

Students can tell us **exactly** what's working — and what's not — in science assessment

Centering student voice to build more engaging, equitable science assessments

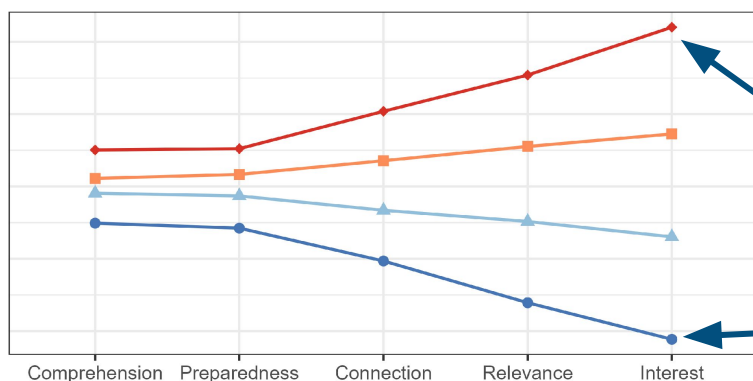


2201438 *Exploring the Validity of Three-Dimensional Assessments for Understanding Student Learning of Science*

Students experience the **same** task in profoundly different ways



All students showed similar factor scores on Comprehension & Preparedness, but experiences diverged sharply on the dimensions most tied to their identities & lived experiences.



Engagement is an assessment design problem, **not** a student problem



No demographic group was disproportionately landing in any one profile. So, engagement isn't inherent to any group of students.

Profile	Interest	Comprehension
High	"I liked how it gives you info on what happens to people who are lazy and what happens if you are."	"I like previous page because it explains every detail and easy to understand."
Low	"It was more personal but felt rather pointless."	"I liked how easy it was to read the questions."

Methods

Latent Profile Analysis

Experience Measures

- Collected student experience surveys from 1,362 middle & high school students immediately after completing an assessment task
- Used factor analysis to identify 5 dimensions of assessment experience, then latent profile analysis to find 4 distinct student engagement profiles.

Challenge Addressed

Student-centered

Students are most impacted by assessments but rarely have a say in how they're designed. We built a process for collecting & acting on student experience data, closing the loop between student voice & assessment revision.

Cari Herrmann Abell, Clarissa Deverel-Rico, Jeffrey Snowden, Patricia Olson, & Chris Wilson



<https://bscs.org/>

✉ cabell@bscs.org

