Action Steps:

» Look for new ways to engage partners that will allow relationships to evolve.

» Create small working groups within your partner network to develop shared resources.

» Build opportunities for ongoing evaluation to understand how the partnership is doing with the shared goals.

Given enough time, most collaborative partnerships transition through predictable phases. It is essential to allow partnerships to change as the community's needs are highlighted and relationships within the community progress.

Strategies to Make it Happen:

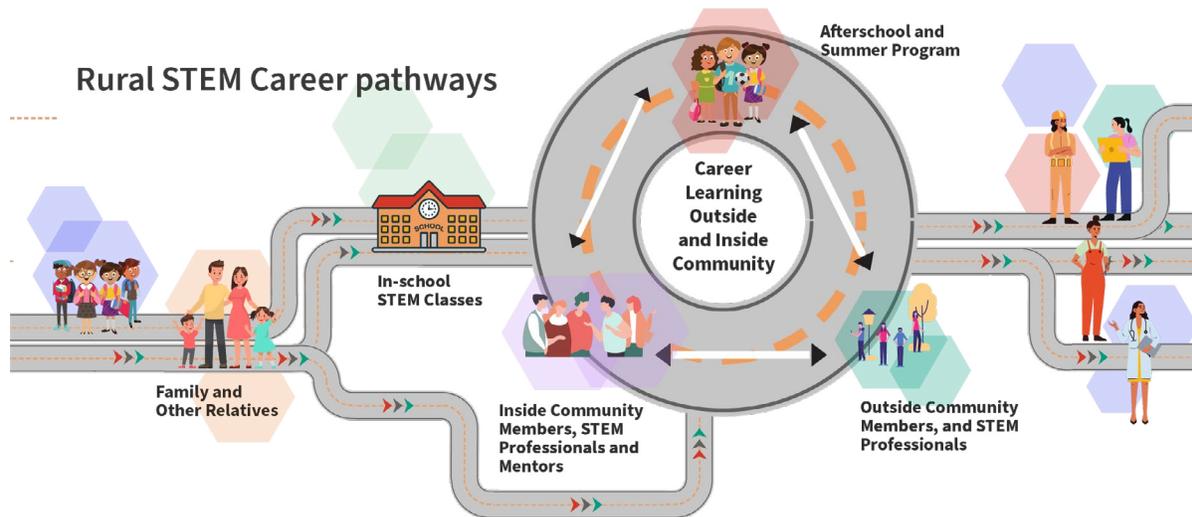**Allow Partnerships to Evolve Along the Way**

The partnership typology diagram below helps to visualize the evolution of your collaborative partnerships. The first community STEM education partnerships (CSEPs)[1] you engage for your project will likely be afforded through previously established relationships (Opportunity-based partnerships). As relationships grow to include additional partners, often sharing tools and strategies to achieve common goals, they become more collaborative (Collaborative partnerships). Eventually the relationships may become so intertwined that all parties succeed and are lifted up in the community as a result of the partnership (Interconnected partnerships). When partnerships become intimately dependent on each other to provide opportunities for success, the partnership is moving toward becoming a transformational partnership that can enact change across the community. Community STEM education partnerships are formed around the STEM opportunities or knowledge each partner brings to the table and how they support and complement each other in their efforts to support youth.

Partnership Typologies (revised from Allen et al., 2020[2]; Noam & Tillinger, 2004[3])

OPPORTUNITY-BASED
Discovering overlapping interests

Member organizations maintain their autonomy. Collaboration is seen as functional. Members network to share knowledge and resources.

COLLABORATIVE
Joining forces

Member organizations develop common goals, benefit from one another's strengths and experiences, and establish some accountability.

INTERCONNECTED
Developing an inclusive system

Member organizations develop clear communication and a level of intimacy. They engage in joint decision-making, shared programming, and group celebrations of accomplishments.

TRANSFORMATIONAL
Changing all partners

Member organizations accomplish more together than they do independently. Relationships are equal, not hierarchical.

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[1]Community STEM education partnerships (CSEPs) are long-term collaborations between organizations and project participants that coordinate and leverage expertise and resources to improve STEM learning opportunities for youth. [2]Noam, G. G., & Rosenbaum Tillinger, J. (2004). After-school as intermediary space: Theory and typology of partnerships.

Expand partnerships by working with your initial partners to connect with other potential partners, which can lead to further connections within the community. This "snowball" approach (described in Practice Brief 3) can provide opportunities for partner relationships to develop more organically. Engage your network of partners to work together on creating something meaningful for youth in their community, such as creating STEM pathways. From that point, consider how to begin transferring ownership to committed partners so as to sustain the community partnership work you have begun.

Rural STEM Career pathways

Form Working Groups to Help Partnerships Evolve

Forming a STEM community partnership group is one way to focus efforts on creating STEM pathways for youth. Invite community members from a wide variety of backgrounds to give voice and representation from all levels, classes, races, and ethnic backgrounds within the local community. Include interested parents and/or older students to contribute from their perspectives. The community partnership group is different from an advisory board, which traditionally exists to give input and advice but does not necessarily have a stake in the process. This group should become an invested central stakeholder who is sharing the work of identifying, creating, and connecting STEM pathways for youth in the community. This role ought to be owned and led by individuals within the community.

First meetings are primarily about participants getting to know each other, understanding organizational priorities in local STEM education, and identifying STEM organizations that should have a seat at the table. The first few meetings must focus on understanding the local STEM landscape and discovering the interests and values of the participants. Consider creating a STEM community asset map (described in practice brief 1) as an activity for your partnership group.

Once you have facilitated a few meetings, identify group members who are interested in helping plan, lead, and facilitate future meetings. This allows the focus of future meetings to be determined by the stakeholders and can lead to slowly transitioning full ownership of the initiative to partners in the community. Work with this core group to draft a set of community-based goals (See example goals from the STEMCC community partnership group below).

At each meeting, take extensive notes during large and small group discussions so that the meeting minutes, discussions, and decisions are recorded and communicated to all those unable to attend. Meeting notes can be used to build out action items for future meetings.

EXAMPLE GOALS FROM A RURAL STEM COMMUNITY PARTNERSHIP GROUP

1. Understand the STEM landscape in the community – past, present, and future.
    *   Explore the history of STEM careers and career pathways in the community.
    *   Determine existing STEM touchpoints and gaps for youth (ES-MS-HS) in the community.
    *   Imagine the possible future STEM opportunities and landscape in the community.
2. Co-define strategies that develop and enable community partnerships to support youth exploration of locally relevant STEM and computing career Pathways.
    *   Explore the past and present STEM partnerships and strategies that have worked well in the community.
    *   Inform existing and future STEM experiences by, and for, youth.
3. Increase youth awareness of and access to STEM opportunities in their local community.
    *   Promote the development of equitable opportunities for youth to engage with STEM in their local community.

After setting goals and creating the STEM asset map, you will want the group to think about how youth engage with the STEM opportunities that are already available in the community. One way to accomplish this is to develop example profiles representing youth in the community. Ask group members to consider the opportunities and barriers that exist for youth to engage in STEM in the community right now. Then have the group brainstorm ideas to expand STEM opportunities and create deeper engagement moving forward. Synthesize these ideas into a list of actionable directions the group could take. Survey your group to gain consent around which actions to prioritize. The results from this survey can be used to create working subgroups, each with a specific sub-goal or resource that the group will focus on creating.

The working groups create meaningful ways for your partners to collaborate with each other and establish or evolve their relationships, beyond the work they might be doing for your project. As partners become more interconnected they are able to accomplish more towards supporting STEM learning opportunities for youth in the community.

Build in Opportunities for Ongoing Evaluation

As the partnership develops and matures over time, it is important to evaluate progress made towards the shared goals. Consider both the perspectives of the partners and the research team to see if the partnership is realizing mutual benefit and value. Use a reflective memo to elicit responses to four ideas about collaborative community partnership development (Yurkofsky et al., 2020):

» **Bridging**: facilitating connections with initiatives and other operating parts of the partner organization.

» **Buffering**: creating protective spaces for those working on the project that keeps possible contradictory guidance, policy, or leadership at bay.

» **Shared tools**: developing shared tools that allow for asynchronous, ongoing collaboration, including capturing decisions and feedback for improvement.

» **Informal support**: Ongoing work that helps partners as they implement youth learning experiences that are not captured in other representations of the partnership, such as helping with a technological issue.

Invite each team member to complete a reflective memo quarterly or after major project activities. Then, convene a meeting with team members and facilitate whole-group reflection and synthesis on the partnership, project goals, and partnership development. This reflection allows the team to make necessary adjustments and changes to ensure that all partners and stakeholders are heard and realize mutual benefit from participating in the project.

STEM CAREER CONNECTIONS

Tool: Reflective Memo Template

Use the reflective memo as a tool for both internal project members and external partners to evaluate how your project is progressing.

STEM Career Connections Spotlight:

In our partnership, our research team planned the first few STEM community partnership meetings and presented the goals described above to the participating members. After the first two meetings, some individuals were central to the partnership and had taken on leadership roles within the group. We invited these individuals to join us in the planning meetings. Over many meetings, these individuals took on more leadership both in planning for the partnership meetings and in facilitating portions of the meetings themselves. This allowed our research team to step back and provided a path for the participating community members to have more ownership over the partnership group helping guide the direction the group went. This was important as our team was not a part of the local community, and our project was only funded for a few years. This transfer of ownership to the local community members builds in sustainability and investment beyond our team's time working in the community so that the STEM partnership group would continue to exist into the future beyond our project and would continue to support the development of STEM learning opportunities and STEM career pathways in the local community.

Reflection Questions

» Which typology best describes your current partnerships? What evidence do you have to support your answer?

» Why is it important to make reflection an essential part of your ongoing work to grow and sustain partnerships?

» How can you facilitate working groups to connect partners to youth opportunities?

» Do you anticipate any need to create "protective spaces" for participants in the project?

» How have you been successful in using "shared tools" for ongoing collaboration, making decisions, and sharing feedback?

Next Steps

Practice Brief 6: Keeping It Going and Looking to the Future