



Family as Faculty as an Infrastructure to Engage Pre-Admission Teacher Candidates in Family-Driven STEM Learning

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Overview

As teachers increasingly leave the field and fewer college students show interest in joining the profession, educators around the country have begun to question what we as a nation can do to get more young people interested in teaching and keep them there. One promising avenue is to strengthen how we prepare educators to engage and build relationships with families and communities. Many educators choose to go into teaching to contribute to their community in a meaningful way, but rarely focus on this in their coursework or field experience.

The innovation collaboration led by Indiana University School of Education in Indianapolis addressed this very challenge. Specifically, the project placed pre-admission teacher candidates – those in their freshman and sophomore college years, still deciding on whether to declare education as a major – in family-centered STEM learning events at a neighborhood elementary school. A focus on mathematics is particularly important given data that consistently show that children are falling behind in mathematics. These field placements

PROJECT PARTNERS

The Indiana University School of Education in Indianapolis

The Collaborative for Equitable and Inclusive STEM Learning (CEISL)
at the School of Education at Indiana University

Indy East Promise Zone

Indianapolis Public School 54 Brookside Elementary

The Neighborhood Caucus, a group of Brookside family and community members (Black/African American, Latine, White) that meet regularly

Down Syndrome Indiana (DSI)

were led by teacher educators, neighborhood members and family leaders so pre-service teacher candidates could learn first-hand from families and communities. The project also built capital and capacity for participating families, allowing them to navigate education systems on behalf of their children.

The Innovation

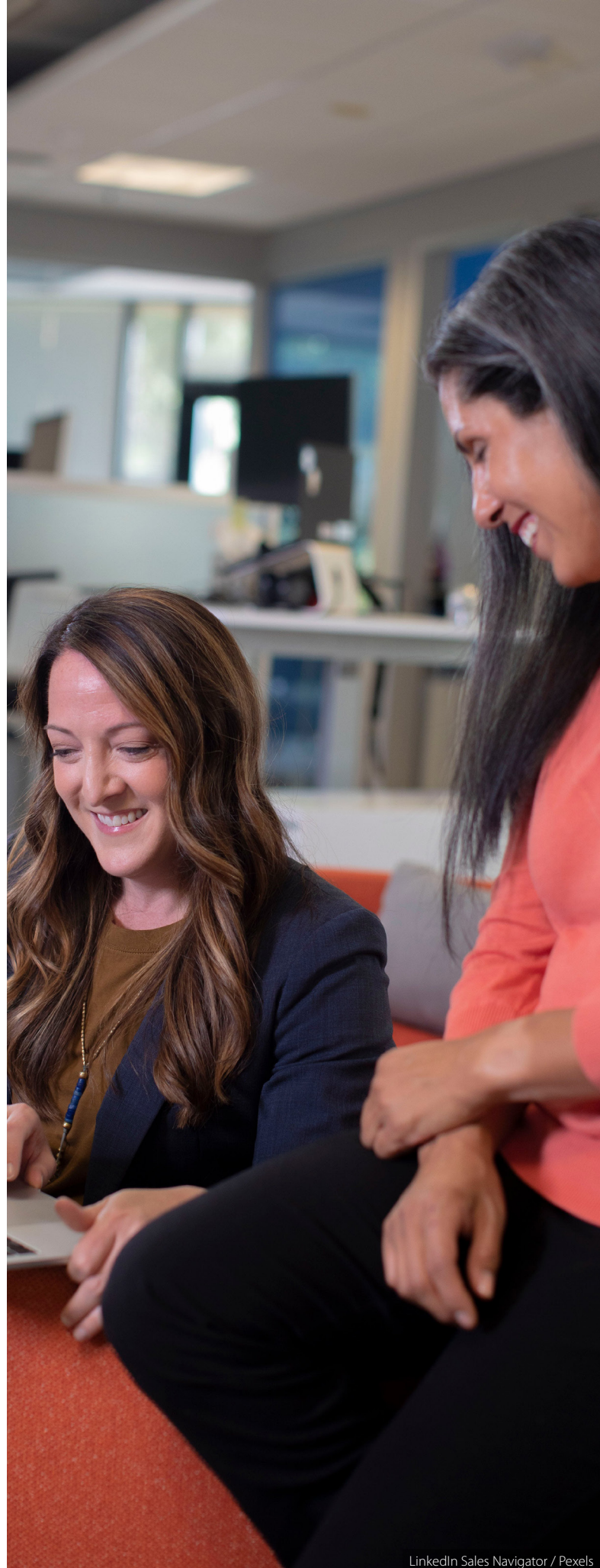
The innovation centered around three main activities:

- **Family centered service-learning field experience:** Over the spring 2023 semester, pre-admissions teacher candidates participated in two hours of service learning each week at the CEISL-led Math Studio in the family resource room at Brookside Elementary. Teacher educators and staff hosted planning sessions for the neighborhood caucus community members and family leaders to facilitate and participate in class sessions with the pre-admission teacher candidates.
- **Family As Faculty (FAF) STEM learning workshops:** FAF is an approach to educator preparation in which families are positioned as leaders and experts in the teaching of new educators. Although FAF takes different forms, for this project a core group of families who were recruited from Down Syndrome Indiana served as leaders and facilitators of three interactive workshops designed specifically so pre-admissions teacher candidates would begin to shift deficit-based understandings they may hold about families to asset-based understandings through active listening and authentic connections with family members. Research on FAF shows that the approach leads to improved communication and collaboration between teachers and families of children with disabilities.¹ In four planning sessions for the FAF events, family leaders discussed how they could elevate the ways math is present in the everyday lives of their children both in and out of school.
- **A “Town Hall” event:** At the end of the semester all participants joined together for a community “Town Hall” celebration. The day included student-led talks where pre-admission teacher candidates gave presentations on what they learned over the course of the semester. The day also included a panel in which family leaders, neighborhood caucus members, the CEISL team, and other community members including the Executive Director of Down Syndrome Indiana spoke about their experiences and hopes for all students.

Outcomes

Pre-admission teacher candidates are likely to continue on the path to becoming a teacher.

At the end of the project, pre-admission teacher candidates were asked to complete a survey about their experience working with families as part of their service-learning



experience. Ninety-three percent of candidates answered “yes” or “to some degree” that their experience working with families as part of their service-learning experiences assisted them in thinking about becoming a teacher.

Pre-admission teacher candidates improved their knowledge, skills, and dispositions in building relationships with families.

At the end of the project, pre-admission teacher candidates were asked to describe the way that working with families during the semester enriched their learning. Responses showed that working with families: (1) helped them understand where families come from; (2) opened their world view; (3) made them realize a need for change; (4) supported a better approach to teaching; and (5) learned that families should work together with teachers. For example, one teacher candidate commented, **“Working with families this semester has given me insight into how important it is for parents to be involved in their children’s education. They know them best and it’s important to include them.”**

Family leaders and neighborhood caucus members increased their capacity to advocate for their children.

Family leaders and neighborhood caucus members filled out a survey related to their experiences throughout the project. All participants agreed or strongly agreed (100%) that:

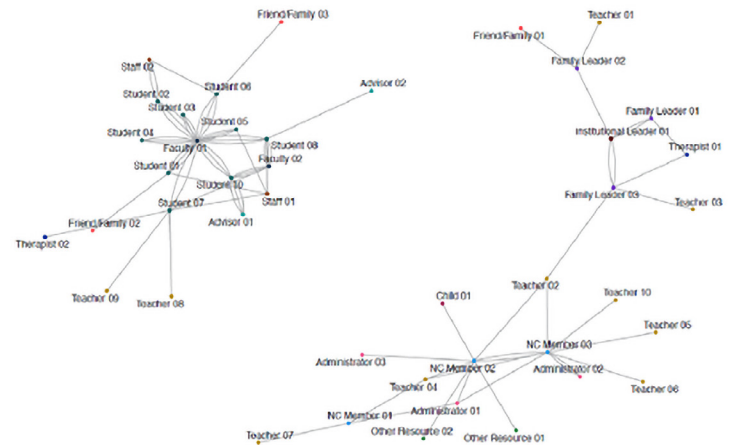
- the project created a safe space for them to express who they were and want to be;
- those involved in the project helped them develop positive understandings about their children; and
- working with those involved in the project can create new educational opportunities for people who might not have otherwise had them.

Students, families, and community members increased opportunities to grow their social networks.

At the end of the project all participants were provided with a link to a name generation survey asking for up to five names of people they seek out to address questions or concerns. Utilizing the name generation survey data, the network map was plotted (Figure 1). Although two distinct networks emerged – one for pre-admission teacher candidates and one for family and community members – teacher educators played a particularly important role in building connections and sharing information across the networks, as did other

school-based leaders who exhibit a great deal of strategic insight and a potential to bring groups together to support educational change.

Figure 1. Network Map



Concluding Thoughts

Overall, this project demonstrates that foregrounding families and communities in educator preparation programs holds the potential to increase the likelihood that young adults will join the teaching profession. The Family as Faculty model shows particular promise as an approach to preparing teacher candidates for family and community. As a result of the innovation, participating pre-admission teacher candidates improved their understanding of families and communities and increased their interest in becoming teachers. Educators also grew their knowledge, skills, and dispositions around family and community engagement. Moreover, families and community members who participated in the project felt a stronger sense of confidence in supporting and advocating for their children. Finally, by mapping social networks of those participating in the project, new opportunities for growing social relationships and supports became clearer. Lessons gleaned from this project also point to the importance of partnership. This work benefited from the fabric and layers of community networks and supports ready to be activated.

¹Patterson, K. B., Krudwig, K., & Webb, K. (2009). Family as faculty parents: Influence on teachers’ beliefs about family partnerships. *Preventing School Failure*, 54(1), 41-50.