MfA

For master teachers
of math and science

#MfAProud

2024 — 2025

ANNUAL REPORT

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Foreword

At MƒA, we believe that making it possible for expert teachers to collaborate, learn, and lead strengthens our education system and is the best way to ensure all students get the education they deserve. MƒA continues to be a model for the profession that shows how it might evolve. During the 2024-2025 school year, MƒA continued to grow, and we remain on track to return to our pre-pandemic level of 1,000 teachers by 2026. Many innovations adopted during the pandemic, such as virtual programming, are now simply standard practice at MƒA, and we have found a balance between in-person and remote options that allow us to reach teachers in efficient, novel ways without sacrificing the human connections that empower our community to thrive.

Our robust and engaging professional development program remains the foundation of everything we do at MƒA. We are also committed to continuing to build on that foundation, evolving our programming, and exploring special projects with the potential to expand our impact. In the last year, we launched or continued ambitious new initiatives that we expect to flourish in the years to come. We are particularly focused on how we can leverage our teacher network in new and exciting ways to make a direct impact on students.

This past fall, nearly 1,300 teachers attended our annual Fall ƒunction gala at the Marriott Marquis in Times Square. Our gathering was bittersweet, being the first time holding the event without our founder Jim Simons, who passed away in May 2024. In addition to celebrating our teachers, we paid tribute to the passion, vision, and generosity that inspired Jim to create a program that has been thriving for more than twenty years.

Educators continue to face many challenges. At MƒA, we remain committed to furthering Jim's vision, rooted in his belief that students benefit when accomplished teachers are trusted, respected, and supported. We hope this report will provide a portrait of our teachers, their accomplishments, and their communities.

Maria Klawe, MƒA President

MfA FELLOWSHIPS

Master Teacher Fellowship

The MƒA Master Teacher Fellowship is a four-year fellowship for New York City K-12 public school mathematics and science teachers that comes with $60,000 in stipends. In the fall of 2024, 108 Master Teachers began their first fellowship with MƒA. Almost 50% of the incoming cohort taught mathematics, and the rest covered other scientific disciplines, including computer science. Roughly 80% of the incoming cohort had applied for the first time, with 20% having applied previously. Admissions from elementary, middle, and high schools closely mirrored proportions at MƒA overall at 6%, 22%, and 72%, respectively. About 80% of the incoming cohort worked in traditional city schools, with charter schools accounting for 13%, and the rest representing specialized and consortium schools. Brooklyn was the borough with the largest representation (33%), followed by the Bronx (23%), Manhattan and Queens (each 21%), and Staten Island (2%). High-poverty schools accounted for 71% of schools. Master Teachers who complete a four-year fellowship are eligible to apply for additional fellowships, called Master Teacher II+ Fellowships.

Master Teacher II+ Fellowship

The MƒA Master Teacher II+ Fellowship is a four-year fellowship for accomplished teachers who have previously received an MƒA Master Teacher Fellowship. Teachers can receive up to five fellowships with MƒA, including their first Master Teacher award. In the fall of 2024, 95 teachers began a new Master Teacher II+ fellowship, including 21 teachers starting their second fellowship, 61 starting their third, nine starting their fourth, and five starting their fifth.

MƒA FELLOWSHIPS	
I	433
II	225
III	270
IV	27
V	13

MƒA COHORT	
2021	275
2022	219
2023	271
2024	203

Emeritus Program

Those who do not receive an additional fellowship can continue to participate in the professional learning community at MƒA through the MƒA Emeritus program. MƒA Emeritus teachers can take and propose courses, and they have access to other professional growth opportunities and benefits. In the fall of 2024, MƒA admitted 171 teachers to the Emeritus program.

968

MƒA TEACHERS

171

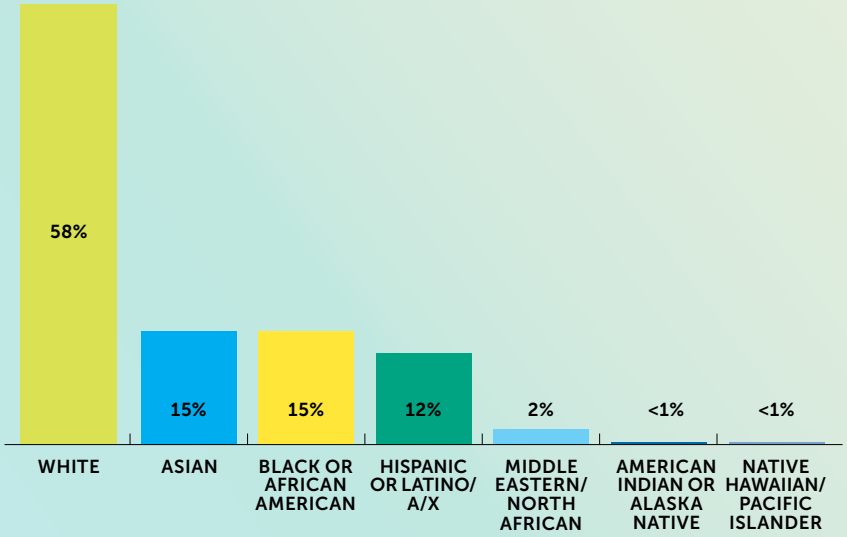
EMERITUS TEACHERS

1,139

TOTAL TEACHERS

Following a dip during the pandemic, MƒA has been gradually returning to its equilibrium state of roughly 1,000 active fellows. MƒA is now on track to reach this goal in the 2026 school year.

TEACHER DEMOGRAPHICS

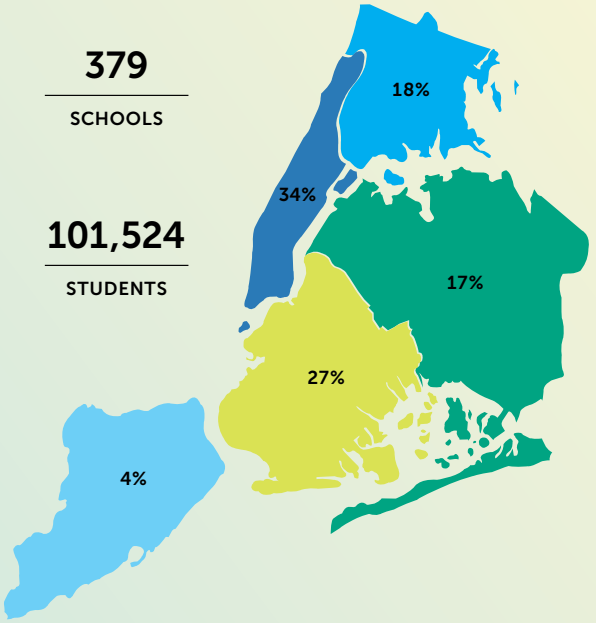


5% - I PREFER NOT TO IDENTIFY

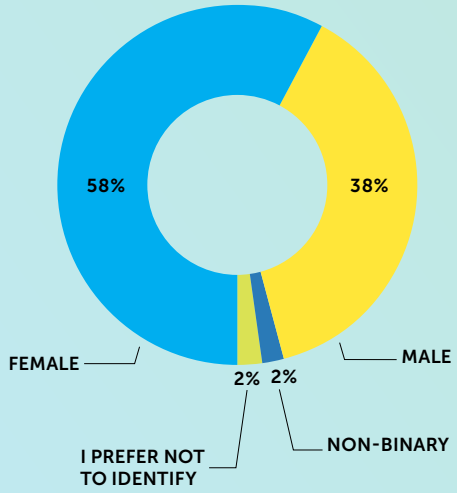
BOROUGHS

379
SCHOOLS

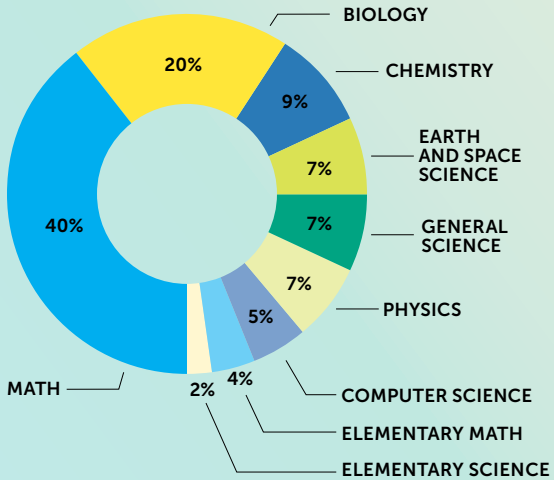
101,524
STUDENTS



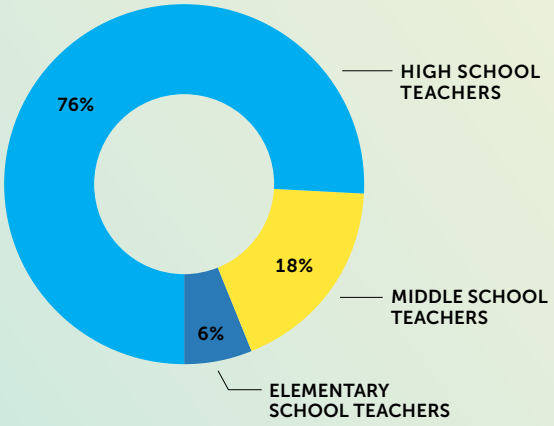
GENDER IDENTITY



SUBJECTS



GRADE LEVELS



MfA TEACHING & LEARNING

One of the hallmarks of MƒA fellowships is our professional development and leadership program for teachers.

At MƒA, Master Teachers explore cutting-edge content, innovative teaching practices, and research-based professional development models. During the 2024-2025 school year, MƒA offered 540 courses consisting of 994 individual workshops focused on mathematics, science, computer science and technology, inquiry, practice, and leadership, community, and equity. 75% of courses/workshops were facilitated by MƒA teachers and 25% were facilitated by outside experts. Many courses aimed to support MƒA teachers in implementing new citywide or statewide initiatives, such as the Illustrative Mathematics curriculum recently adopted by New York City Public Schools, and the Next Generation Science Standards adopted by the State of New York. Additional MƒA courses tailored to the specific interests and needs of our teachers, included:

- How Intelligent is Artificial Intelligence?: A Neuroscience Perspective
- Do You Want to Excel at Excel and Google Sheets?
- Empowering Education: AI-Enhanced Lesson Planning
- The Science of Happiness
- Game Theory: The Mathematics of Decision-Making
- And Now to the Weather...

In addition to core programming, MƒA also partners with programs, researchers, and institutions on projects that advance our mission and vision locally and nationwide:

SPECIAL EDUCATION ADVANCED CERTIFICATE FOR PRACTICING TEACHERS (SpEd-ACT)

SpEd-ACT is a PreK-12 advanced certificate program specifically collaborating with and serving 80 diverse educators from MƒA, Urban Assembly, and District 4's Talented and Gifted School for Young Scholars. MƒA partnered with Hunter College to help address the shortage of highly qualified STEM special education teachers in New York City Public Schools (NYCPS). Teachers in the program learn from Dr. Rhonda Bondie and a team of faculty who bring specialized expertise. Teachers will receive two years of coaching to support them as they apply their learning to serving students with disabilities at their own schools. 10 MƒA teachers joined an inaugural cohort of teachers who received special training through Hunter College toward certification in Special Education. The program will increase the number of special education teachers with deep STEM knowledge and immediately increase the quality of instruction that students with disabilities are receiving. This is especially important in NYCPS, where a recent Annual Special Education report showed that more than 3,000 students did not receive the special education services recommended on their Individualized Education Plans.

CODE.ORG

MƒA partnered with Code.org, an education nonprofit dedicated to the vision that every student in every school has the opportunity to learn computer science and artificial intelligence as part of their core K-12 education, to provide a week-long intensive course that prepared 16 math and science teachers to teach computer science during the school year. The teachers followed the summer experience with eight professional development days throughout the school year. These teachers helped to fill crucial gaps in computer science offerings in the NYC public school system with a focus on increasing participation by young women and students from other underrepresented groups.

PROJECT KINDLE

MƒA partnered with Earthwatch, a nonprofit organization that connects people with scientists worldwide to conduct environmental research, and Greenbacker Capital to send 10 teachers on a week-long excursion with scientists to conduct fieldwork in Acadia National Park. After returning, the teachers created hands-on research experiences for their students based on the fieldwork experience. They shared their projects and learnings with the broader teaching community through a showcase hosted at MƒA.

AI WITH TEACHING LAB

MƒA partnered with Teaching Lab, a professional development provider focused on curriculum, to test AI tools designed to support the implementation of Illustrative Mathematics, a curriculum recently adopted citywide by New York State Public Schools. Teachers tested the innovation in their classrooms and proceeded to provide crucial feedback to developers to ensure the AI will effectively support teaching and learning.

TEACHER TALK

MƒA is the single greatest source of professional learning on the planet. It may seem hyperbolic, but there is no place else where you will find a collection of such outrageously talented and passionate educators so willing to challenge one another and themselves, often from one moment to the next. The axioms of professional learning hold that it is reflective, ongoing, job-embedded, and student-centered; MƒA has created a sort of biosphere, or incubator, where these abstractions become concrete.

In an industry where stagnant, compliance-based, one-size-fits-all professional development is too frequently the rule and not the exception, MƒA teachers are invited and empowered to do something transcendent for one another on a regular basis.

You may work through problem sets to better understand relativity one evening and the next find yourself sat in a circle uncovering implicit bias. In both cases you'll find teachers courageously bringing their whole cognition and souls to the work in a held-space that has been sanctified by commitment and collaboration at the highest levels.

Teaching is a profession where you can work 24/7 and still feel like you are falling behind. There is nowhere I would rather spend those hours than with my feet under the same tables as my fellow MƒA teachers."

MƒA MASTER TEACHER PAUL KEHOE,
The Riverside School for Makers and Artists

During the 2024-2025 school year, MƒA offered 540 courses consisting of 994 individual workshops focused on mathematics, science, computer science and technology, inquiry, practice, and leadership, community, and equity.

MfA IMPACT

MƒA teachers bring what they learn at MƒA back to their classrooms, directly benefiting their students and schools.

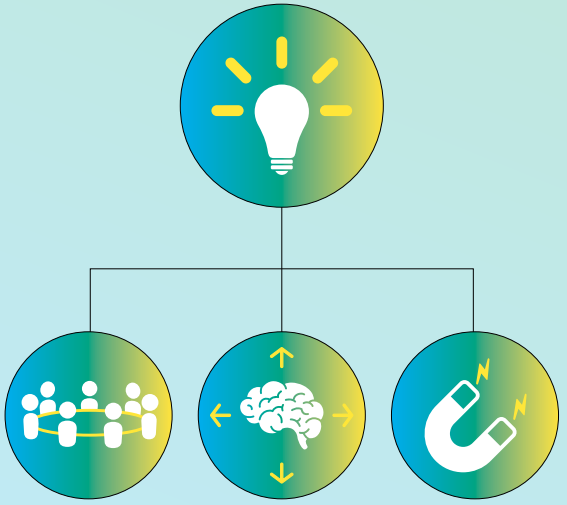
During the 2024-2025 school year, 91% of MƒA teachers reported regularly incorporating resources or strategies from their fellowships into their instruction. The ripple effect extends beyond their own classrooms: 96% shared ideas about curriculum, teaching, or student learning with school colleagues; 79% modeled instruction for at least one teacher at their school; and 40% facilitated professional development by turnkeying best practices they learned at MƒA. In short, nearly all MƒA teachers extend what they learn beyond their own classrooms, amplifying impact across schools.

MƒA teachers also enrich student learning in STEM by using new ideas, resources, and relationships from MƒA. This past school year, 80% of teachers attributed increases in student engagement and persistence in STEM to the resources and strategies they learned at MƒA. These gains were especially significant in high poverty schools, where 70% of teachers saw improvements in student mastery of math and science concepts.

MƒA's fellowship model fosters community and keeps teachers in the classroom, countering professional isolation and burnout. MƒA's nearly 970 teachers bring an average of 14 years of teaching experience, creating a rich network of highly experienced, expert professionals. With a yearly retention rate of 96%, MƒA keeps excellent teachers where they are needed most. Notably, 60% of MƒA teachers say their fellowship was a factor in their decision to stay in the classroom this year. By investing in teachers, MƒA multiplies its impact across classrooms, schools, and communities.

Outstanding teachers join a professional community where they explore cutting-edge content, innovative teaching practices, and research-based professional development models

Teachers bring what they learn back to their classrooms and schools



MƒA teachers strengthen teaching and professional development at their schools.

- **89%** of MƒA teachers incorporated resources or strategies from their fellowships into their instruction on a daily, weekly, or monthly basis.
- **96%** of MƒA teachers shared ideas about curriculum, teaching, teacher professional development or student learning with school colleagues.

MƒA teachers enrich student learning in STEM at their schools, using new ideas, resources, and relationships from MƒA.

- **277** MƒA teachers added new higher-level STEM classes to their schools' curriculum.
- **407** MƒA teachers created new STEM electives or extracurriculars at their schools.
- **381** MƒA teachers established new partnerships to increase students' access to additional STEM learning outside of school.

MƒA fellowships keep teachers in the classroom longer.

- **572** MƒA teachers said their fellowship was a factor in their decision to stay in the classroom this school year.
- The MƒA fellowship has an average yearly teacher retention rate of **96%.**
- The MƒA community is comprised of highly experienced teachers who have spent an average of **14** years in the classroom.

450+
professional development workshops per semester

→

75%+
designed and led by MƒA teachers

→

100+
partnerships with mathematicians, scientists, and education experts

75% of courses/workshops were facilitated by MƒA teachers and 25% were facilitated by outside experts.

MƒA NEWS, SEPTEMBER 2024

New School Year Brings a New Math Curriculum

Broadcasted on Spectrum News NY1, MƒA teachers and leadership share their thoughts on NYC's rollout of the Illustrative Math curriculum for nearly all high schools.

When he first started teaching high school algebra at Chelsea Career and Technical Education High School, Jason Ovalles heard a familiar question from his students.

"'Why are we doing this?' You know? And the eventual answer was, it was basically just like, you need to know this to graduate, because you need to know this to pass the Regents," he said.

Then he started using a curriculum called Illustrative Math, which he'd previously used in a middle school. Instead of demonstrating an equation and handing out worksheets, he poses a complicated question, and students work in groups, with his help, to solve it.

"We're teaching you how to think and how to, how to like, reason through things. How do you hear what somebody else is saying and kind of use your brain to figure out, does that make sense or does that not? And if it doesn't make sense, how do I argue against it?" Ovalles said. "Especially the students that we teach, that's way more useful and something that they can take away."

The lessons are problem-based. Rather than having students copy a teacher to solve a simple equation, one lesson available online asks students to use an equation to help plan a party, using letters to represent the cost of a main dish or dish, and the number of them needed, and then creating an equation to determine the cost of the party.

Ovalles is a master teacher through the group Math for America, which provides professional development to math teachers. Math for America president Maria Klawe says there are benefits to standardizing curriculum, but it can be hard for teachers, many of whom have developed their own materials and methods. She said among the fellows using the curriculum, reaction has been mixed.

"I think that there is a general consensus that it's a good curriculum. I think there are teachers who would prefer not to be told what curriculum they have to use," Klawe said.

The city began mandating the curriculum in 260 high schools last year, including the transfer high school where Meredith Klein, another Math for America master teacher, taught students who had either previously left school or were behind on credits.

"We were told that it needs to be taught exactly as written, and I felt extremely depressed by that, to be honest, and really worried for my students," Klein said.

Klein said the curriculum wasn't written with students like hers in mind, and assumed prior knowledge they did not have. Over the course of the year, teachers were told they could ease up on how strictly they followed it.

"What we keep being told is that we're building the plane as we're flying it. And I just think, like, my question is why?" Klein said.

One controversial aspect of the curriculum is a pacing calendar meant to keep teachers on track.

"They're asking for things to happen way too quickly, and teachers are rightfully being like, that's, this is not going to fit my students," Ovalles acknowledged.

Both teachers noted the curriculum is not aligned to the Regents exams students must pass to graduate, requiring them to make changes or offer classes focused on test prep.

The city's Department of Education says no curriculum is perfect, but this is one well-regarded by a range of experts, and that they'll listen to educator feedback.

All high schools will use Illustrative Mathematics, unless they're given an exemption — and so far, those have only been given to six of the city's specialized high schools.

The city is also standardizing the curriculum for middle schools, but superintendents will be given a list of approved curriculum options they can choose from at the middle school level, which will include Illustrative Mathematics.

MƒA STORIES, MARCH 2025

Inspired Science: Making the Invisible, Visible

How MƒA Master Teacher Sylvia Gayatinea creates connections between nuclear chemistry, history and ethics for her students.

Over the past several years, Master Teacher Sylvia Gayatinea has taken two MƒA courses focused on nuclear weapons taught by Dr. Ivana Hughes, a senior lecturer in chemistry at Columbia University. She also attended a lecture Hughes delivered about her work with Columbia's K=1 Project, which researches the legacy of U.S. nuclear testing in the Marshall Islands in the 1940s and '50s.

At one point, Hughes introduced a nuclear diplomacy simulation, which challenged students to step into the roles of scientists, diplomats and world leaders to tackle tough questions about nuclear energy, weapons and global policies. Gayatinea saw immediately how the exercise could help her illuminate some of the more abstract concepts she explores with her own students at the Urban Assembly Gateway School for Technology.

"I have to teach nuclear chemistry, but it's very dry," she says. "It's not like I can bring nuclear radioactive isotopes in the classroom to make it interesting."

When she used the nuclear diplomacy simulation with her students, Gayatinea saw its impact instantly. Teachers in her school's history department helped support her efforts by ensuring the students were well grounded in the history of nuclear weapons development in World War II by the time their nuclear chemistry unit began. "It's amazing to see students trying to balance scientific facts with political realities," she says. "They're realizing how chemistry connects with ethics and history in a way they hadn't considered before."

This newly expansive perspective led Gayatinea to a life-changing experience in the summer of 2024, when she made a solo trip to CERN, the European Organization for Nuclear Research. Located on the Franco-Swiss border near Geneva, the intergovernmental organization operates the largest particle physics laboratory in the world. Her exposure to Hughes' work had inspired Gayatinea to learn more about quantum mechanics, a topic she had always wanted to explore but never had the chance to dive into. "I wanted to learn something different, and maybe I could bring something back to my students," she recalls. "I got more than I anticipated."

At the Science Gateway, a museum that CERN scientists use to share their work with the public, Gayatinea participated in immersive exhibits, laboratory workshops, lectures and a guided tour of the facilities. She also took full advantage of access to the physicist assigned to her group, who readily answered her many questions about topics such as the Higgs boson, the fundamental particle of the Higgs field, which is responsible for giving other particles their mass. First proposed in 1964, its existence was confirmed in a CERN laboratory in 2012.

Back home, Gayatinea created a simple classroom activity based on what she had learned at CERN. Students broke into groups, and she gave each group a gift-wrapped box and asked how they could know what was inside without peeking, using things like sound, feel and logic.

"While it was a simple exercise, it led to meaningful conversations about how we make the invisible visible in science," she says. "For the first time, no student asked 'If atoms are so tiny, how do we know they exist?' This was a breakthrough in my class." She hopes to schedule a virtual talk by the CERN physicist she met to further expose her students to the lab's groundbreaking work.

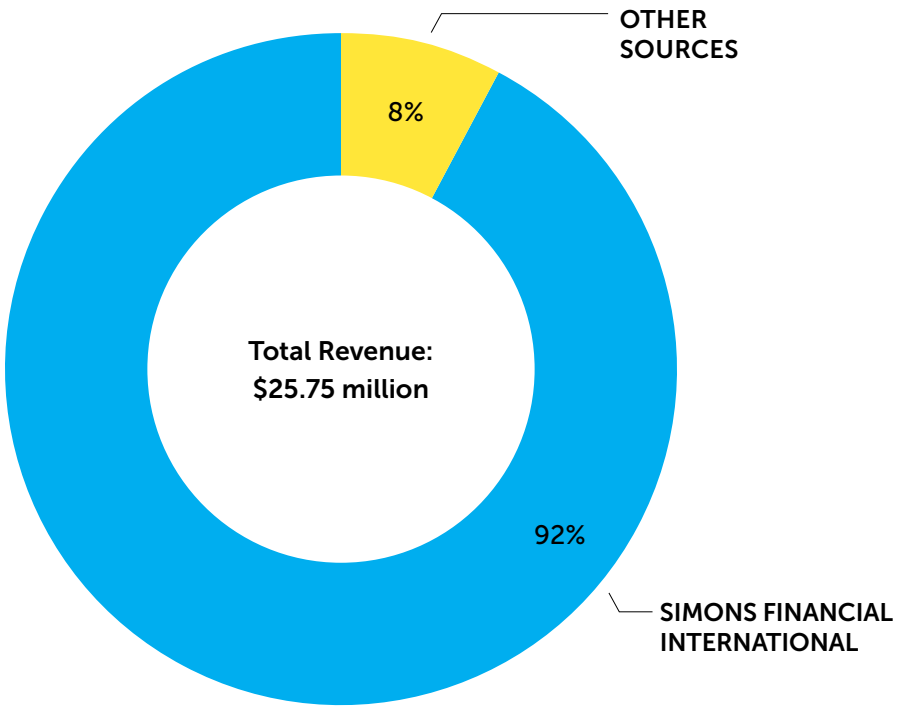
Gayatinea has never shied away from tackling new challenges as an educator — the previous spring, she chaperoned a trip to Japan — but after the trip to CERN she was inspired to create a professional bucket list of future goals. "I realized how important it is to have goals to keep me excited and motivated in my work," she says. "It helps me focus on what's important."

This summer, thanks to an impact grant from MƒA, Gayatinea will head to Bali as a volunteer teacher. She has also used grant money to start an art and science club at her school, a passion project that involves taking students to the Natural History Museum, the Metropolitan Museum of Art, and other locations around New York City where they can connect art and science.

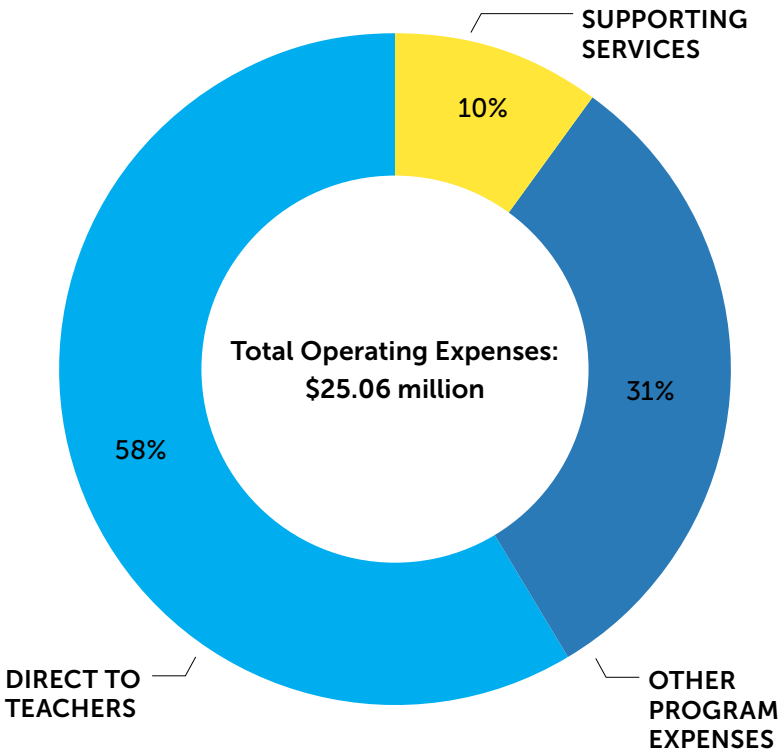
In an effort to share the benefits of her own experience, Gayatinea hopes to facilitate a course through MƒA about how her fellow teachers can create their own professional bucket list. "We're always looking for ways to stay inspired and keep growing in our careers," she says. "This will be a great way to connect, share goals and find new ways to keep the passion for teaching alive."

Fiscal Year 2025, Year in Review

REVENUE

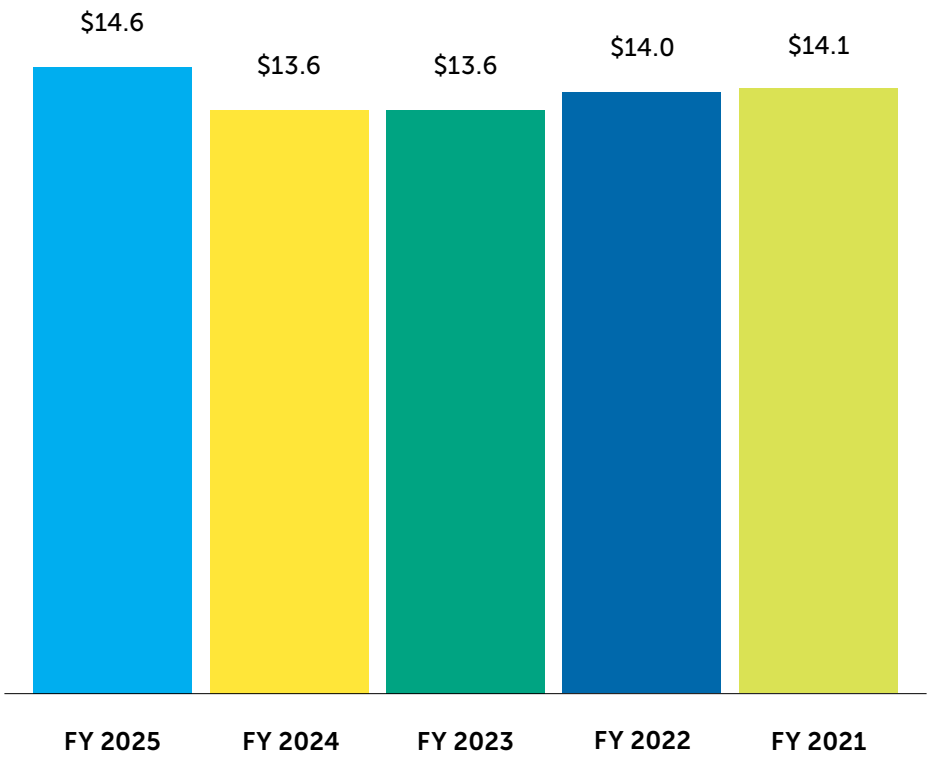


OPERATING EXPENSES



(Accrual basis, unaudited, $'s in millions)

$70 MILLION PAID DIRECTLY TO TEACHERS OVER 5 YEARS



Our Mission

Building a community of accomplished mathematics and science teachers who make a lasting impact in their schools, their communities, and the profession at large through collaboration and continued learning.

About MƒA

At MƒA, we've created fellowships for accomplished mathematics and science teachers. Our model is based on the belief that collaboration, continued learning, and genuine respect enables teachers to grow professionally and provides long-term career satisfaction. This is a remarkable community of teachers who stay in the profession longer and define what teaching excellence means. These are teachers who inspire and motivate their colleagues. They change the lives of their students.

Learn more at MathForAmerica.org

MfA

$$4\sum_{k=1}^{n}\frac{(-1)^{k-1}}{2k-1}$$

For master teachers
of math and science

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