

9

Extensions

Students' Affect: Underappreciated and Under-Measured

Chapter 9's Assessment-Related Understanding

Affective Assessment. Because students' in-school affective dispositions can have a significant impact on students' success, both during school and after its conclusion, student affect should be more frequently assessed via anonymously completed self-report inventories.

BETTER UNDERSTANDING AN UNDERSTANDING

Much like the preceding chapter, this chapter's assessment-related understanding represents a position of advocacy. Whereas Chapter 8 urged the more widespread use of formative assessment, this chapter's assessment-related understanding

attempts to foster the greater use of instruments intended to measure students' affect. In order to thoroughly comprehend this chapter's affect-focused understanding, it's necessary for someone to become more intimately familiar with the nature of affective assessment.

Several significant distinctions can be drawn between educational assessments aimed at measuring a student's cognitive capabilities and measuring students' affect. To clarify, a student's cognitive capabilities include the student's knowledge and skills, whereas a student's affect encompasses the student's attitudes, interests, or values. We should review a few of those differences because they contribute to our awareness of what's required to support the chapter's assessment-related understanding.

One of the most influential of these distinctions is that cognitive measurements call for students to display their *optimal* level of performance, while affective measures call for students to provide *honest responses* to questions so that adults can arrive at accurate inferences about students' affect. This difference leads to a marked contrast between the kinds of inferences we can legitimately draw from cognitive assessments and those we can legitimately draw from affective assessments.

We can most efficiently make inferences about students' affect based on their responses to affect-related statements or questions contained in a self-report inventory of some kind. More exotic and more costly methods exist to discern students' affect—such as using rooms with one-way mirrors and employing accomplices to stage an “inference-contributing situation” related to students' affective dispositions. But, as a practical matter, self-report inventories are clearly preferable to elaborate measurement procedures such as those calling for costly biologically rooted tactics. Nonetheless, it would be foolhardy to believe that, when completing self-report inventories, students will always dish up the unvarnished truth when asked about their interests, attitudes, or values. For a variety of reasons, even when completing a self-report inventory without supplying their names, students sometimes distort their responses. As a consequence, when collecting

self-reported affective data, it is always necessary to be satisfied with *group-focused inferences*. These would include inferences about the affective status of the group of students who completed an affective self-report inventory.

For cognitively oriented tests, given that we are attempting to make inferences about an individual student's knowledge and skills, we make an inference that the test-taker's performance is indicative of an individual student's best ability-level. Such an inference, of course, will occasionally be mistaken. Sometimes on cognitive tests, students perform *below* their actual ability-level. Many factors might lead to instances of under-performance. On the other hand, we almost never see students performing well *above* their ability-levels on cognitive tests. Nonetheless, in most settings educators are reasonably comfortable in using a student's performance in response to a set of test-items in order to arrive at an inference (or, if you prefer, an interpretation) about an individual student's cognitive achievement level.

For affective assessments, on the other hand, inferences must relate to a larger collection of students, such as all students in Mr. Higgins fourth-grade class this year. After administering an affective self-report inventory to his 28 fourth-graders, Mr. Higgins could analyze students' responses in order to discern what levels of affect were present in his class. Four items in the self-report inventory might be centered on the routine ambiance of Mr. Higgins' class—especially on the levels of noise and student-movement during class sessions. Most students, responding with total anonymity, might indicate that they were “very often” distracted from learning by the tumult typically present in class. Indeed, almost half of Mr. Higgins' students might mark a response-choice on the self-report inventory indicating that they were “Often unable to concentrate.”

Given such a result, Mr. Higgins will arrive at an inference that there's too much noise and movement going on in his fourth-grade classroom. A subsequent group-focused inference should lead Mr. Higgins to make adjustments in how he maintains order.

One final point needs to be made about the use of self-report affective inventories, namely, that the level of their accuracy is certain to be influenced by respondents who deliberately “inflate” or “deflate” responses regarding their true affective status. Ideally, the number of too-positive responses will be matched by the number of too-negative responses. However, that “perfect match” situation is unlikely. Although most self-report affective inventories urge respondents to complete such inventories anonymously and honestly, we must always recall that self-report inventories are, indeed, *self-report* inventories. Such instruments should be used more frequently by teachers, but teachers need to realize that the group-focused interpretations made from students’ responses are apt to be rather indicative rather than completely definitive.

COLLEGIAL CONJECTURING

Please read the imaginary e-mail below. You are to consider your friend’s stance regarding an important issue associated with the measurement of students’ affect—in this instance, the appropriateness of assessing certain kinds of values. After reviewing your friend’s position on this issue, try to formulate how you would respond to this request for advice.

TO: A TWO-TIME READER OF AN EDUCATIONAL TESTING BOOK FROM: YOUR BUDDY, WHO CAN'T BELIEVE IT SUBJECT: ACCEPTABLE AND UNACCEPTABLE AFFECTIVE EDUCATION

Howdy:

In last week’s e-mail, you said you’ve decided to *re-read* that book about educational testing (I forget its title). Wow, you only finished reading it a couple of weeks ago, and here you are going for Round Two. What on earth is up with you? Did you not understand what you read the first time, or have your recollection skills disappeared?

Anyway, since you will apparently soon be a revered authority on educational testing, I want to run a position by you that I'm intending to push when my committee and I meet next week with our local district's school board. We've been scheduled to meet with them for nearly three months, and we'd like to talk about educational measurement—more specifically, the district's policy regarding the measurement of our students' attitudes, interests, and values.

Two years ago, the school board endorsed a policy of encouraging the district's teachers to more frequently employ self-report inventories in their classes—completed by students anonymously and focused on students' *affect*. I fear that some of the teachers have run amuck in their implementation of this policy. I need you to tell me whether my stance on affective assessment is defensible enough to present to the board.

I realize there is educational value in having teachers gauge the affective dispositions of their students in order to arrive at actionable interpretations of students' attitudes, interests, and values. In the two years that the district's teachers have been giving their students anonymously completed attitude inventories, we've clearly seen positive signs regarding several important attitudes, such as students' general interest in learning. Nonetheless, there are no guidelines from the district delineating what sorts of affect should be measured or promoted by teachers. And, candidly, I believe several district teachers have gone way overboard because a number of teachers are both *measuring* and then *promoting* students' acceptance of particular political values. A handful of teachers, in fact, have pooled their efforts and developed self-report inventories aimed directly at whether a student's political leanings were toward the right or toward the left. We can safely assume that, if those students' self-reported values were inconsistent with a teacher's political preferences, then some teachers might attempt—perhaps subtly—to alter such values.

My position on this affective assessment program is quite simple. I want the school board to stop allowing teachers to measure or promote *any values at all* or, possibly, *any values other than those approved by 100 percent of our nation's citizens*. If teachers

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want to promote their students' honesty or patriotism, I'm fine with teachers' promoting students' acceptance of diverse points of view. However, the current policy of leaving affective assessment, by neglect, to "teacher's choice" is, in my mind, quite dangerous.

Well, that's my position. Do think it has sufficient merit for me to voice it before the board? I know you've been thinking about this sort of measurement issue, and I really do need your advice! Let me know whether you believe that only values endorsed by *practically everyone* should be assessed and promoted in our public schools.

Les

THOUGHT-PROVOCATION QUERIES

Please consider the three questions below, each of which is related to affective assessment. Then, if one or more of the questions strike your fancy, think through how you might go about churning out a consummately compelling response to the question(s).

Query 1. Because most students have not experienced a great deal of affective assessment, particularly the completion of self-report assessment inventories taken with total anonymity, some students will need to be given an explanation/orientation regarding why this sort of assessment is taking place. If you were being asked to explain to a group of students the rationale for the assessment of their affective dispositions, what would be the chief elements of the explanation you might compose?

Query 2. A "cognitive laboratory" is an activity during which a small group of test-takers take part in an item-by-item analysis of an under-construction assessment device. Often used for cognitive assessments focused on measuring students'

knowledge and skills, cognitive labs can also be quite helpful in constructing self-report inventories to assess affective dispositions. If you were in charge of a cognitive lab to help improve the qualities of a new self-report inventory intended to measure students' interest in non-required reading, what would you focus on when interacting with a group of 6–10 seventh-grade students?

Query 3. If you were a fourth-grade teacher committed to measuring a small number of your students' affective dispositions over the course of a school year—once every few months—which *three* affective dispositions would you choose to measure via self-report inventories and address instructionally?

A REAL-WORLD APPLICATION

In the real-world measurement of students' affective dispositions, the most common assessment procedures used are self-report inventories anonymously completed by students. The phrasing of the items in such inventories is particularly important. Typically, a student is presented with a series of statements such as, "When I get home after a day in school, the very last thing I want to do is study." Students then choose a response to each item from options often ranging from Strongly Agree to Strongly Disagree. To make such inventories sufficiently efficient, the statements must elicit differing degrees of agreement or disagreement. For instance, almost all students would register disagreement with a blatantly positive statement such as, "I enjoy school so much that I desperately wish they held it seven days a week—with no weekends at all!"

Your task in this chapter's final Extension is to generate a set of three-to-five statements for an affective inventory intended to measure seventh-grade students' attitudes toward the subject of mathematics. Try to make the statements definitely positive or negative toward math, but not so flagrantly positive or flagrantly negative that there would be little variation in students' responses to an item. Details of the exercise are supplied below in italics.

CONSTRUCTING ITEMS FOR A SELF-REPORT INVENTORY

(A SUB-GROUP EXERCISE)

Because the mission of this exercise is to increase participants' familiarity, hence comfort, in creating the items needed when developing an affective self-report inventory, it will come as no surprise that the exercise calls for the generation of such items. First, please divide your larger group into sub-groups of 4–8 members, and then spend about 20 minutes writing items for an inventory intended to measure seventh-grade students' attitudes toward mathematics. Try to do a good job in generating the statements that could, if regarded as suitable, help constitute an early version of a self-report inventory.

The items in this inventory are usually statements relevant to the affective variable of interest—in this instance students' attitude toward mathematics. Try to create relatively short statements, using age-appropriate vocabulary, that represent either a person's positive or negative sentiment towards mathematics. An example of a positive statement might be: "I really have fun trying to solve math word-problems." An example of a negative statement might be: "When compared to my other subjects, I like math the least." In the inventory itself, students will be selecting one of the following responses for each item: Strongly Agree, Agree, Not Sure, Disagree, or Strongly Disagree.

The statements you generate should (1) help contribute to someone's drawing a group-focused inference regarding students' attitudes toward mathematics and (2) although definitely positive or negative, dare not be so positive or so negative that there is insufficient variation in students' responses to an item (that is, not enough variation to permit determination of a student group's affect). At the close of a sub-group's item-writing time, each sub-group's draft statements should be read aloud so that other participants can critique them

*As usual, if someone is reading *The ABCs* solo, and thus has no opportunity to carry out this exercise as a member of a sub-group, the task of generating items for an inventory—and subsequently reviewing them—can be done individually.*