

STEM Pathways Evaluation: Interviews with STEM Pathways Partners

Summary

STEM Pathways aims to increase youths' long-term interest, learning and achievement in STEM through a deliberate and interconnected system of STEM learning opportunities. STEM Pathways is a partnership of Minneapolis Public Schools (MPS), the Minnesota Department of Education (MDE), The Bakken, The Bell Museum of Natural History, Minnesota Zoo, STARBASE Minnesota, and The Works that tests a model for collaboration that could be expanded and replicated across more grade levels, schools, organizations, and communities. STEM Pathways serves fourth- and fifth-grade students at six elementary schools in MPS. This summary presents findings from interviews with representatives of the STEM Pathways partner organizations, including those who are members of the steering committee as well as members of the implementation team.

Key findings

Representatives of the STEM Pathways partner organizations indicated several successes from the first year of implementation including:

- **Full implementation of each partner's programming** for all the fourth- and fifth-grade classes at the six STEM Pathways schools
- **Enthusiasm and commitment** on the part of all partner organizations
- **Increased familiarity with, knowledge, and appreciation** of what other partner organizations do and how their work complements the work of other informal STEM education organizations
- **Sharing of educational approaches** between partner organizations, leading to new ideas and improved curriculum and instruction

- **Stronger alignment with and reinforcement of state standards** and increased knowledge, on the part of the partner organizations, of MPS' learning targets
- **Buy-in from leadership and teachers** at MPS
- **Attention to and support of the Next Generation Science Standards**

Partner organizations were at different stages of implementation for specific programmatic features of STEM Pathways:

- **Most partner organizations referred to other partner organizations** when working with students, however, this was not done consistently or strategically across all organizations

- **Partners began to use common vocabulary and incorporate crosscutting concepts, practices, and core ideas.** Understanding of these programmatic elements, and expectations regarding implementation of them, were not clear to all partners and were not implemented consistently or strategically across all organizations
- **Referencing to the STEM Pathways Portfolio varied,** with some partners referencing it regularly and others not using it at all
- **Discussion of careers and use of the career interactive** varied across partner organizations, partially as a result of late implementation of the career interactive
- **Partners found value in the use of the logo** as a visual cue for students and teachers to make connections between the partner organizations and as a representation of their unified initiative

Representatives of the STEM Pathways partner organizations noted a few challenges from the first year of implementation including:

- Partner organizations struggled with the **lack of funding** to participate in STEM Pathways
- **Logistical challenges** for some organizations arose related to scheduling and communication with MPS teachers
- **Varying levels of organizational capacity** lead to varying levels of engagement in planning activities and developing programmatic tools

Representatives of the STEM Pathways partner organizations described criteria for successful implementation including:

- **Total buy-in** from all partners, the school district, and teachers
- **Understanding from teachers** about what STEM Pathways is and what the partner activities involve
- **Strong leadership/direction** from the steering committee
- **Endorsement and advocacy on the part of the district** to principals and teachers at participating schools
- **Small group work** such as that done by the fourth- and fifth-grade cohorts, implementation team, and steering committee
- **Collaboration**—meaningful input from every partner involved
- **Consistency of activities**—ensuring that each partner consistently implements agreed upon programmatic components (e.g., the STEM Pathways Portfolios, common vocabulary)
- Providing **compelling evidence-based research and evaluation** to help secure funding for continued implementation

The full report includes a more detailed explanation of all the findings from the interviews with the representatives of the STEM Pathways partner organizations.

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For more information

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