

# A New Model for Engaging Under-Represented High School Students in STEM Using Popular Media and Technology

Lessons from the PAC-Involved Evaluation

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## Research streams for the pilot design

### Video games in teaching (serious games)

- Called “the next great discovery,” as they offer a way to captivate students to the point that they will spend hours learning on their own time

(Federation of American Scientists, National Summit on Educational & Federation of American, 2006)

### Teachers repurposing popular media

- Potential outcomes of using video clips in classroom include grab students’ attention, foster creativity, stimulate flow of ideas, and more.
- Can “effectively to bring the abstract, distant worlds of science into close focus and within the personal meaningful realm of each individual student”

(Berk, “Multimedia teaching with video clips,” 2009; Harwood & McMahon, 1997)

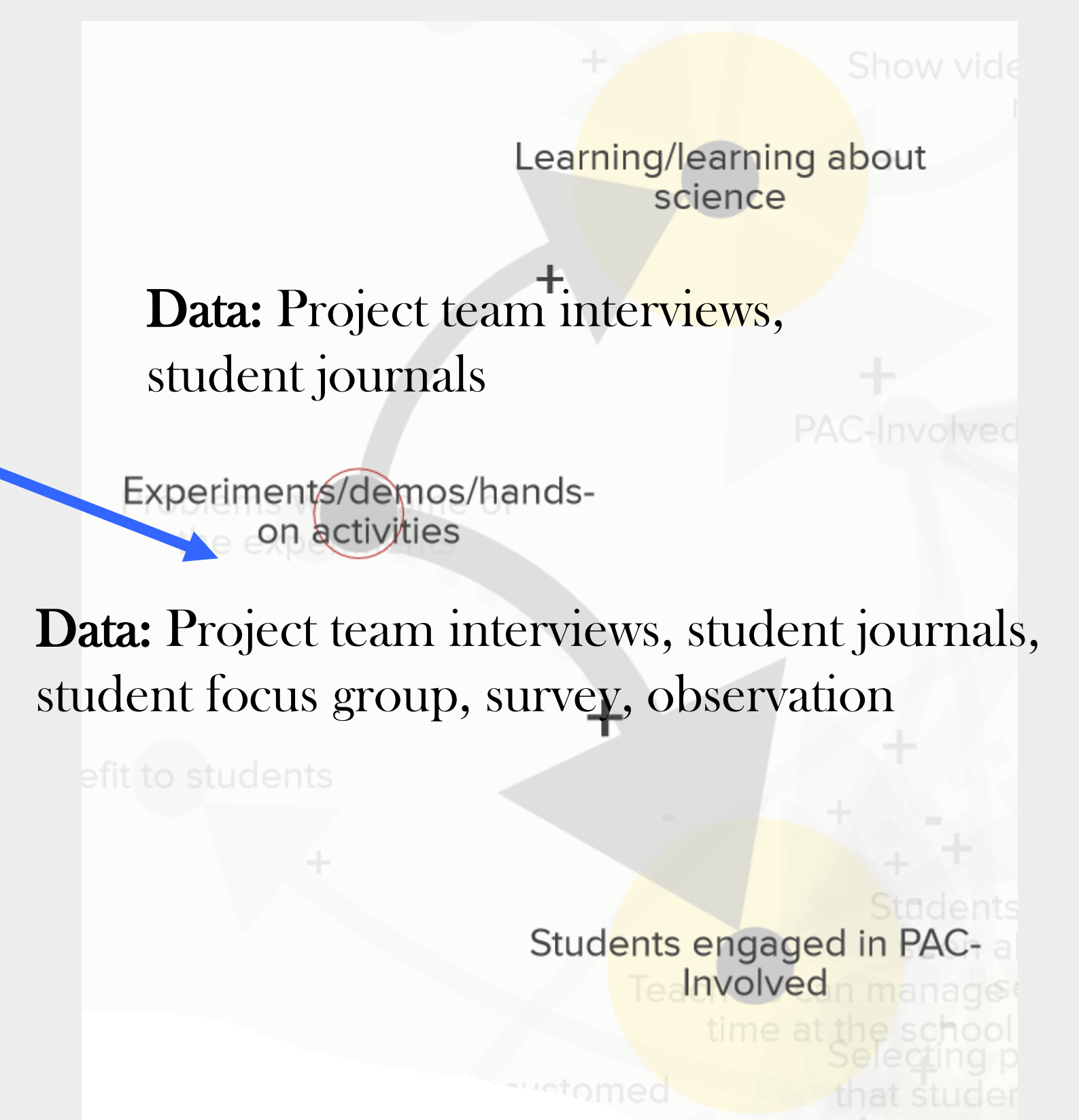
## Nuts & bolts strategies

- Provide computers & stipends for students
- Create website
- Interdisciplinary team develops modules, selects media
- Recruit high schools and physics teachers
- Recruit students, outreach to parents
- Deliver the new model with teachers and grad student
- Held at Howard University, every other Saturday

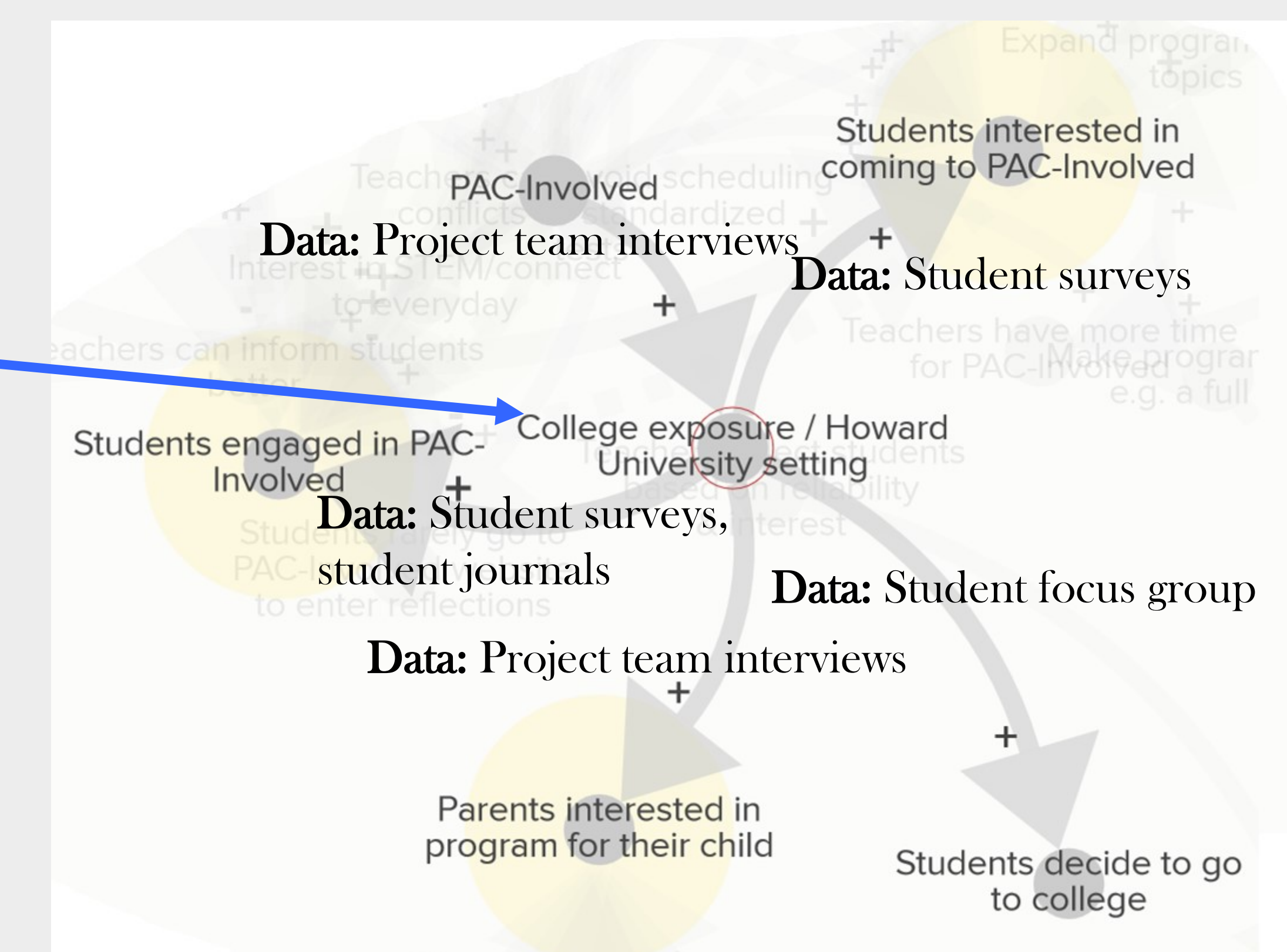
## Example key lessons with new map from evaluation findings

### Add more hands

**-on activities,** to increase student engagement and learning.



**Add university campus visits,** to increase student and parent interest in PAC-Involved, students deciding to go to college, and student engagement in PAC-Involved.



**Clarify responsibilities with students,** so they can see what they need to do and to reduce miscommunication.

