

A Social Programmable Robot:

Fostering Rapport to Improve Computer Science Skills and Attitudes

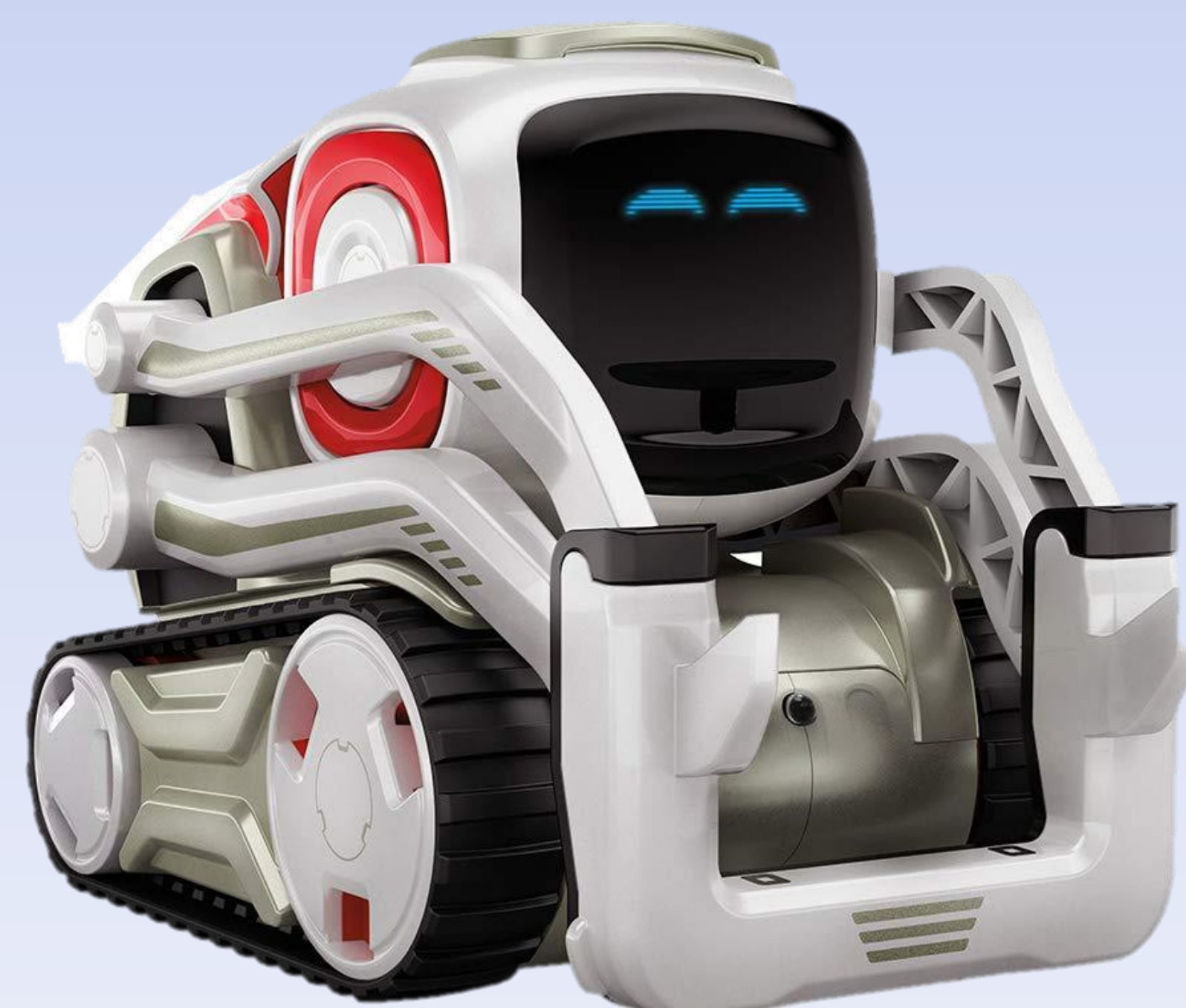
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Innovation

Create a social programmable robot that builds rapport non-verbally and verbally.



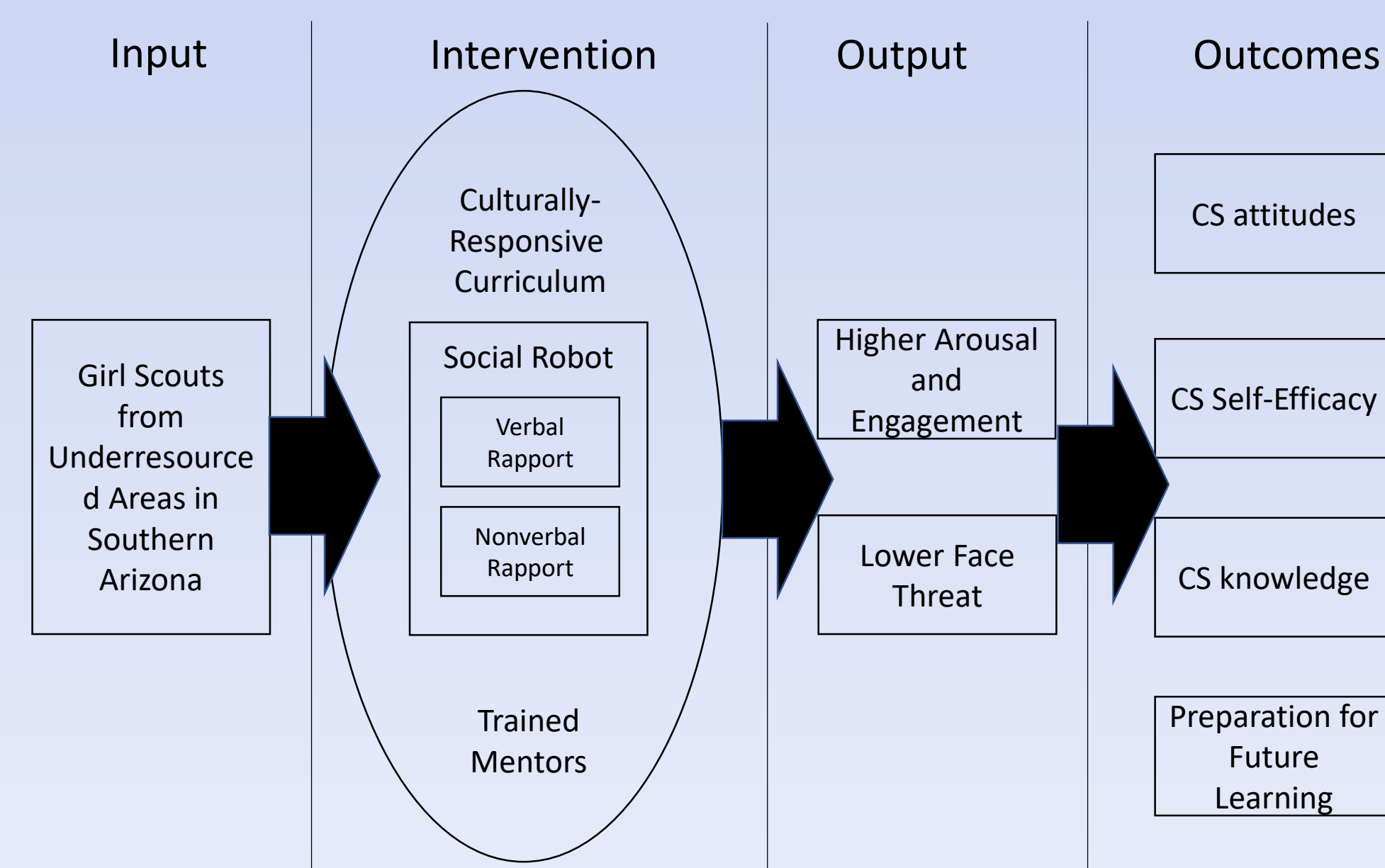
Social programmable robot: An intelligent robot that interacts with a learner as it is programmed.

Students learn how to program a Cozmo robot using a visual programming language.

In response, Cozmo gives them feedback and encouragement.

Knowledge-Building

Investigate the effects of a social programmable robot on CS knowledge, attitudes, and self-efficacy.



Four studies testing non-verbal rapport, verbal rapport, and efficacy.

Cross-study questions:

1. How do middle school-aged girls describe interactions with Cozmo?
2. How do girls speak about their social context and identity after the intervention?
3. How do facilitators respond?

Context

Collaborate with Girl Scouts of Southern Arizona to offer culturally-responsive curriculum.



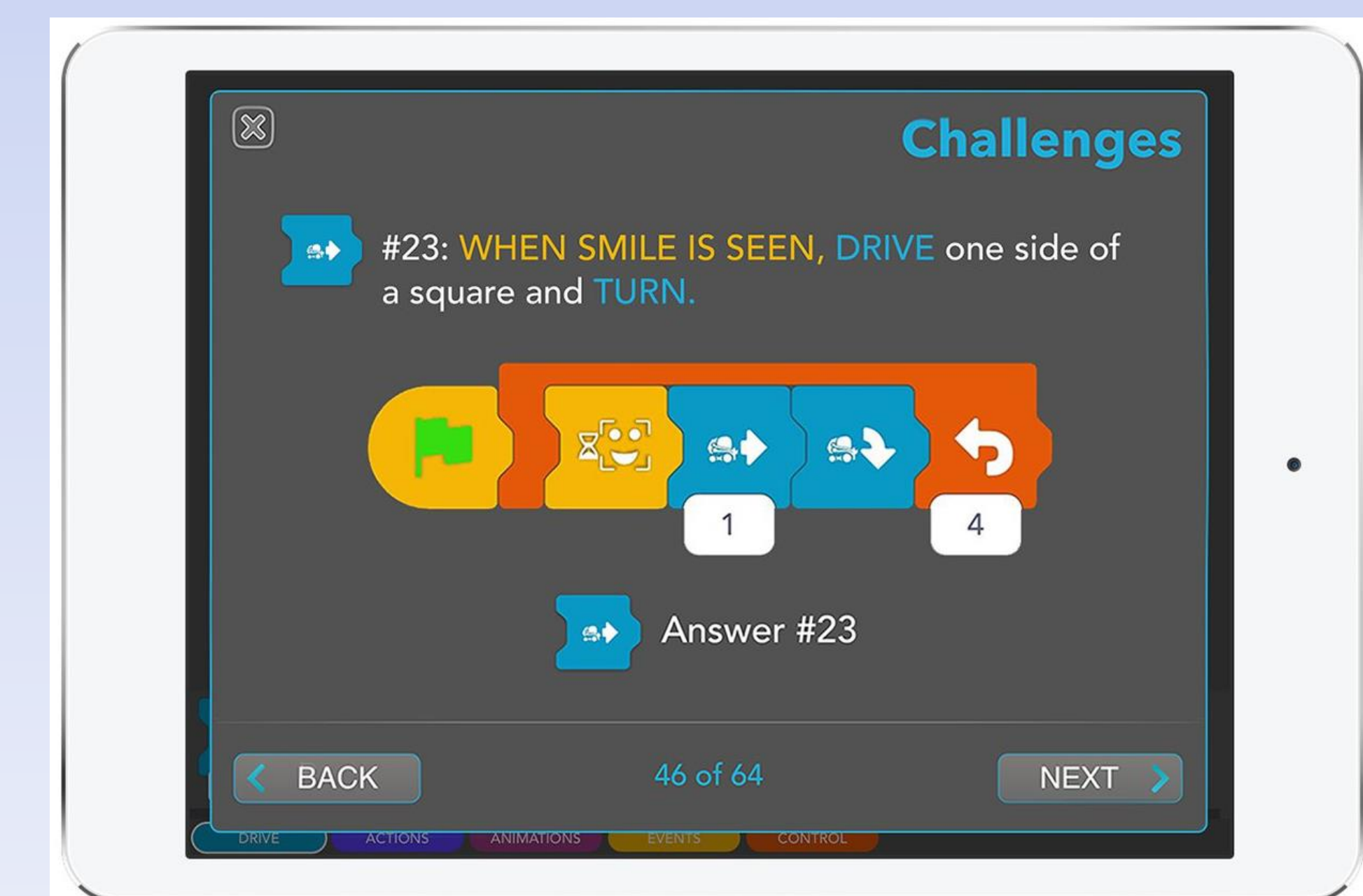
Reach 100 underrepresented middle school girls a year as part of GSSofAZ social justice program.

Girl Scout leaders will facilitate the sessions, and will be trained in culturally responsive teaching

GSSofAZ will collaborate on curriculum design.

Impact

Develop social technologies for informal learning that engage excluded populations.



We will make instructional modules & collaborative reflection activities on use of Cozmo.

Approach based on CompuGirls culturally-responsive curriculum.

Goal: Innovative technology & curriculum relevant to learners' existing knowledge & practices.