they're asking the kids to do. And to be ready for that. [teacher]

You teach five lessons in that week and it takes you an hour to internalize each lesson, that's five hours of prep. We don't have five hours of prep in a week. Now you take my teachers who teach three different topics—Algebra I, Algebra II, and Algebra III—and now you've multiplied that by three. How do you internalize 15 lessons in a week? It's mind-boggling. [teacher]

You cannot wing this program. [school leader]

Key Takeaway: Preparing IM materials was very time-consuming.

Preparing IM materials was **time-consuming**.

- Across schools, teachers reported varying amounts of compensated time to prepare materials.
- Some principals paid teachers for additional PD time.
- Some allowed PLC to be used to prepare materials.
- Others had other school staff make copies.
- However, in many schools, teachers were expected to prepare on their own time.

The biggest thing for me is the preparing because there's tons of copying, tons of cutting, along with tons of materials, not only for one grade for me but for three. That's my biggest woah. [teacher]

The planning and preparation has consumed my life, totally consumed my life…[teacher]

I think for the K-5 space particularly, the center prep was like a monster, and a lot of my schools — they had SBTLs who their sole job was just making copies, laminating things, and getting copies out to the spaces for centers. [PLS]

Key Takeaway: Some classrooms did not receive enough IM materials and supplies.

Some schools and classrooms did not have enough supplies for centers, or enough IM materials (workbooks, materials, center kits, etc.) for all students.

- This was especially true for schools that experienced higher rates of student transience
- This was especially true for learning support classrooms

Some schools and classrooms did not have needed supplies for IM activities.

- Many supplies required for lessons were not included in the curricular materials supplied to schools.
- Some schools ordered "center kits," while others did not.
- Some supplies required for lessons were unusual (e.g., milk/egg cartons, play dough, stamp/ink pads, spatulas), required time and planning to acquire, and/or for the amount needed (e.g., one per student).
- Teachers spent their money "past the $200 allotment" on these supplies.
- This was particularly acute in middle and high schools, which were not historically equipped with certain kinds of hands-on supplies in the past.

I know we were scrounging for things like straws and something else earlier on because things hadn't been delivered, and with, again, our population, I guess, we were set for a certain amount of books, and materials, and we were growing. We were trying to keep up with the influx of students. Having a little extra flexibility, maybe a 10 percent if you're going to send out supplies just to know that certain schools do grow, and continue to grow, and that would definitely help with the hands-on experiences for the students. [teacher]

I know one major barrier for our middle schools were they weren't given the materials like they were for K-5, and I know that was one big barrier. [PLS]

We don't have enough of each of the centers for our students. We got one kit for each grade. I'm making a lot of center materials. A lot of mats for students. A lot of cards. I think there was three decks of cards in each. Whatever happened, we just don't have enough. [SBTL]

Key Takeaway: Time spent preparing IM materials was a main barrier to effective lesson planning.

Because of how time-consuming it was to prepare IM lesson materials, often teachers said they had less capacity for the intellectual planning necessary to facilitate IM lessons with integrity.

- Participants suggested SDP provide ample materials, center kits, paper, and other supplies up front, to reduce the time burden on teachers, so they can instead focus on intellectual preparation.
    - In particular, participants wondered if cool-downs could be pre-printed into packets and provided up front.
- Participants asked for higher quantities of supplies to be provided, to account for fluctuating student populations and transience.
- Participants asked for ample materials and supplies to be provided to Learning Support and ESOL teachers, if they are expected to implement IM with integrity.

There's so much preparation and time that's needed for cutting, and making centers, and doing that. So in our building, we do like a make and take PD after school. They prep their centers. That's been effective. [SBTL]

That's why we did the binder because I'd rather than be sitting with their team planning than standing at the copy machine. We can do it after school. There are people here for an hour after school every day. Put it on my desk and we'll get it to you within a week. [school leader]

I think that will be very helpful to basically have those materials ready for the teachers to use for centers for the lesson. It'll be much easier and it would be great if they could have some of those materials already copied in a student journal. [teacher]

Finding 4

Pacing was a barrier.

Lesson pacing was a barrier to integrity of implementation.

- The majority of principals and teachers reported using IM on a daily basis most of the time and being mostly on track with SDP's pacing guide.
- However, it was noted that not all lessons were delivered with integrity.
- Pacing was a main barrier to implementation.
- Special Education and ESOL teachers reported using IM the least in daily instruction, and reported modifying and supplementing the most.
- Guidance on allowable modifications is needed.

Key Takeaway: Most reported using IM in daily instruction and being mostly on track with SDP's pacing guide.

The vast majority of principals and teachers reported using IM on a **daily basis** most of the time, and reported being **mostly on schedule** with SDP's pacing guide.

- However, some noted not all lessons were delivered with integrity.
- Special Education and ESOL teachers reported being on schedule with the pacing guide much less often (or not at all).

I will say, even the people who didn't like it — they still did it. [PLS]

Yes — we were very stringent, very much so with a pacing guide. [teacher]

I would say everybody used the program… Would I say everybody used it with integrity? No. That was some of the work we had to do. [leader]

They're all on pace but that doesn't mean they know what they're doing. [teacher]

Key Takeaway: Lesson pacing was a main barrier to integrity of implementation.

- Many **barriers** prevented teachers from getting through all of the planned lesson material, including:
  - Scheduling issues
  - Assessment calendars
  - High chronic absenteeism
  - Student transience (e.g., new students arriving mid-year)
  - Discipline issues
- Participants cut lesson components when short on time, but were not always clear on which components of each lesson were most crucial to keep.

I have to cut so much for us to get through the synthesis, so it's not really using the curriculum to engage all learners. I am somehow having to speed up and the kids who are left behind are the kids who were always left behind, even with other curriculums. [teacher]

The biggest support is a more realistic time allotment for each lesson…like which one is the most important one to hit on? [teacher]

Key Takeaway: Teachers reverted to old ways to address gaps in “foundational skills” and when they felt more “practice” was needed.

- Many teachers reported struggling to stay on pace when their students had not yet mastered the prerequisite **foundational skills** for grade-level IM content.
- In the absence of clear guidance, most teachers told us they **reverted to old, familiar “skill and drill”** approaches.
- Common supplemental materials, mainly to provide additional **practice problems**, included:
    - Online Adaptive Programs (OAPs) (e.g., iReady).
    - Online assignments and problem sets (e.g., DeltaMath).
    - Old textbooks (e.g., Envisions).
    - Other types of worksheets from various sources.

I like that it’s a spiral, but there’s no room for error. I have gotten reprimanded for not staying on pace, but I can’t stay on pace if my kids don’t get it. [teacher]

You can't give a cookie cutter answer to a very diverse population…the idea is that we’re trying to find practices that meet students where they’re at and also gain them basic skills, so for the students that I work with, they have already enough discomfort, sometimes, continually doing productive struggle all the time is not always the answer. [principal]

Key Takeaway: Most teachers felt modifications were necessary for diverse learners.

Most teachers felt **modifying** was required to **meet diverse learners' needs** and bridge gaps when students had not yet accessed **foundational skills**.

- Special Education and ESOL teachers, in particular, reported using IM less frequently, modifying IM, and supplementing with outside materials more often.

Some modifications seem helpful, but others may undermine integrity. For example:

- **"Access" modifications** that clarify materials or activities:
  - Translating into students' home languages
  - Making slides simpler, easier to understand, or "prettier"
  - Adding visuals or changing font size or spacing on slides and/or worksheets
  - Clarifying center directions
- **"Content" modifications** that may undermine integrity:
  - Changing an activity or problem so much that it no longer aligns to the intended standard
  - Cutting certain lessons or activities entirely
  - Skipping essential components to supplement with outside materials

I have completely abandoned it. I just look at the goals, like what they want the students to understand, and then I look for material that focuses on the goal where my kids are still—we're still project-based, and they're still exploring and learning. [Special Ed teacher]

I am using part of the IM. I'm not doing on-grade-level stuff. [Special Ed teacher]

Our workbooks, it's all word problem. And I have a lot of students who are new – about two-thirds of my students are ESL, and one-third just came this year, and I teach fourth grade. I'm constantly translating. [ESOL teacher]

Key Takeaway: Clear guidance on what modifications are allowable – even encouraged – is urgently needed to improve integrity of implementation and equity of access.

- Participants asked for **more guidance** on what lessons or lesson components to cut when short on time. Suggestions included:
    - Alternative pacing guide for classrooms that do not have 90-minute blocks – a "lean mean version" so teachers know what content is most important, and what could be cut.
    - Guidance about what previous IM content and/or supplemental materials can be used to help "bridge" gaps in foundational knowledge.
- Principals and teacher leaders also believed that teachers need support with pacing and modifying.
    - Professional learning to help teachers (and their supervisors and coaches) make distinctions between allowable content and access modifications, in ways that preserve the goals of the lesson.

I think a big piece of that is understanding the difference between…productive struggle and just struggle, and that goes along with those timings. I agree, using the six minute example, if six minutes really takes you 10 minutes, nobody is losing any sleep over that. But when six is taking you 45, that's just struggle, that's not productive. [school leader]

Finding 5

Mixed messaging was a barrier.

Unclear information about allowable modifications and supplemental materials was a barrier that undermined integrity of implementation.

- Clarity was particularly needed for English Learners, students with IEPs, and students who were absent for a significant amount of lessons.
- Additionally, some teachers felt that IM was not closely aligned to state standards, and were unsure what was allowable to help prepare students for state tests.
- Participants wanted more support, guidance, and trust.

Key Takeaway: Mixed messaging was a barrier to integrity of implementation.

"Conflicting" messages undermined integrity of implementation:

- As previously stated, teachers were unsure what modifications were allowable (encouraged, even, for differentiation) and what were prohibited. School leaders and Assistant Superintendents were not always on the same page as the math department.
- Special Education teachers were told not to use materials outside of IM; however, IEP documents sometimes require other materials.
- The Algebra IM courses did not align well to the Algebra Keystone exam; however, some teachers were reprimanded for using materials outside of IM to prepare their students.

Anybody getting used to a new program, you got to give people time to figure it out… Sometimes, you have to do things a little different because your class is whatever it is. And I'm not saying change the whole program, but then you do it, and you seem to get yelled at for it. I guess my concern is less the actual program because people were getting used to it, and more what we're being – and often what we're told is very conflicting. [teacher]

…what am I going to do with this [exploratory] thing when they need frequent practice and they need repeated materials and stuff like that. That's my struggle right now. Because the IEP is a legal document, so I have to implement stuff that met their goals and the accommodations and all that. I don't really know how to be on pace with all the demands that is being asked. [Special Ed teacher]

Key Takeaway: Heavy-handed enforcement of fidelity undermined buy-in

Teachers at some schools/networks reported being **reprimanded** or "yelled at" by school and District leaders for supplementing and modifying, which **undermined teacher buy-in** for IM.

- Teachers found this heavy-handed approach unfair, and to some, inequitable because it "tied their hands" in meeting students' needs.
- Instead, teachers said it would be helpful to trust and "empower" them to use IM as part of their teaching, "rather than it's something they're doing wrong."

The teachers just felt like, it was after the whole thing happened with the teacher using supplemental materials to try and help the ESL kids and she got told off for it, and you were told at the beginning, you weren't allowed to do that, then they were told they weren't allowed to use any other materials, that was sort of very punitive. [teacher]

I have gotten reprimanded for not staying on pace, but I can't stay on pace if my kids don't get it. Then, I'm getting in trouble in the back end because I have 23 kids and only three of my kids are getting the material, and the rest are like, I don't know what we're talking about. I found that either I do the right thing because I have integrity and I still teach my kids who don't get it, or I have to keep going. That's not fair. That's not equitable. [teacher]

Key Takeaway: More flexibility and grace is needed.

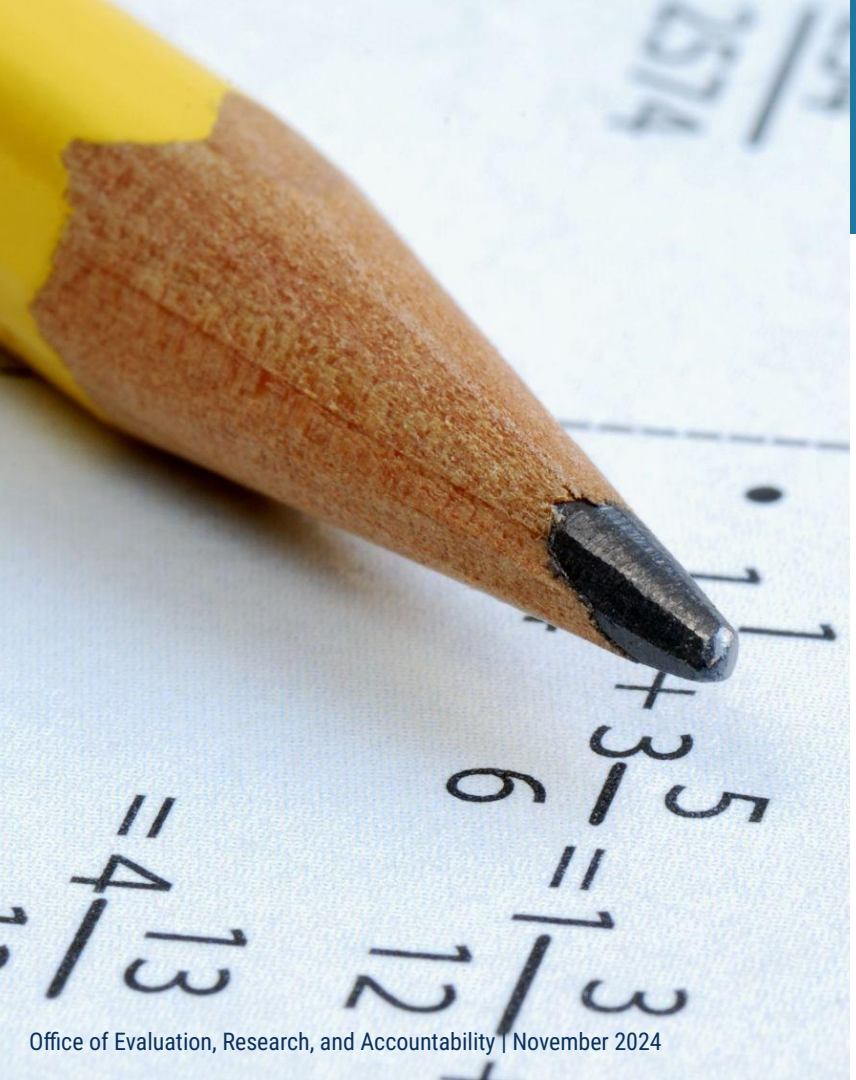
Understanding that IM is a major shift in the way most teachers learned to teach math, teachers requested:

- Understanding and patience from administrators that they are doing their best to implement the new program, despite the **big learning curve.**
- More **support and guidance**, and less punitive reprimands.
- More efforts for teachers to **trust and buy in** to IM, and less judgment for doing "something wrong."
- More celebration of model classrooms and **sharing of best practices**, and less "top down."

I think teachers should have a little more leeway to teach the students how they know their students learn. If going off script for a unit or for a few days for whatever and doing something different because this isn't connecting, I think the Assistant Principals and people who are scoring these teachers are so gung-ho about follow the script verbatim. I think that's really frustrating a lot of teachers and a lot of students and impeding their ability to actually teach them. [teacher]

But if they feel like it's something they're doing wrong, the teachers will be like, "Screw it, I'm just not going to use it at all." [teacher]

No joke…I think it's coming down from the top down, but yeah, the principals are coming in and doing that. It's a learning curve. It's a new program. We have, especially at first, so I think that it's more that we haven't gotten – they like to think that we've gotten supported, but we've basically gotten threatened. [teacher]



Recommendations

The math team is really responsive. That pacing guide they put out – it's phenomenal the amount of work that gets put in that they're turning around to try and mitigate some of the concerns that they're hearing from schools so I always appreciate the math team's willingness to streamline processes for success because I think that's really the biggest barrier. [SBTL]

Recommendations from the Evaluation Team Based on Focus Group Responses

1. Continue and expand PLCs in order to build teacher trust, collaboration, and buy-in through continual, collaborative support structures. (Slide 15)

2. Provide differentiated professional learning by grade-level, role, and content-area (such as ESOL, Special Education, and Algebra). (Slide 18)

3. Provide generous amounts of materials and supplies to schools, as well as prepared materials and pre-printed copies, when possible, in order to reduce the time required for teachers to prepare lessons and increase the likelihood that teachers will spend time on intellectual preparation. (Slide 19)

4. Clarify messaging about allowable modifications that can support implementation, while keeping in mind that punitive efforts to enforce fidelity may undermine buy-in and trust in IM. (Slide 29 and Slide 30)

THE SCHOOL DISTRICT OF PHILADELPHIA

Learn more about the Illustrative Math Curriculum:
https://www.philasd.org/curriculum/#math