

A Philosophy Focused on Families

The Great Lakes Bay Regional Alliance invests in families early

It's been a few years since Lori Flippin worked in a school district, but the former teacher and school administrator quickly recalls the many students whose lives and education were compromised because they didn't have family members to support them.

"So many students were just on their own," says Flippin, who serves as the STEM Initiative Leader of the Great Lakes Bay Regional Alliance (GLBRA), a STEM ecosystem in Michigan.

As an ecosystem leader, Flippin says her work is often guided by experiences she had with students and families, first as a secondary school math teacher and, later, as an assistant principal and assistant superintendent of schools.

NAVIGATING CULTURE CLASH WITH FAMILIES

Lori remembered one boy whose parents wouldn't allow him to participate in an after-school robotics club because they thought he needed to be home helping care for his siblings.

"He invited his parents to join the club so they could really see what he was doing. The parents started learning more about the project and understanding why it could matter in his life. By witnessing his engagement, they began to see what opportunities the program could create for him," she says.

"This student was failing most of his classes his freshman year. By the time he left school last spring, he had not only raised his grades, but he was moving on to an engineering college in pursuit of an engineering major and a computer science minor. This program helped make that shift possible."

Flippin remembers other stories, unfortunately, of less desirable endings for kids. Stories of students' desires to learn clashing with their family's needs and difficulties navigating their lives and schooling on their own.

"The inescapable truth," Flippin says, "is that family engagement is essential for students' success. Without engaged families, you're never going to get where you need to be. It can't all be just student-based programming."

ADVOCATING TO INVOLVE FAMILIES

The Great Lakes Bay Region STEM Ecosystem has been working on a series of initiatives to ensure students within the region have an advocate who understands their learning and in their overall development.

GLBRA's work with family engagement was spurred by research documenting the importance of having families tied to student learning. Flippin mentions that the state of Michigan also mandated that school districts could not accept funds for work with "at-risk" students unless they had a plan

for how to involve families.

In 2014, leadership of the Great Lakes Bay contracted with Accenture for an [exhaustive study](#) and recommendations about STEM. The STEM Impact Initiative concluded that creating a culture of STEM in the Great Lakes Bay region was critical for creating the strong STEM pipeline that stakeholders sought.

A pillar in creating such foundational STEM culture is engagement with families.

Leadership of the Great Lakes Bay launched several initiatives that are bringing families into the STEM learning of their children: [Math in the Mail](#), [Bedtime Math](#) and [STEM Passport](#) programs.

TAKING THE PATH LESS TRAVELED

Flippin points out that it would be much easier to have meetings and invite families to work with their children and the math kits. “But then you would only be serving the same parents that always come to everything, having all the opportunities and resources...And that same population that is difficult to reach, would continue to go unserved,” she says.

Flippin says Math in the Mail was designed to address some of the barriers, including transportation, preventing families of young children from engaging with their learning.

ALWAYS SEEKING FEEDBACK - FROM THE BEGINNING

Flippin maintains that families are an integral part of the design of much of the work that happens at the Great Lakes Bay Regional Alliance. “Things wouldn’t look the way they do without their input from the beginning,” she says.

For the Math in the Mail program and other GLBRA family engagement initiatives, Flippin says that organizers are always looking for feedback.

She said that they heard instructions for one of their programs were too long and confusing. They’ve also been told that the kits need more pictures so that families can better follow what is being asked of them.

“This is so important. You can then make the next adaptation that hopefully will allow it to be more impactful for them. As you go along with the process, you learn,” she says.

STEM PASSPORT - MAKING OUT OF SCHOOL OPPORTUNITIES MORE AVAILABLE

As part of its STEM Impact Initiative, GLBRA began a program in 2018 to help make out-of-school opportunities more available for families.

An “Out-of-School Time STEM Network” comprised of before- and after-school programs, community-based STEM programs, and STEM-rich institutions (i.e., museums, zoo, planetarium, arts and cultural centers, etc.) meets regularly to connect and align resources, while fostering a culture of STEM for the Region.

Recognizing that some children do not have equal access to STEM assets, the Out-of-School Time Network convened a STEM Access/Equity Committee to identify and implement strategies to mitigate access & equity issues.

MODELING AFTER ANOTHER ECOSYSTEM

The idea of a STEM Passport began after attending the Spring 2017 conference of the STEM Learning Ecosystems Community of Practice in Washington, D.C. The Greater Cincinnati STEM Collaborative shared the passport concept with Matthew Felan, President and CEO of the Great Lakes Bay Regional Alliance. Pitched with the idea, the local committee felt a STEM Passport could increase awareness and reduce financial barriers related to accessing regional STEM-rich institutions and programs.

Since October 2018, the passports have been distributed to children and their families. The passport features fifteen STEM-rich institutions and community-based STEM programs, including discounts, coupons and promotional advertisements. The program encourages families to take part in the STEM rich culture of the region and learn together.

BUILDING AWARENESS FOR THE WORK AHEAD

Flippin says another critical piece of her ecosystem's work with family engagement is to ensure that people know what's happening, why the work matters and how to engage with it.

GLBRA is now partnering with [Great Lakes Parents](#), a local parent group, to expand communication with families. They are planning a promotional campaign for Fall 2019.

Despite its many programs and initiatives, Flippin realizes that there's so much more work to do. "There's still so many more people to reach and there are always new populations coming in that you haven't interacted with. As you know, students exit the k-12 programming and new ones enter. So, it's an ever-moving, ever-changing target," she says.

Flippin shares that the key is to "be incredibly diligent in the work and keep gathering the stakeholders and adapting and modifying depending upon what's happening. You have to keep pushing and keep working."

LESSONS LEARNED

SUCCESSSES - "I think one of our best decisions was to pick a particular age of students to really focus on. I think initially we were just looking at too broad of an area. Although, we are still working with older populations, our key focal point has become that early childhood realm to promote early intervention for the students. So, I think that decision has really helped us to focus our work and align a lot of programming in a way that's going to make a great deal of sense in the long term," say Flippin.

CHALLENGES - "One of our biggest challenges has been maybe not having as much time to focus on the financial side of things. In many cases, we get excited about the initiatives and the progress we can have with the educators and the students and then finding the money seems almost like an afterthought. Like, 'OK now we've got this great project, now how do we fund it and scale it?' So, we need to bake in the mechanisms to scale in the design of promising programs. We still need to figure out how to make sure that once we have these quality programs that we can scale them," says Flippin.

MEASUREMENT - "How can we measure what we're doing in an affordable, meaningful way? Besides funding, measurement is really our major challenge. We would like to be able to predict outcomes in a more structured meaningful way. What we do should be based on data so that

you're not wasting anybody's time or resources. And I recognize that you've got to try new things. But the core portion of the work really should be driven by data, research and best practices. And the more that we can get there within our ecosystem and within all of the ecosystems, the closer we get to making the biggest impact that we could possibly make," says Flippin.

KEY TAKE-AWAYS

- Meeting families where they are is critical to increase equitable access to STEM programming. This means sometimes taking the road less traveled with programming.
- Include families in the design of programs from the beginning and keep listening. This ensures that families are getting the most out of the programs.
- Focus can increase impact. This might mean honing in on a particular age group.
- Bake program scaling into program architecture during development phases. Thinking about communication plans and funding models from the beginning will allow you to scale.

[Great Lakes Bay Regional Alliance \(GLBRA\)](#)

The Great Lakes Bay Regional Alliance (GLBRA), a consortium of business, education, and community interests, recognized that the future vitality of its economy was dependent on developing a STEM Talent Pipeline. The [STEM Impact Initiative](#) was launched in the Spring of 2014 when GLBRA contracted with Accenture and Innovate+Educate to develop a comprehensive analysis of STEM in the region and develop a strategy with specific recommendations. The final report - entitled "Building a Robust STEM Talent Pipeline in the Great Lakes Bay Region" - identified four sets of key requirements for a high-performing STEM region: (1) Driven by Employer Demand; (2) Powered by Career and College Ready Students; (3) Focused on Strengthening Technical Skills Needed for the Economy; and (4) Sustained by a Culture of STEM.