In a growing number of afterschool programs, young people are discovering that STEM skills and approaches can empower them to better their communities and address issues they care about. To learn more about these programs and how to bolster them, the Collective for Youth Empowerment in STEM and Society (CYESS) commissioned a study looking at trends among afterschool programming at the intersection of STEM, civic engagement, and youth leadership. A survey and interviews with programs led to the following findings and recommendations.

**FINDINGS**

**Common Program Components.** The survey revealed that there are clear trends among those who operate an afterschool program that incorporates STEM and community engagement. The greatest number of the survey respondents (50%) facilitated a program that is operated at least in part by a community-based organization or other type of non-profit. Museums or science centers were another common collaborator (54%) for program operations.

Two predominant afterschool models for STEM and community engagement emerged from this study: the local chapters of national models sharing a common curriculum, and the independently operated approaches by community-based organizations like museums, science centers, or non-profits. Each model carried its own set of advantages and challenges.

**Incorporating Community Engagement and STEM.** Findings indicated a trend towards using community engagement as the bridge that establishes STEM’s relevance and meaning for youth (versus employing STEM initiatives to drive community involvement). When asked about the objectives of the community engagement portion of their programming, survey respondents revealed that the top priority was empowering young people to effect positive change in their communities. When asked about the goals of the STEM portion of their program, the highest ranked was to excite and inspire teens about STEM, followed by building their confidence. The study did not reveal any inherent tension between workforce readiness and a commitment to social justice or other community-oriented goals.

**Youth Involvement.** Survey responses indicated diverse degrees of youth involvement in program design, with a majority (77%) of programs falling between the second and third highest rungs of Hart’s Ladder, a model for documenting youth involvement that encourages progressing from lower levels of participation, which might only offer tokenistic inclusion, to higher levels where young people’s input meaningfully informs decisions. Notably, 42% of programs were consistent with the third highest rung, where adults established the overarching framework and youth partook in determining its execution. Another significant portion (35%) of respondents aligned their programs with the second-highest rung of Hart’s Ladder. This involves youth taking the initiative to identify issues, plan their projects, and seek adult assistance as necessary.

**Assessments.** While a few survey respondents were seeking funding for formal evaluation services, most incorporated some form of structured feedback about their program. Their methods were varied, with the most common forms being survey administration (27%), qualitative data collection (e.g., stories, reflections, multimedia; 19%), and some type of assessment either built into the program (e.g., competition results) or distributed to determine change over time (e.g., pre-/post-test, 19%).

**Funding.** The survey revealed a diverse spectrum of funding sources underpinning these programs. A significant 81% of respondents received support through grants from private foundations. Other common funders included federal, state, and/or local governments (50%) and corporate sponsors (46%).
Challenges. Interviews with afterschool leaders revealed a few challenges in integrating youth perspectives into their programs. To begin, they often noted the difficulty of balancing a youth-driven approach and the level of adult support needed to help youth formulate attainable solutions to their societal concerns. Project continuity poses another unique challenge when young people select the societal concern they would like to address with their project. While youth-centered, this approach is at risk of creating disjointed efforts over the years as youth leave the program and new participants select different concerns they’d like to address. Finally, this study shed light on a fundamental tension between fully participatory programming and traditional funding models, wherein conventional funding often necessitates a detailed proposal outlining the approach to a predefined problem and its anticipated solutions, while genuinely participatory programming starts without preconceived outcomes.

RECOMMENDATIONS

In response to these challenges and the overall state of the field, CYESS recommends the following:

For Afterschool Leaders

- Learn about promising practices from peers. Their work can serve as models for those wishing to adopt a more youth-centered approach.
- Plan for project continuity. Establish ways in which youth can remain involved after they graduate from the program, e.g., through ongoing alumni engagement through structures such as youth leadership boards.
- Document the broader impact of youth-driven programming on communities. This will demonstrate to students, funders, and communities the full scope of the impact a youth-led project makes.

For Funders

- Incorporate approaches to funding that support authentic youth-driven and youth-led participatory programming. This includes application requirements that seek to understand the means by which programs will engage youth instead of the precise nature of the work.
- Shift expectations around evaluation. This entails focusing on developmental evaluation approaches instead of requiring measures that assess the program’s outcome or impact.
- Support the generation and dissemination of evidence to fill knowledge gaps. Current gaps in peer-reviewed literature include the utility, efficacy, and impact of authentic youth-led, community-driven STEM engagement.
- Fund new or expand existing networks focused on involving young people authentically in STEM learning and community science. Such networks can mainstream best practices, share lessons learned, broker relationships between stakeholders looking to collaborate and coordinate tailored professional development and technical assistance for diverse stakeholders.

To read the full report, go to cyess.org

The Collective for Youth Empowerment in STEM and Society (CYESS) - an initiative of the Afterschool Alliance - works to expand opportunities for young people to use STEM to drive social change and build bright futures.