Bridging the Gap: Leveraging Out-of-School Time Programs to Shape Future STEM Careers

Presented by:
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ACT NOW
Afterschool for Children & Teens
Who is ACT Now?
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The Afterschool for Children and Teens Now (ACT Now) Coalition is…

A diverse statewide coalition of over 2,300 members that advocates for quality and affordable afterschool, youth development, and community school programs for youth across Illinois.

We further our mission through policy and advocacy initiatives and providing research and evidence-based professional development on:

- STEM and problem-based learning
- Social and Emotional Learning (SEL)
- Community Schools
- Grant management
- Systems approach to family engagement and cultural competency
- Administration, attrition, and development of providers
- LGBTQIA+ understanding and safe space making for OST
Introductions! Who are your Facilitators?

Kim Turnbull (she/her)
Afterschool STEM Specialist

Emma Giamberdino (she/her)
Policy and Communications Manager
Why is Afterschool STEM Important?
Quick Facts

- STEM occupations are projected to grow 10.5% between 2020 and 2030, faster than the average for all occupations at 7.7%
- STEM occupations are higher paying with a median salary of $89,780, compared to $41,950 for all other fields.
- Out-of-school time (OST) programming provides youth with unique opportunities to learn new skills
- Across 11 state afterschool networks, between 65% and 85% of students made significant gains in STEM attitudes, identity, career interest, SEL and 21st Century skills.
- Afterschool STEM programs are a strategy for addressing educational inequities
- Family and parent engagement increases
The Landscape of Afterschool STEM in Illinois

- Our [Map and Database](#) show that 1,209 programs offer STEM
- There are two state-funded grant programs that prioritize STEM learning experiences for youth
  - Teen REACH
  - Reimagine Public Safety Act
- The state and state board of education also are prioritizing STEM and Career and Technical Education for students
- Many OST providers braid state and federal funding to support STEM programming for young people across Illinois
The Creation and Evolution of STEM Clubs
Purpose and Selection of Locations

- **Issue:** There remain areas of the state that do not offer any afterschool STEM programming
  - Coalition members highlighted the barriers to facilitating OST STEM
    - Workforce shortage
    - Cost of materials
- **Goal:** Expand access to high-quality STEM programs in Illinois for youth
- **Goal:** Provide professional development, curriculum and materials for STEM programs
- **Selection:** 10 sites across the state with a focus on rural regions
Training and Curriculum

- Human-centered trainings in which the facilitator is identified as important
- 2 in-person trainings for one year
- ACT Now support to STEM Clubs throughout the experience
- Curriculum is developed “in-house” by ACT Now
  - Activities build upon each other
  - Hands-on learning
  - Connected to a STEM theme or area of interest
  - Career exposure!
Evaluation of STEM Clubs

ACT Now leverages two quality evaluation frameworks to provide ongoing feedback and support to STEM Clubs:

- The first is the **Dimensions of Success (DoS)**, which has 4 domains that cover 12 different dimensions. Each domain is rated out of 4!

- Each STEM Club receives two site visits, or DoS observations while participating in the initiative.

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**Domain 1—Features of the Learning Environment**

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Evaluation of STEM Clubs

The second framework is the **Common Instrument Survey (CIS)**, from Partnerships in Education and Resilience (PEAR).

- This tool is used to measure student and instructor outcomes.
- Positive change indicates areas of confidence and engagement; negative changes indicates areas that programs may need to focus on/strengthen.

### Percent of youth reporting significant positive change

- Critical thinking: 80%
- Relationships with peers: 76%
- Career interest: 73%

### Percent of providers reporting negative change in programmatic areas

- Engaging and age-appropriate STEM activities: 43%
- STEM career knowledge: 34%
- STEM identity: 28%
Evaluation of STEM Clubs

CIS - Educator data

- This tool is used to measure the facilitators' perceptions of self and youth.
OST aligned with PaCE Framework

By end of 6th grade
- Youth have been exposed to careers; Developed growth mindset and perseverance; and received positive support to recognize strengths

By the end of 7th grade
- Youth will have had time for self-reflection (part of DoS Framework); Explored through PBL and Service Learning; and built leadership skills

By the end of 8th grade
- Youth have cemented their learning styles; Developed a support network; Connected with community; and Developed an educational plan
STEM Club Results: Evidence of Expanded Educational Opportunities
Growth Over the Years

Youth Involvement

<table>
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<th>Year</th>
<th>Count</th>
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<tr>
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Career Interest

<table>
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<tr>
<th>Year</th>
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<tr>
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<td>3.25</td>
</tr>
<tr>
<td>2022-23</td>
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</table>

21st Century Skills

- Critical Thinking: 69% increase
- Relationships with Peers: 60% increase
- Perseverance: 69% increase
- Relationships with Adults: 62% increase

Awareness to Action: Promoting Equity in Education and Careers
Educator Growth

- I think of myself as a STEM person.
- My colleagues think of me as a STEM person.
- My family thinks of me as a STEM person.
- My supervisor thinks of me as a STEM person.
- STEM is easy for me.
- I would rather NOT lead STEM activities because they are hard.
What’s Next?: Future Needs

Investing in Tomorrow’s Innovators in Illinois

A Comprehensive Assessment of Afterschool STEM Programs and the Need for Expanded Learning Opportunities for Youth

By EMMA CAMRERON
ACT Now Policy and Communications Manager

Awareness to Action: Promoting Equity in Education and Careers
There is clear evidence of the need to grow afterschool STEM in Illinois

- Of the 102 counties, 38 have zero programs that offer STEM programming.
- The highest concentration of gaps to accessing STEM programs are located outside of cities; more specifically in the central, southwest, and southern regions of Illinois.
- Advances in technology and everyday life spark interest in STEM for many students

ACT Now recommendations for state and federal governments

- Require a STEM priority for ISBE’s After School Programs grant
- Increase OST funding for STEM within state grants AND provide funding for STEM materials
- Provide flexibility in grants for staff wages AND professional development
- Increase federal grants that support afterschool, STEM, and CTE like 21st CCLC and Title I
Partnerships Matter

Career exploration is key and OST helps to supplement the traditional school day learning!

Easy ways to partner with local programs to support STEM identity and college and career journeys:

- Cross collaboration sessions in afterschool
- Open communication with OST programs
- Mentoring and role model relationships
- Industry partnerships
Questions?

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