



Intensive Youth Programming :

*Building Common Language
for Identifying Collaborative
Opportunities for Creating
Long-Term Success*



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Who We Are



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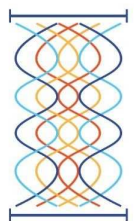
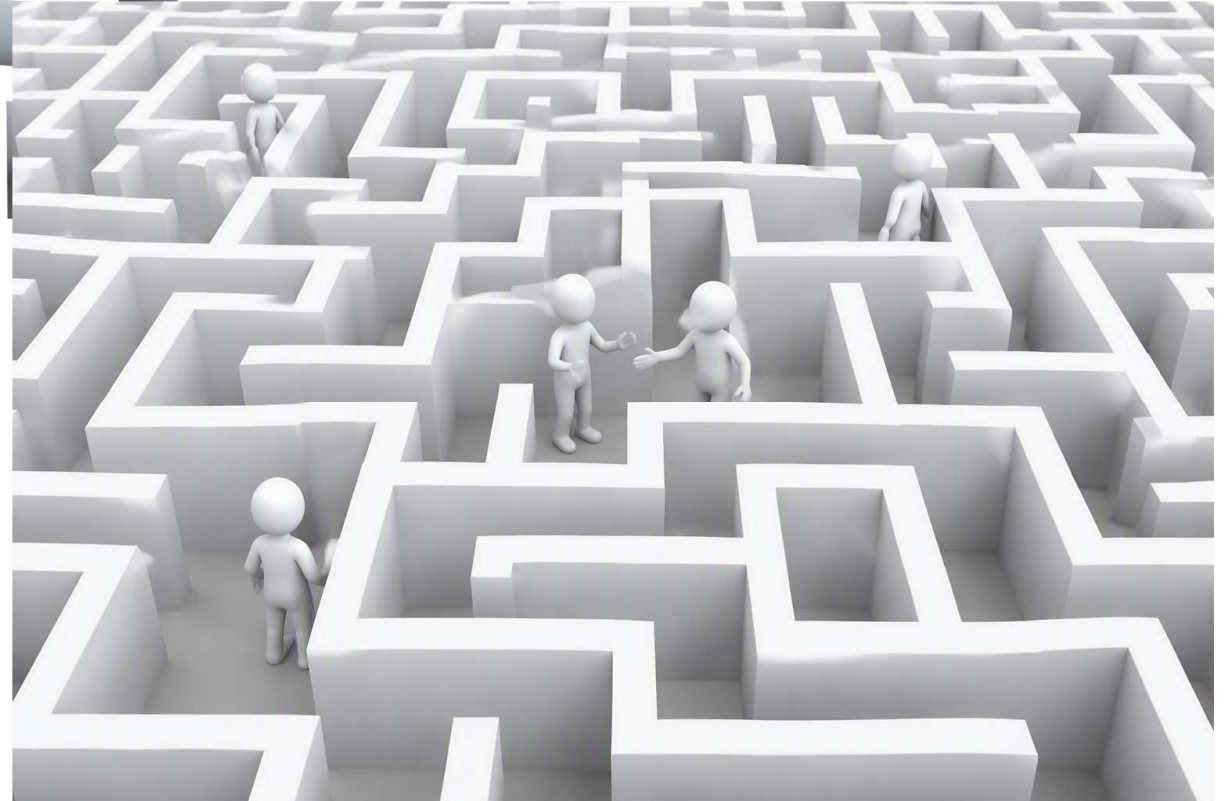


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Three Studies

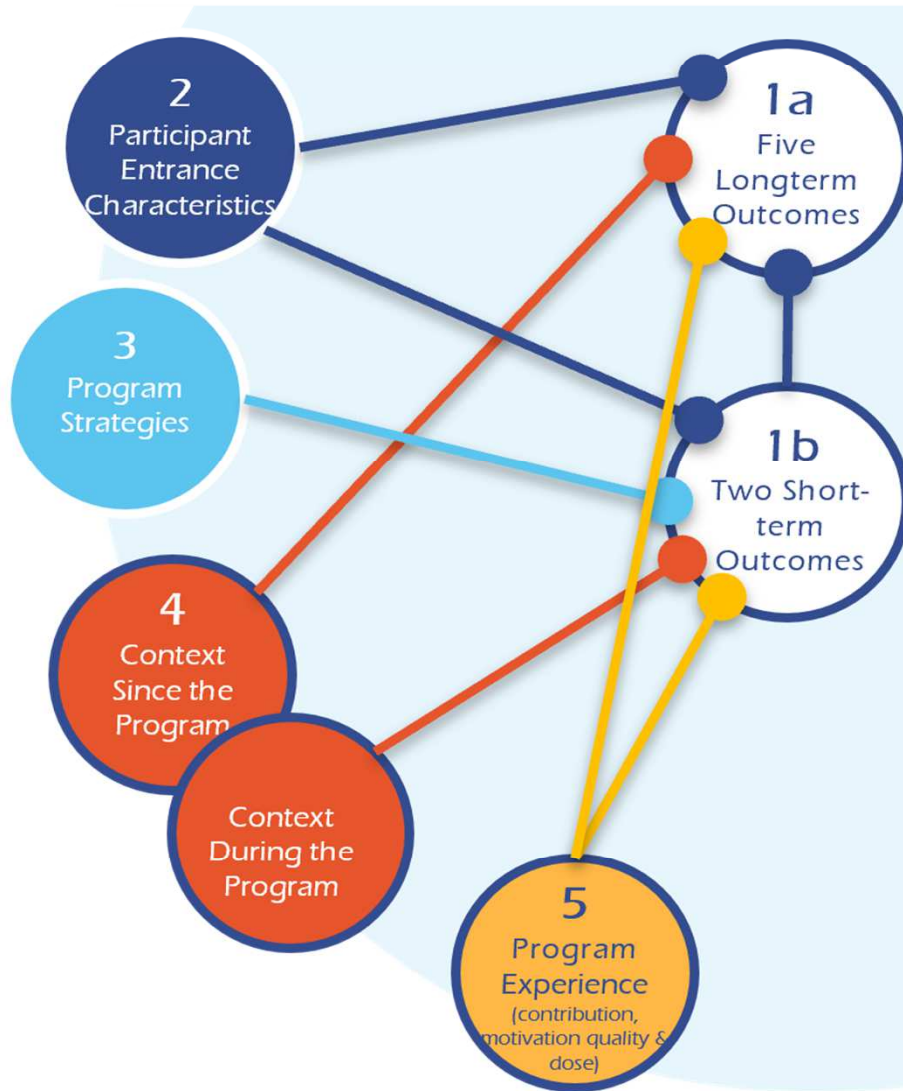


Today's Discussion



Foundations
& Bridges

A Conceptual Model for Building Effective Programs



1a. Long-term Outcomes

1b. Short-term Outcomes

2. Participant Entrance Characteristics

3. Program Strategies

4. Context During & Since

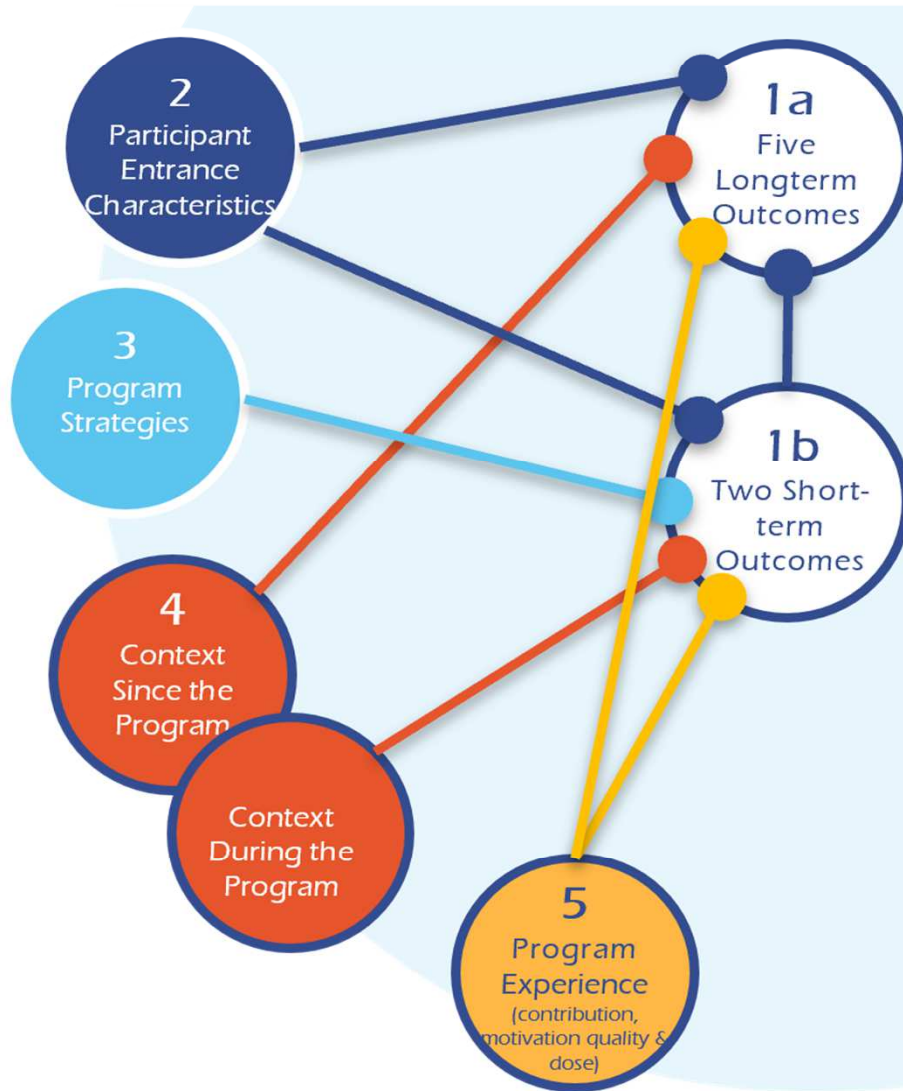
5. Program Experience

Long-Term Outcomes

STEM Work Force Development	Youth Development
STEM Academics & Career	STEM literacy
STEM Adjacent Careers (business, entrepreneurship, law, journalism, museology)	Personal STEM involvement (e.g., health decisions, home repair, parenting)
S, T, E, M or S type Career? (e.g. ecology, zoology, oceanography, parks & nature)	Community STEM involvement; Civic Engagement
	Entrepreneurship
	Dispositional Autonomy
Professional Identity	Personal Identity
STEM Identity	
21 st Century Skills (critical thinking, communication, collaboration, creativity, citizenship)	
STEM Capital/Resource Mobilization	

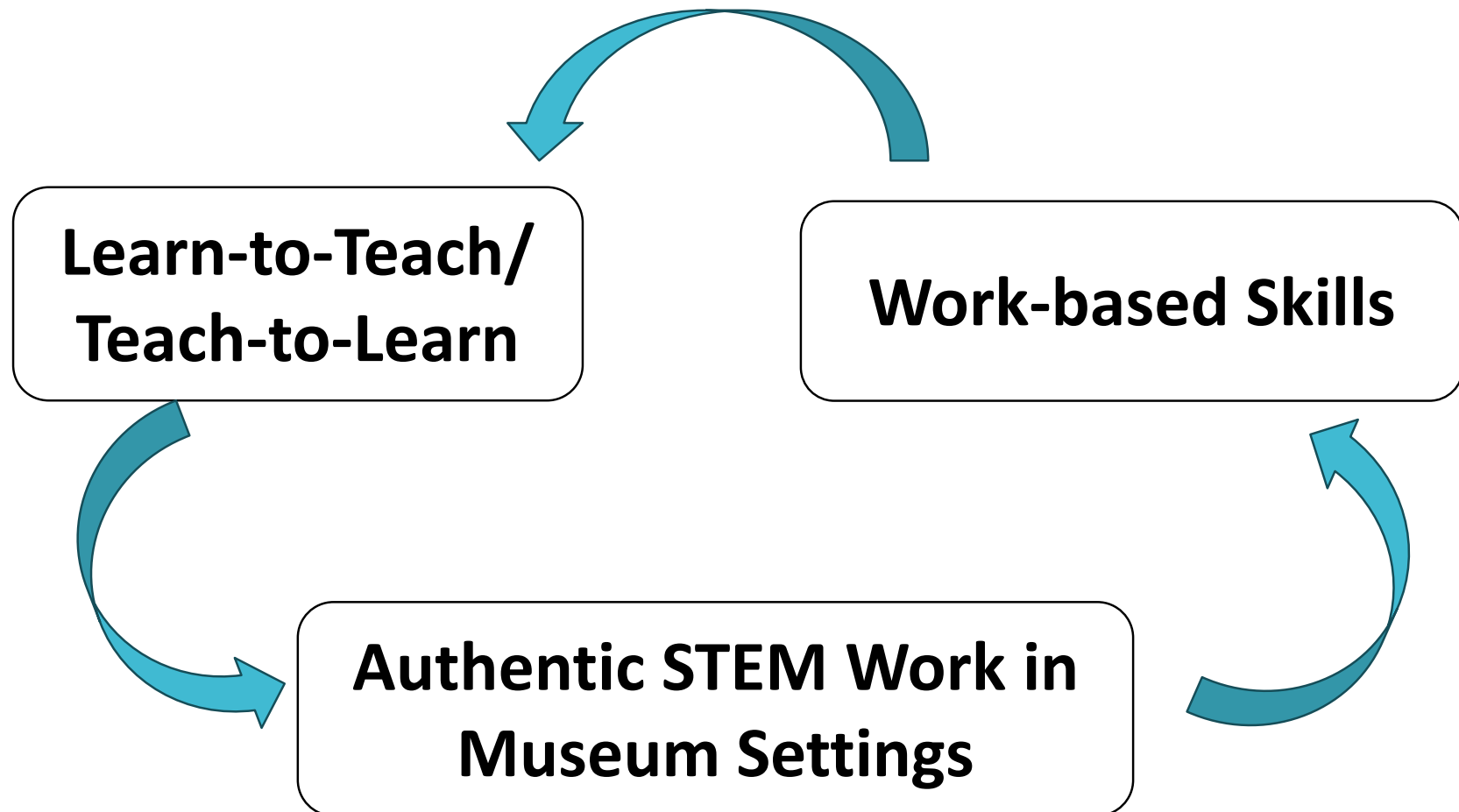
Short-Term Outcomes

- Contribution to intended long-term outcomes
- **Motivational Quality**
(Sense of competence, relatedness & autonomy during the program)
- **Dose** (length of time in program)

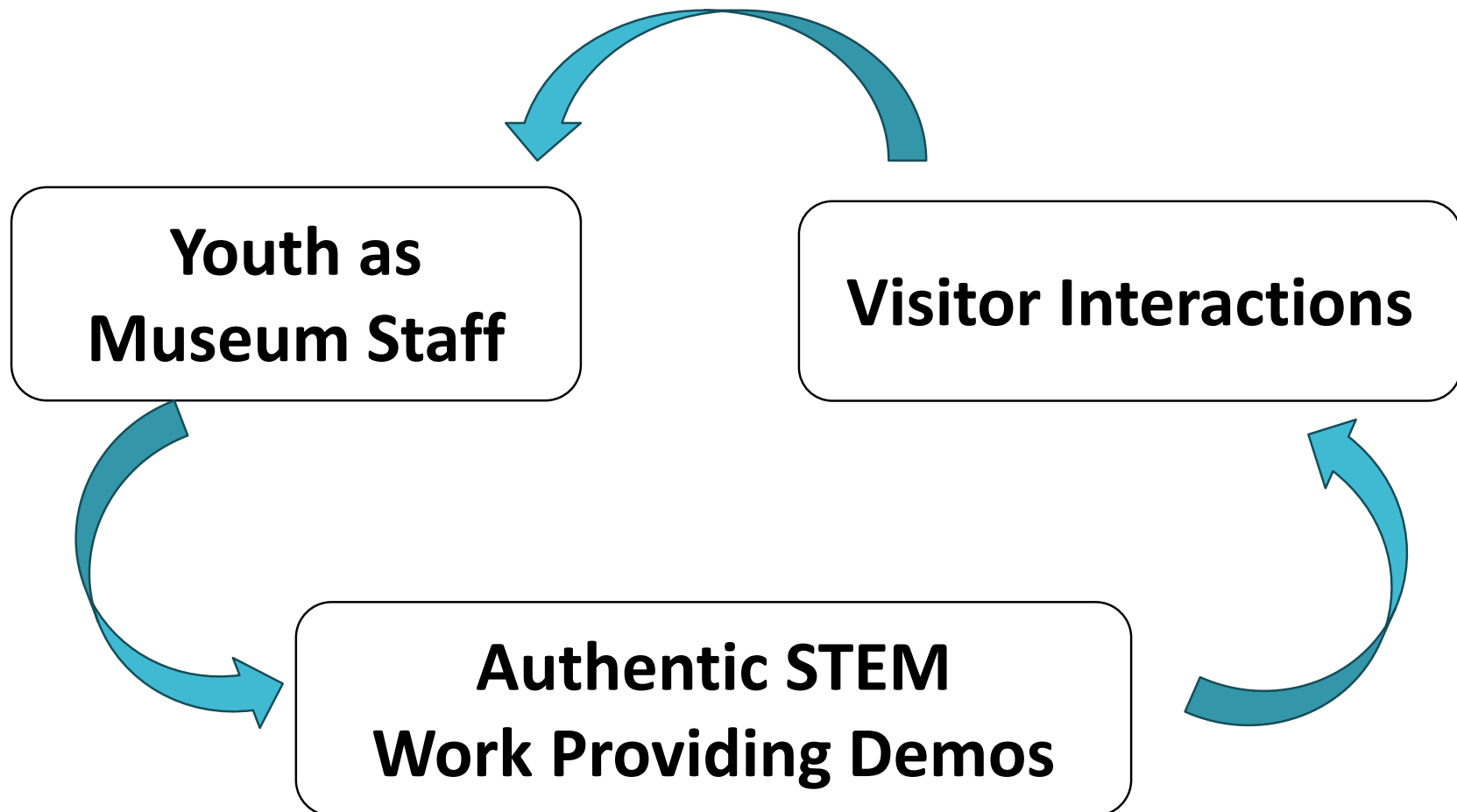


3.
**What program
strategies work to
produce the
outcomes?**

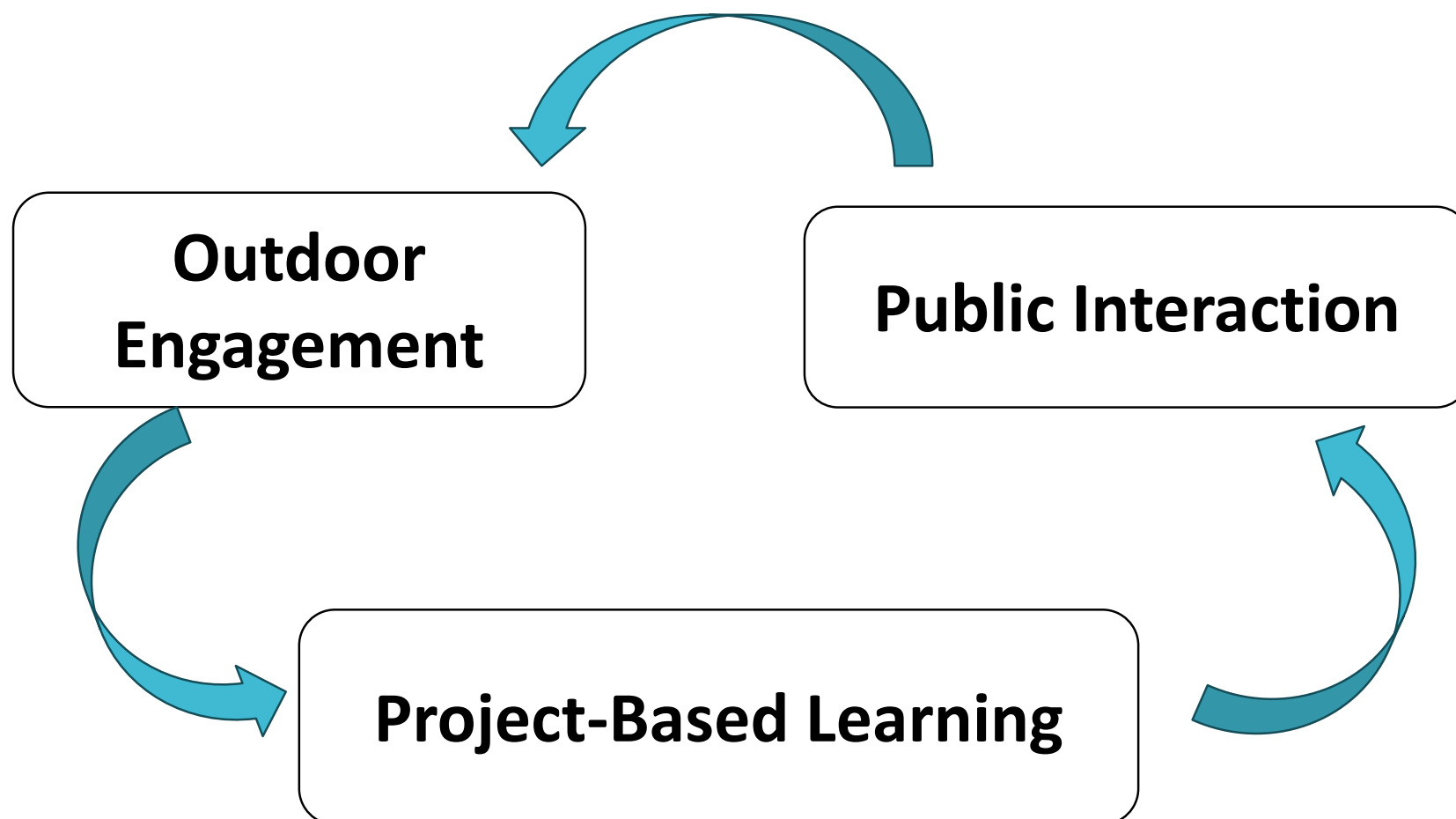
Program Strategies Examples



Program Strategies Examples



Program Strategies Examples



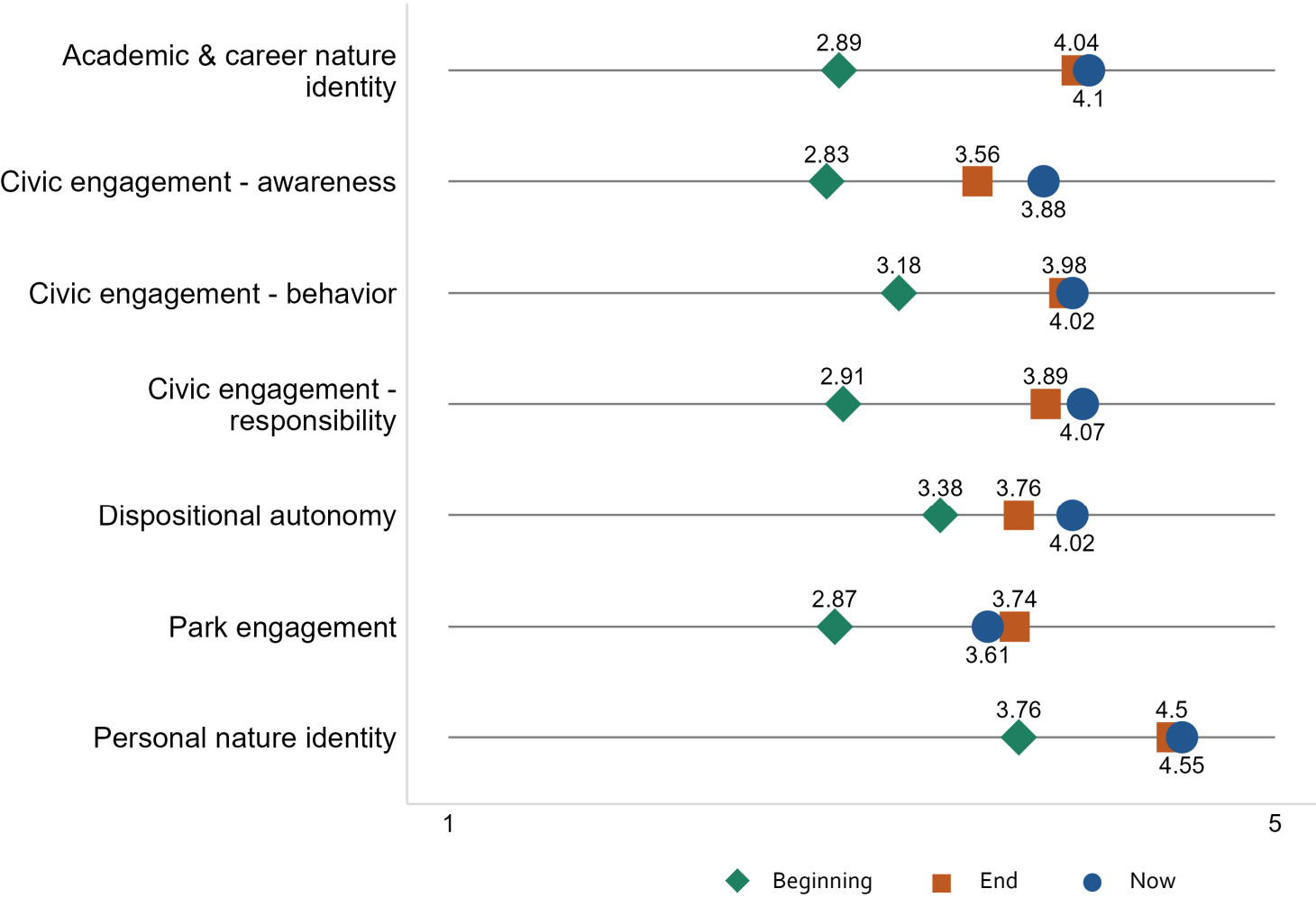
Program Strategies Commonalities

- Meaningful Roles
- Authentic Tasks
- Interactions with the Public
- Learning STEM Content for a Purpose
- Relationships with Mentors



Context

Short and Long-Term Outcome Means



Resources

Join us!

- <https://www.linkedin.com/groups/18627008/>
- <https://foundationsandbridges.lawrencehallofscience.org/>
- <https://foundationsandbridges.lawrencehallofscience.org/publications/>

Learn more about Roads Taken:

- <https://cosi.org/cre/roads-taken>
- <https://informalscience.org/project/roads-taken-retrospective-study-program-strategies-and-long-term-impacts-intensive-multi-year-stem/>

Weiss, E., Mulvey, K. L., Wasserman, D., Chi, B., Klein, C., & Abouelkheir, M. (2025). Advancing a collaborative network toward equitable STEM pathways in intensive youth programs. *Journal of Applied Developmental Psychology*, 97, Article 101764.

Wasserman, D. L., Altman, J. T., Klein, C., Mohabir, P., & Tisdal, C. (2025). fsQCA for discovering social emotional pathways to adult STEM engagement. *Journal of Applied Developmental Psychology*, 98, 101767.
<https://doi.org/10.1016/J.APPDEV.2025.101767>