

Understanding Bias in Assessment Design

This resource includes a description of bias as it relates to assessment, with a focus on the importance of fairness. It includes a rationale for attending to bias, a list of questions that assessment designers should ask themselves, and a rubric for attending to bias in the design process.

What is bias in assessment design? A fundamental issue in assessment and curriculum design is fairness. While fairness doesn't have a technical definition, we have a sense of what fairness entails: the work a student produces for an assessment or the score a student receives should reflect the student's abilities as accurately as possible. We can think of "bias" as those things that make an assessment or task unfair to the student. The presence of bias can result in the teacher or student reaching inaccurate or misleading conclusions about the student's abilities based on assessment attributes that are unrelated to what the student knows or can do. These misleading conclusions present "measurement error" or a threat to reliability. That is, we can't be sure we can trust the results of an assessment if we haven't taken steps to ensure it is as bias-free as possible.

Why attend to bias? It's safe to assume teachers don't sit down and deliberately write biased or unfair assessments or tasks. Examples, though, regularly appear in the media. And it's likely that for every example that appears in the media, there are multiple examples in which a bias went undetected because a student or the student's parent decided not to speak up about a task or the bias. To borrow a phrase, good intentions during the design process don't trump the impact of the assessment experience on the learner. This can be especially challenging given the limited training teachers receive around assessment design and cultural competency in teacher preparation programs. The purpose of attending actively to bias when designing any assessment, including performance-based assessments, is to ensure that the experience of engaging in the assessment doesn't "offend, district, rile or hurt" (Popham, 2011) the student. Additionally, it helps us ensure that when we are using the results of the assessment to inform placement, grading, scoring, or evaluation, we can be confident in our decisions.



Reflective Questions for Attending to Bias in Assessment Design

- 1. What system does our school have in place to attend to issues of measurement error especially for high stakes tests (e.g. SLO tests, student finals, midterms, etc.) or performance tasks?
- 2. What resources can assessment designers access in our school/community for "final eyes" review for high stakes tests (e.g. SLO/SGO tests, student finals, midterms, etc.) or performance tasks?
- 3. What resources should our assessment designers use and trust when beginning the design process? When self-assessing and revising? (See *Rubric for self-assessment*)
- 4. What is the communication structure for parents/students who want to raise concerns about measurement error? If parents/students are uncomfortable with a task, is there a process or structure in place for them to raise their concerns and know that their concerns will be heard?
- 5. If our assessment designers are not reflective of the diversity of the student or community population, what steps are taken during the design process to seek out diverse perspectives?
- 6. Are our assessments reflective of the student population ("mirrors")? Can all the students see themselves in their assessments?
- 7. Are our assessments reflective of the diversity of our community, state, country, and world ("windows")? Can students see diversity in their assessments?
- 8. If our assessment include controversial texts, topics, or content, are students and teachers made aware of the explicit instructional outcomes? Are structures and processes in place to ensure students' emotional safety during the exploration of a controversial topic?
- 9. If a test is high stakes, what structures are in place in order to scan the item data to do differential item functioning (DIF)?



Assessment Rubric for Attending to Bias

To what extent do assessment designers attend to measurement error issues related to bias?

Limited awareness of and	Emerging awareness of and	Explicit awareness of and	Embedded awareness of and
attention to bias	attention to bias	attention to bias	attention to bias
Assessment designers equate conversations about bias in assessment design to accusations. The initial response when the issue is broached is defensive.	Assessment designers can define bias and understand its technical definition. The initial response when the issue is broached is a desire to wait it out.	Assessment designers can define bias, recognize it in practice, and speak up when they see examples of it. The initial response when the issue is broached is a desire to learn more and address what went wrong.	Assessment designers frame bias within the larger context of social justice advocacy and equity. Conversations about bias and assessment extend to curriculum and pedagogy and occur regularly.
Designers operate under a belief that their assessments are automatically bias-free despite unconsciously designing for students who look like them, learn like them, or hold similar mental models around content, culture, religion, and school.	Designers have adopted a checklist approach to bias ("We looked for it, saw none and are moving on") in assessment design. They talk about attending to bias and consider seeking out diverse input but concerns about saying or doing the wrong thing limits the discourse.	Designers have communicated their goal of bias-free assessment to the school community. Design/school leaders purposefully seek out teachers and parents of color, LGBT parents and educators, religious leaders, people with disabilities, members of the community's immigrant population, and social justice advocates to communicate their goals. They invite diverse community members to join the process wherever the community member feels comfortable.	Designers see their assessments in relation to equity and social justice issues. They seek out diverse perspectives (including students) and regularly re-design, revise, or readminister assessments. Designers actively seek out feedback from students following the assessment administration and regularly solicit input from diverse/divergent community members as a part of practice.
Assessments with measurement error are ignored or justified. The designers' intent is often used as defense for the error.	Assessments with measurement error are pulled from the curriculum.	Assessments with measurement error are pulled from the curriculum. An apology is offered and/or a process established to design a higher quality task. The flawed item/test is used as a learning opportunity in the future for designers.	Assessments with measurement error are pulled from the curriculum. An apology is offered, and students are given opportunity to re-take the test or assessment, if high stakes. The designers follow a pre-established process to design a higher quality task. The flawed item/task is annotated, and used as a learning opportunity in the future.