

A 2-Phase, Mixed Methods Approach to Evaluating and Improving an Innovative Program Model

The PAC-Involved Evaluation

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Welcome To Pac - Involved

PAC – Involved is an innovative educational project that introduces high school students to physical sciences in an investigative way. It connects students with STEM professionals and provides them with rich hands-on experiences related to science while utilizing the full potential of modern technology.



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graph LR; P1((Phase 1: Develop Program Model)) -- "Plan evaluation" --> P2((Phase 2: Collect Data)); P2 -- "Improve model" --> P1;
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Phase 1:
Develop
Program
Model


Plan
evaluation


Phase 2:
Collect
Data

Improve
model

Preliminary Logic Model

Context and Resources →	Activities and Strategies →	Two-Year / Pilot Project Goals →	Longer- Term / Expanded Project Goals
NSF ITEST grant supported pilot project Howard University Interdisciplinary project team Web designer Vendors for student lunches Supplies for labs Computers and \$300 stipends for students	Throughout PI manages grant Evaluators collaborate with HU to plan and conduct evaluation Fall 2013 - Summer 2014 Interdisciplinary team develops modules and materials Create website (http://pacinvolved.com/), populate it, and search engine optimize it Recruit high schools, high school physics teachers DCPS and project team develop student recruitment/parent outreach plan and materials	Peak and maintain students' interest and engagement in PAC-Involved and in physics/STEM / relevance to their everyday lives Increase interest and motivation toward studying STEM/physics and considering STEM careers Enhance math skills and knowledge of physics/STEM College exposure Exposure to, understanding of realities of being a scientist Strengthen students' research and problem-solving skills Help start back STEM Academy	More students enroll and succeed in college level STEM courses and STEM careers Refine the PAC-Involved model and expand it to a larger group of students, to the entire school year Incorporate Saturday content into everyday class assignments Share findings with the larger field, including high school and college instructors and researchers Extend to more themes beyond the two themes of the pilot Involve more teachers and add workshops for teachers

 How does the program
affect students?

 What works with
this model?

 How to structure
future projects?



Surveys

Focus
Group

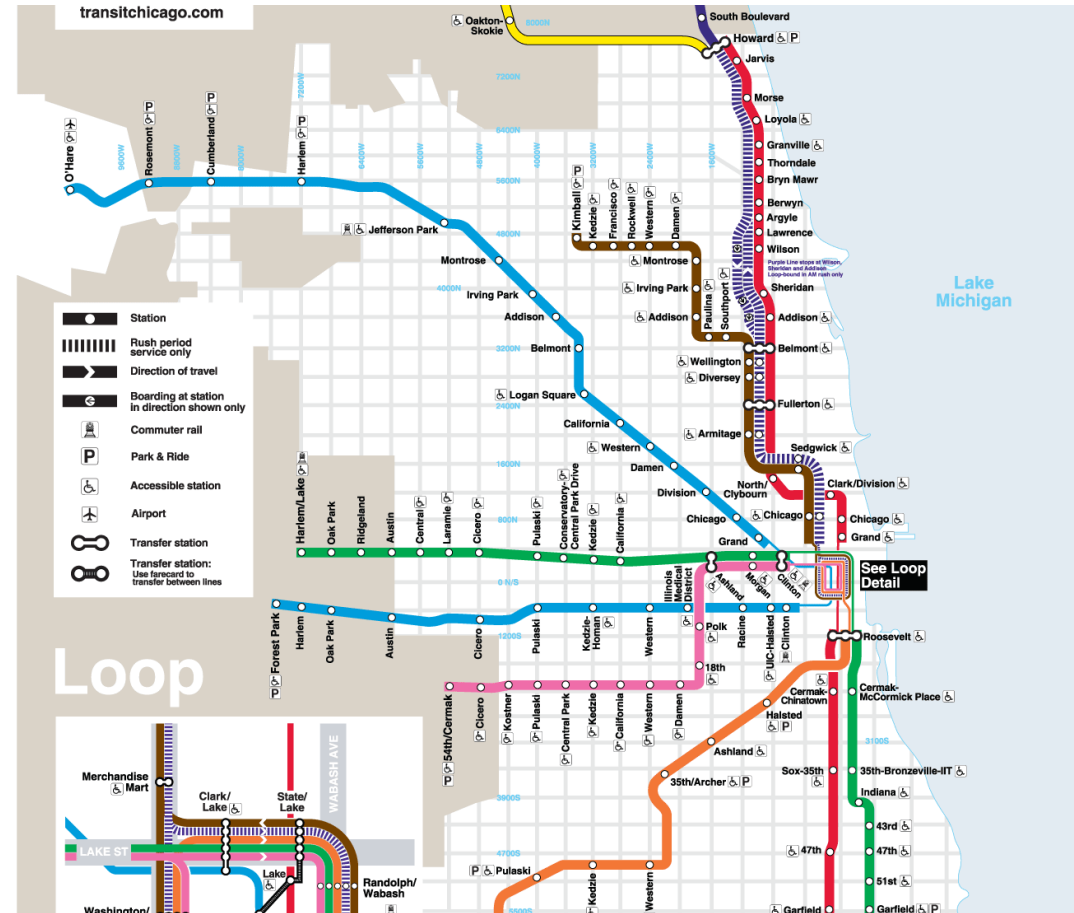
Inter-
views

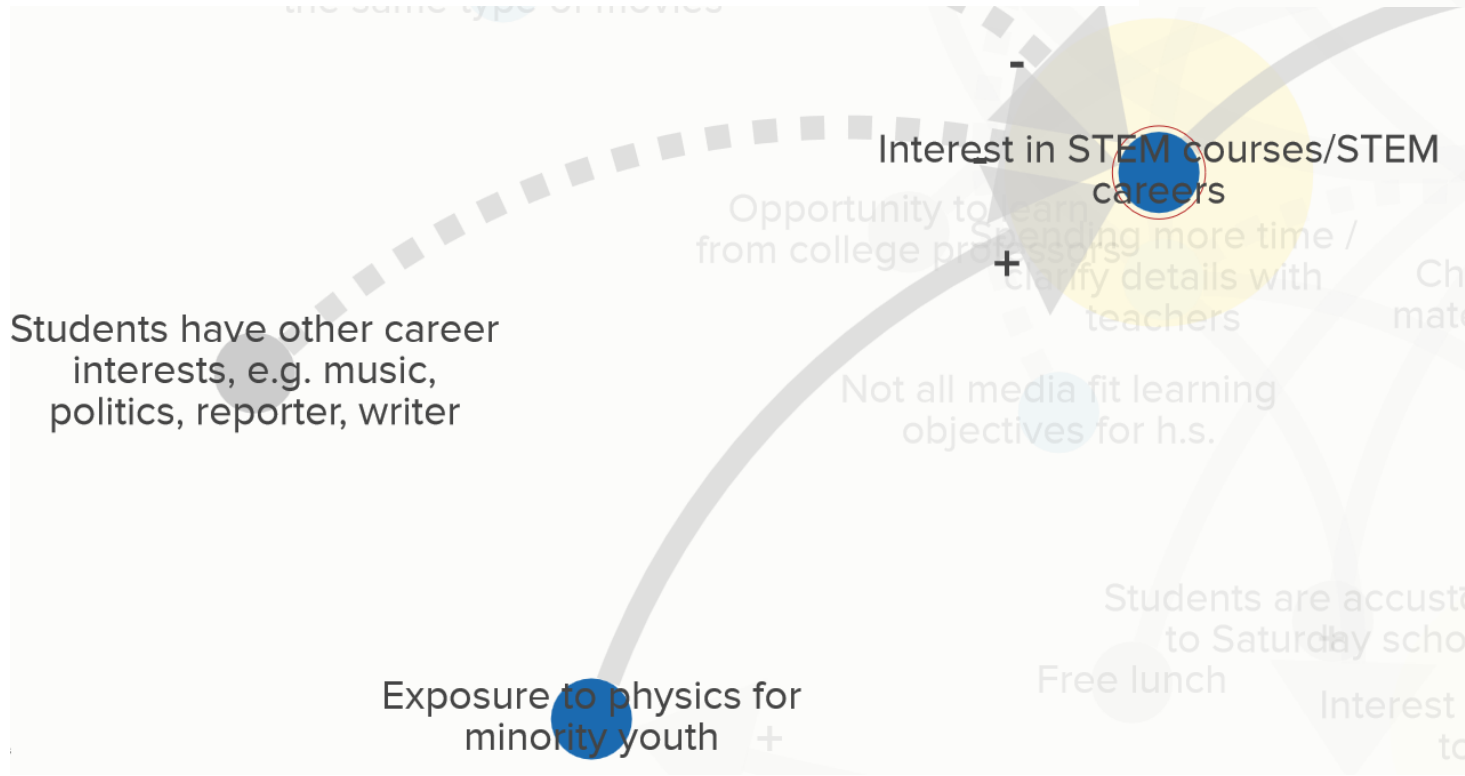
Observa-
-tion

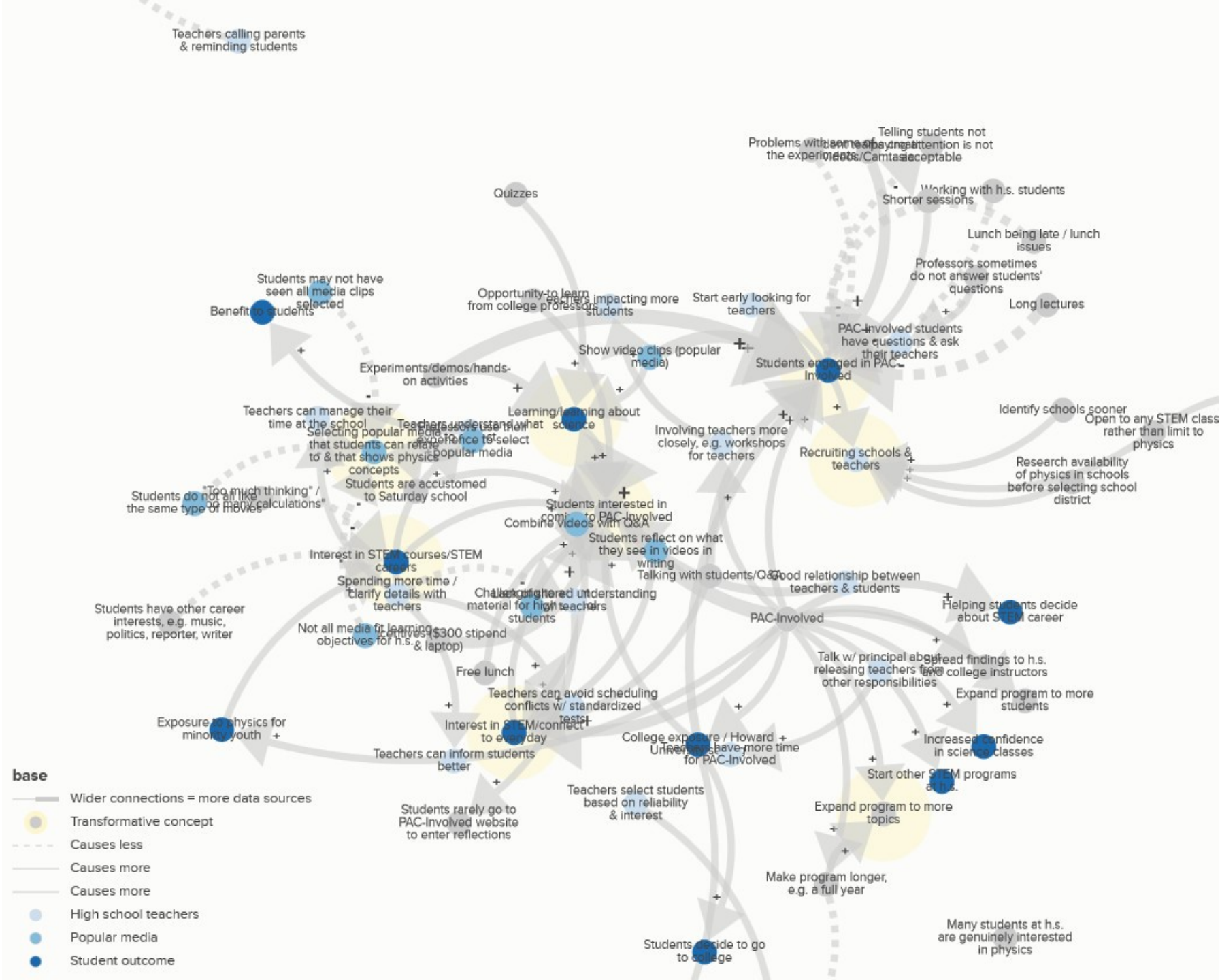
Videos
&
Journals

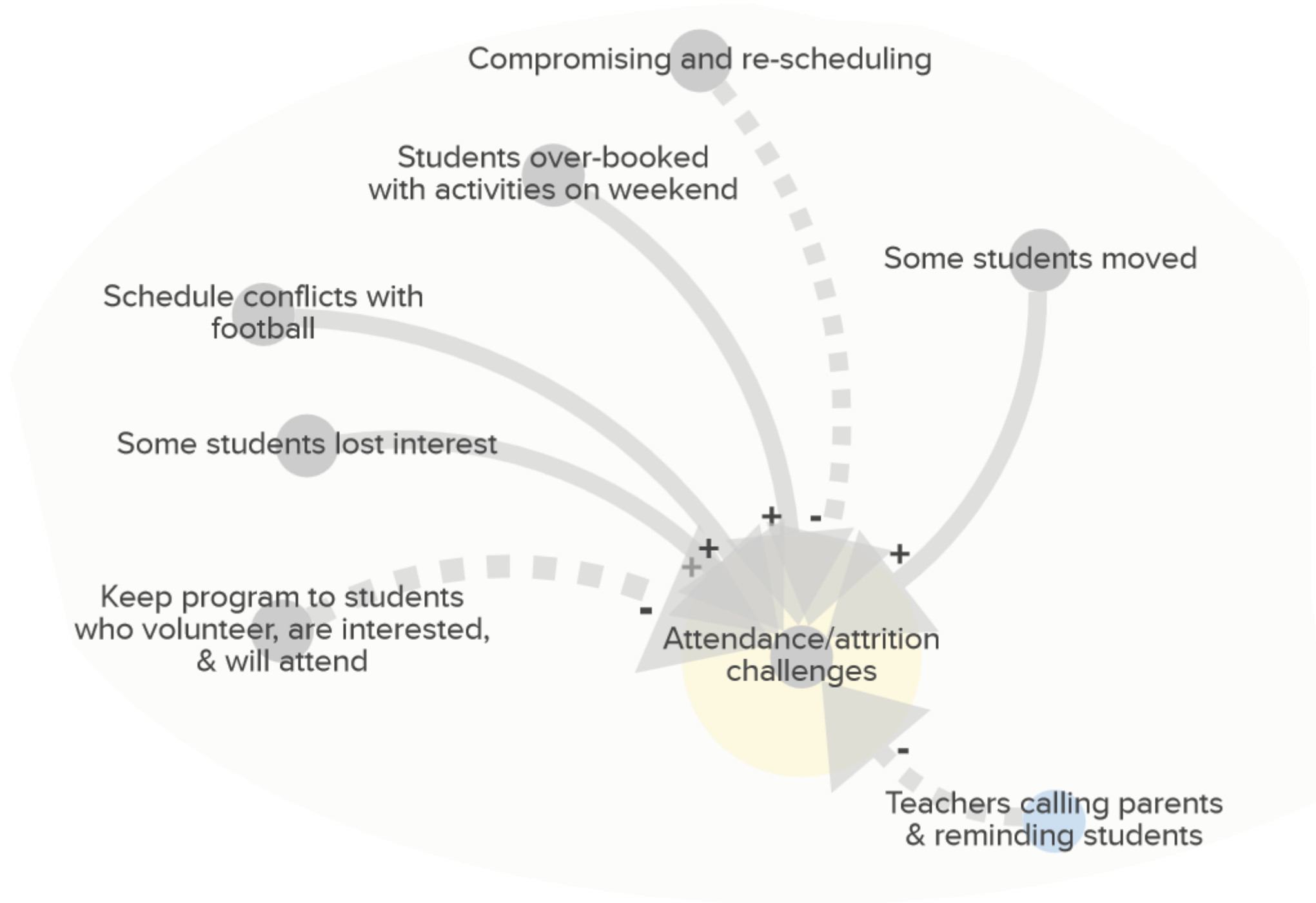
Which Is Better for Navigation?

- State/Lake
- Midway
- 79th
- Orange Line
- Lake Michigan

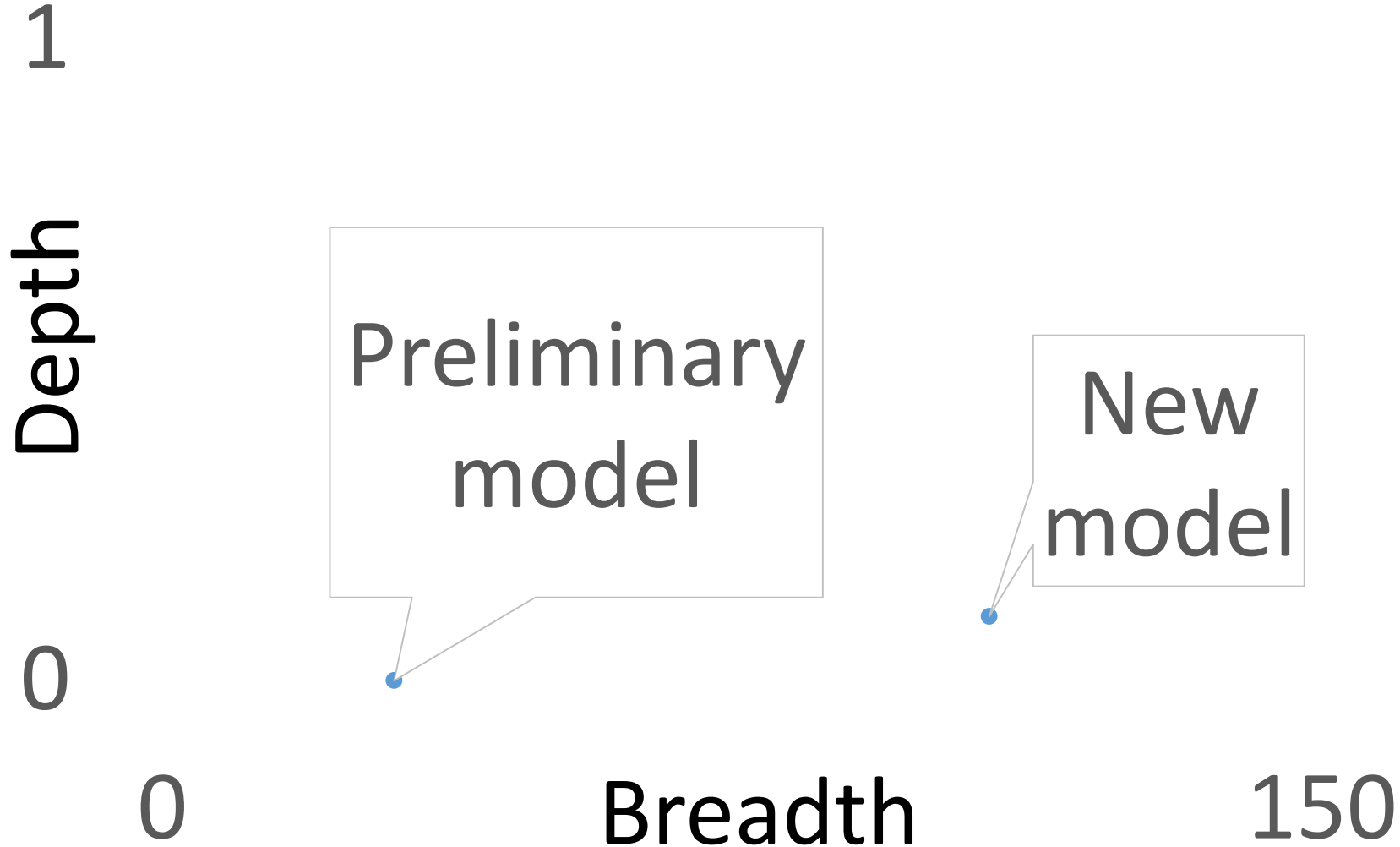


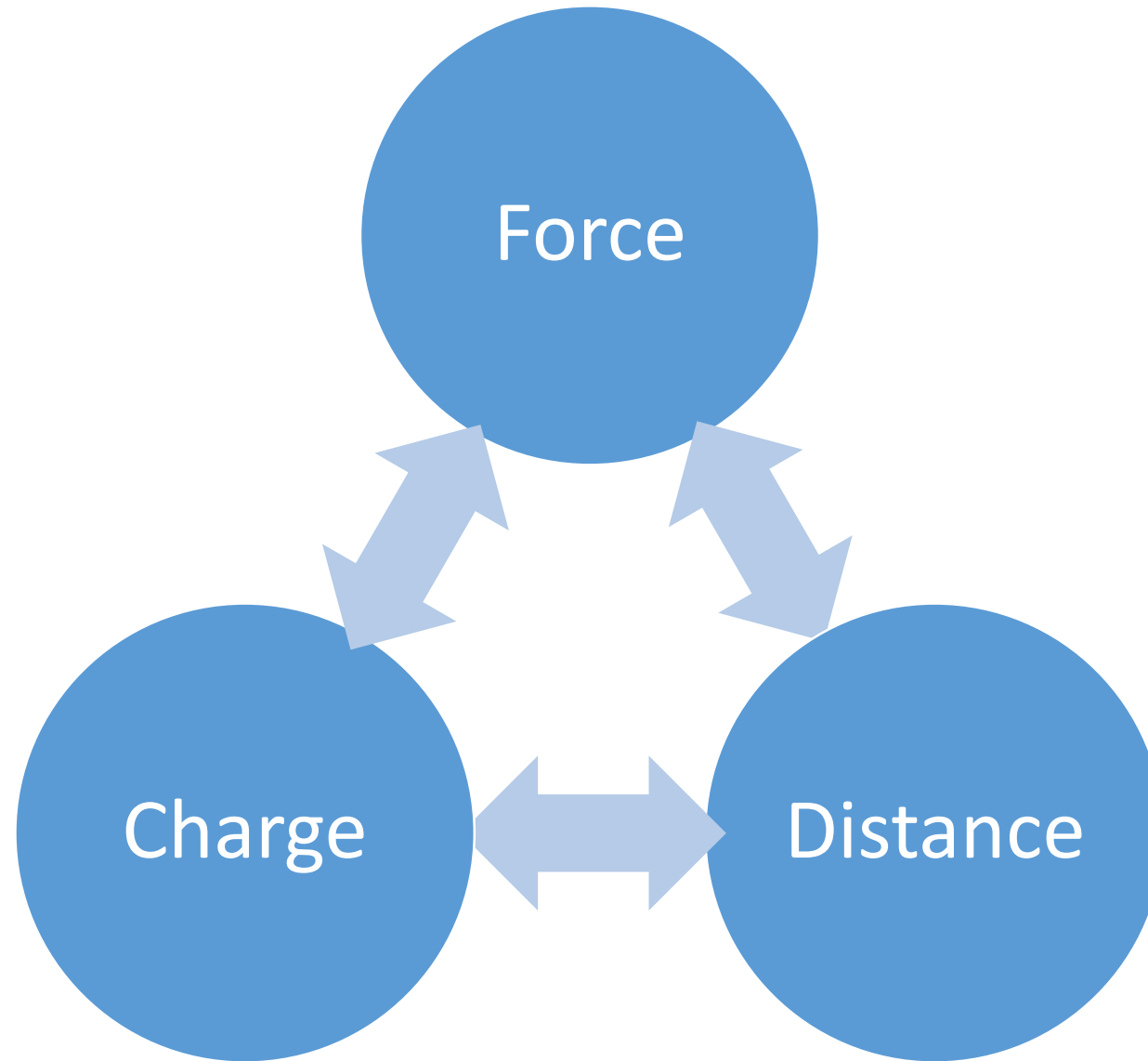


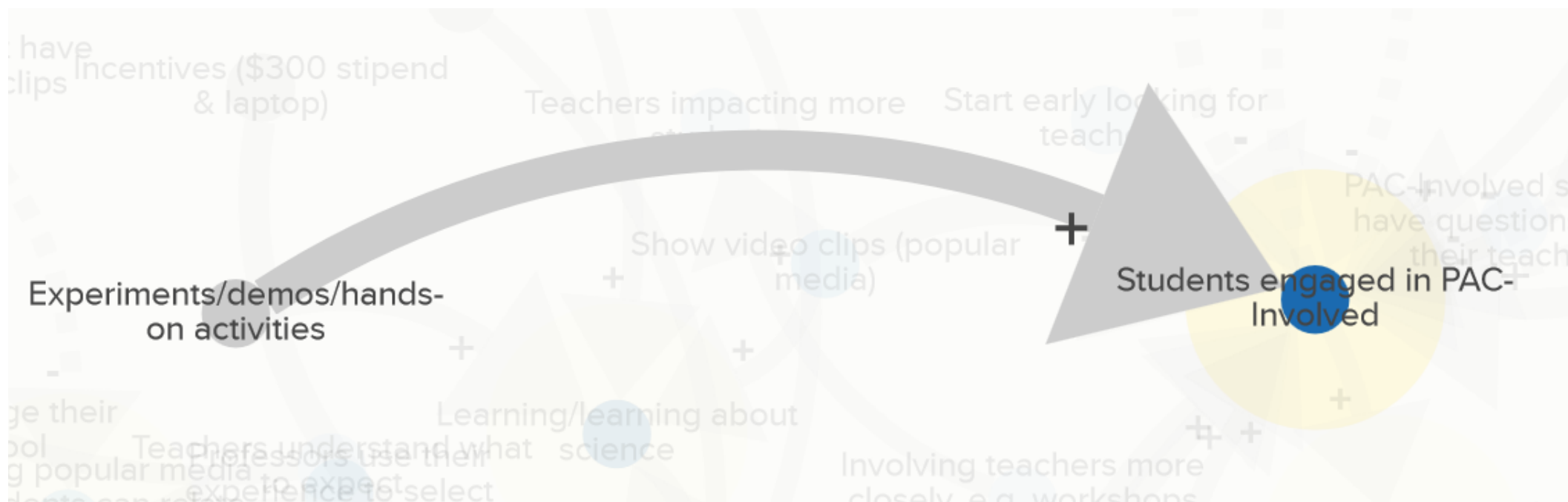




Integrative Propositional Analysis (IPA) Results







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Many students at h.s.
are genuinely interested
in physics

?



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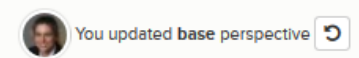


School has involved students
in interactive science
learning

?



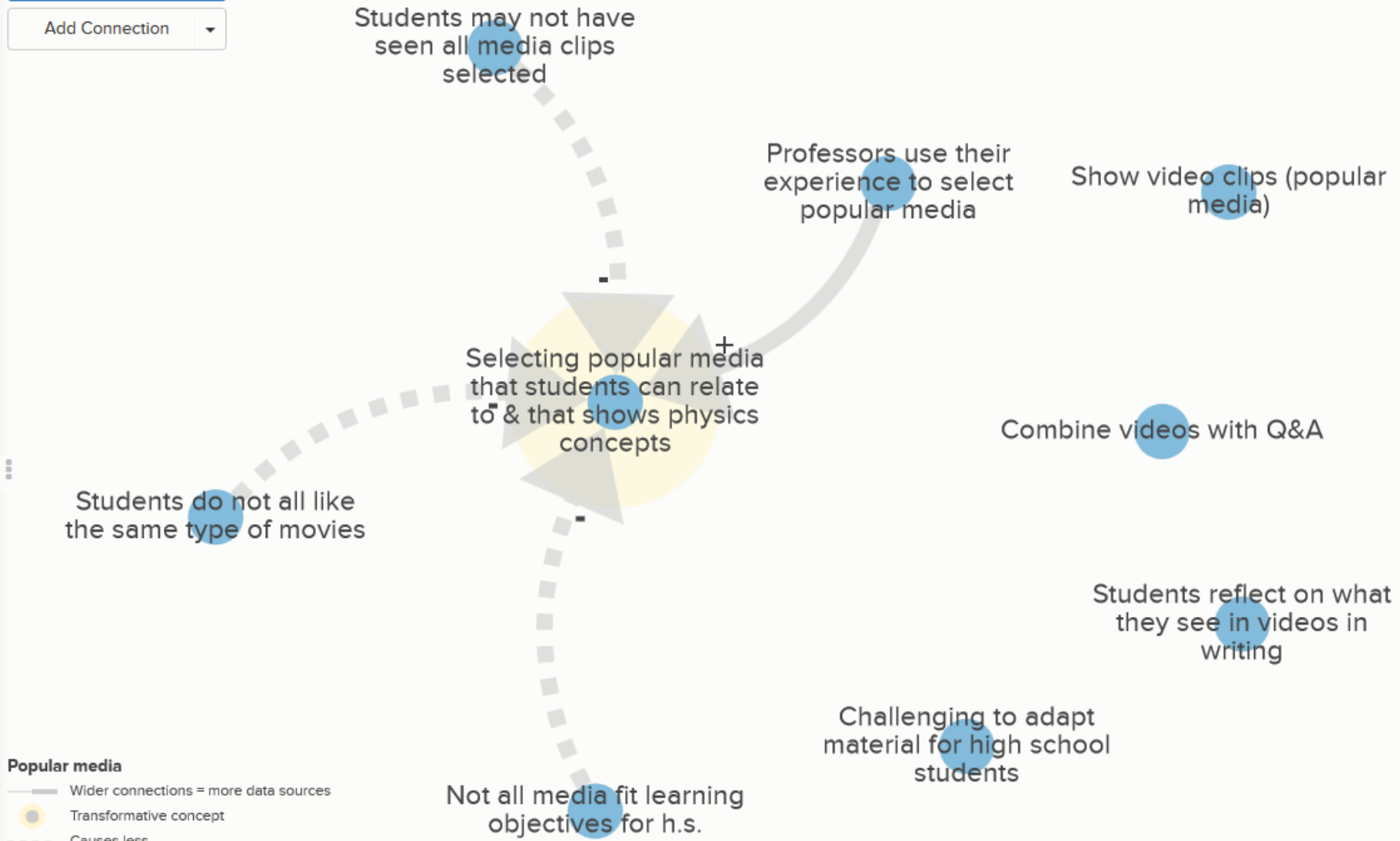
Physics is available
at all grade levels at
h.s.



Search

Add Element

Add Connection



Q Search

Add Element

Add Connection

"A-ha moments" for students

Benefit to students

Learning/learning about science

Exposure to physics for minority youth

Interest in STEM courses/STEM careers

Students successfully pursue STEM careers

Interest in STEM/connect to everyday

Students decide to go to college

College exposure / Howard University setting

Students engaged in PAC-Involved

Start other STEM programs at h.s.

Increased confidence in science classes

Helping students decide about STEM career

Student outcomes

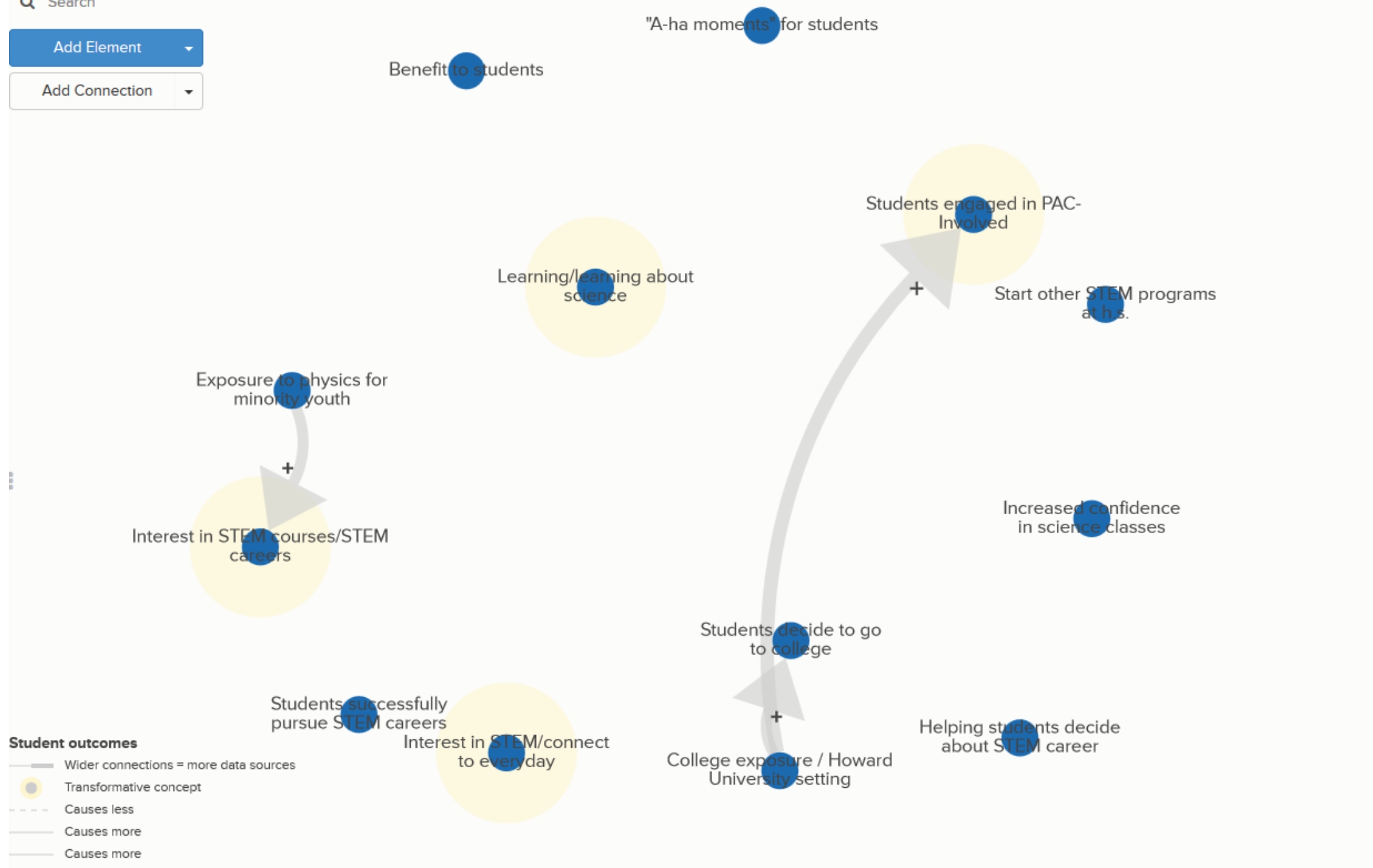
Wider connections = more data sources

Transformative concept

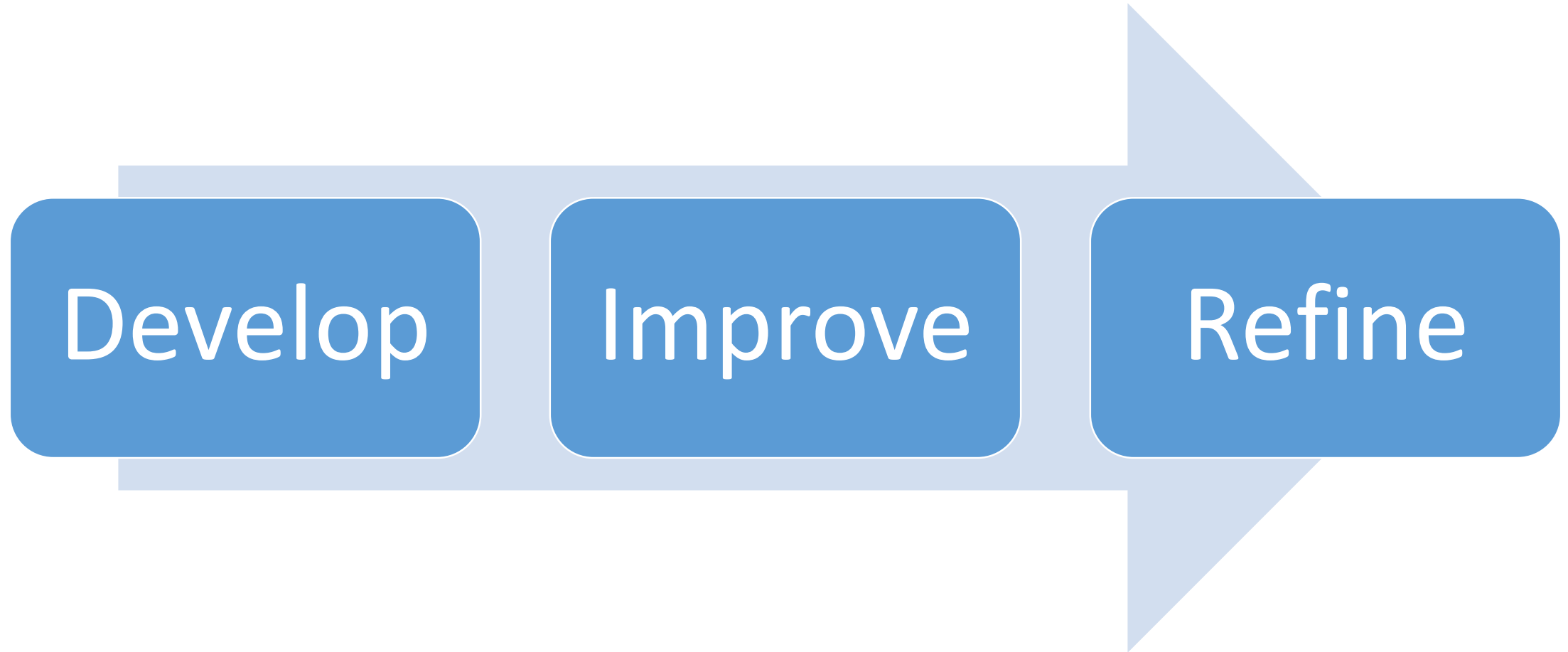
Causes less

Causes more

Causes more



Benefits for the Program

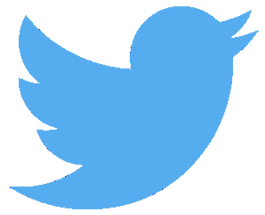


“The program was educational. I didn’t know some things until I did this. I do want to learn more about space and how it works. This program was the best. I hope to make sure that in college this would be my major.”

Keep in Touch

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