



Enhancing the Unique Student's Test Performance

ERIC GEE
Department of Psychology

INTRODUCTION

I recently reflected on my time as an instructor of students and realized (somewhat dismayingly) that I've been teaching college students in one capacity or another for nearly 26 years. That's a quarter century of teaching and assessing. I could not count the number of tests that I've given nor the number of encounters (both positive and negative) that I've had with students regarding their test performance. I have a slight advantage over some faculty here though. I teach a class entitled "Psychological Assessment," which automatically sets me up as an expert in test construction, at least to the students. That expectation is probably not fully earned, though. Like everyone else, I struggle to use testing as an effective tool. Testing, of course, is not just about evaluating, but can also lead to learning (Roediger, Putnam & Smith, 2011). The purpose of this paper is to describe how assessment can be used to improve each student's performance and learning.

MEASUREMENT AS A CONCEPT

There are two quotes from Lord Kelvin, the famous Irish physicist, that apply here:

"To measure is to know."

"If you cannot measure it, you cannot improve it."

Each day as faculty at BYU we are confronted by a need to know how our students are doing in our classes. Are they understanding the material? Are they mastering the skills? Are they able to apply what is being taught? Are they engaged with the class? If the answer to any of these questions is "YES," then both we and the student are doing our jobs. If the answer to any of these questions is "NO," it is measurement that gives the information needed to improve.

Typically, the BYU-Idaho Testing Center provides very useful statistics regarding group performance on tests. Reliability, standard error of measurement, and item analysis are some of the convenient statistical tools available for looking at the overall quality of a test. These tools can also provide some guidance on improving that quality. However, the limitation of these methods is that while they tell us something about how the GROUP performed and how to improve the GROUP experience, they often don't tell us much about how to improve an individual student's performance. In other words, a reliability of .85 (which is good!) on our multiple choice test gives us that warm, delightful feeling inside, but can do little for the student who has failed or at least failed to achieve what they would like to achieve.

So measurement techniques help us know and improve generally and help us know individually, but the traditional tools may not help us improve the individual student for whom such things as reliability, standard deviation, quartiles, etc. are dusty, remote, and esoteric concepts. And frankly, they don't tell us much about how an individual student can improve.

The first step is recognizing that this is probably something that has to be done one on one. Obviously, you can have a group discussion over these issues. However, it will not be as effective given that some of the points made will apply to only a portion of the class. I generally invite

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all students to come to my office to discuss their tests. It is certainly appropriate, if you feel so moved, to extend a personal invitation to a student who is struggling to come and discuss their test performance. Once in the interview, you can do a number of different things. I will discuss the following suggestions: assess test taking skills, conduct an item review interview, identify possible response sets, and evaluate test anxiety.

HELPING THE INDIVIDUAL STUDENT IMPROVE THEIR TEST PERFORMANCE

ASSESS TEST TAKING SKILLS

The first thing to assess is the individual student's test taking skills. For those of us that have been in academia the greater part of our lives, it may seem ridiculous to have to learn how to take a test. That is because such information is so internalized we don't think about it anymore. That is not always the case with students. Worthen, Borg & White (1993) describe students with good test taking skills as demonstrating the following abilities:

- Underline important words (where permissible)
- Analyze items systematically
- Guess (after eliminating unreasonable options)
- Pace herself during the test
- Skip difficult items and return if time permits
- Make sure he understands all directions

Students with poor test-taking skills will do the following:

- Read too quickly
- Miss important words
- Jump to conclusions
- Make random guesses
- Be confused by different answer formats
- Have difficulty adjusting to the structured setting of a test

A few well-placed questions can reveal the approach the student brings to the test. Sometimes, the solution could be as simple as "read carefully." Over the years, I have had a number of students come to my office to discuss their tests. Many times I can see that it's only inherent courtesy that keeps them from blasting me with invective regarding the fundamental unfairness of the test just taken. Regardless of their emotional state, I invite them to look over their test with the answer key. Frequently, the student looks up and says, "I don't know why I put that answer down, it seems so clearly wrong now." A gentle reminder to read questions carefully can be provided at this point. Another general recommendation you can make (particularly if the problem is systematic) is to take a study skills course offered by BYUI. There is also a brief video that you can refer students to located here: <http://www.byui.edu/academic-support-centers/study-skills/study-skills-courses>

CONDUCT AN ITEM REVIEW INTERVIEW

Another useful exercise is to sit down with the student and carefully examine the items that they have missed. The item analysis will be helpful in this instance. An item that most of the class misses may simply be a difficult item and will tell you little about the student. An item that most or a majority got correct, but was missed by the student, will be more informative. An item difficulty index of .70 or above is generally considered to be an easy item. An item discrimination index of .40 or above is also desirable. Comparing the student's individual performance with the performance of the class as a whole, item by missed item, may be quite revelatory to the student and to you. At times, patterns may emerge that will guide you to giving the student better direction regarding test or assignment preparation. These patterns can reveal misunderstandings

of the content that can be corrected. In fact, it's not a bad idea to simply ask the question "Why did you put that answer down?" and see what the student says.

IDENTIFY POSSIBLE RESPONSE SETS

A conversation with the student may also reveal a particular response set that is problematic. Response sets are common ways of responding to items irrespective of the item. Response sets become most apparent when items are ambiguous or student understanding of the item is muddled (Cronbach, 1950). For example, there is a "gambling" response set possessed by some students who are risk takers. Risk takers can benefit in tests where wrong answers result in loss of points (as opposed to simply to receiving credit). In addition, risk takers may be more likely (when they don't know) to go out on a limb and choose an answer. Another type of response set is how fast the students responds to the test. Interestingly, there is generally not a relationship between response speed and accuracy. Having looked at this data in my own classes, I find that the fastest students are not necessarily the poorest students (nor are they the best students). So simply telling them to "slow down" is not automatically good advice, but may apply if you discern that they aren't reading things carefully. In addition, if they are waiting until the last minute to take the test (15 minutes before the Testing Center closes), a slow response set will not be advantageous. You may also want to check for "positional preference set", which is the tendency to select one option over the others (particularly when unsure of the answer). Item review described above may reveal a positional preference set.

EVALUATE ANXIETY

While most students will claim that they experience test anxiety, only a minority really experience the kind of crippling anxiety that can have significant impacts on test performance (Hill & Wigfield, 1984). Our cognitive resources are limited and if the bulk of those resources are taken up in ruminating over anxiety-producing thoughts, it shouldn't be surprising that such students don't perform well. Test anxiety can actually be assessed. If a student comes claiming test anxiety, a quick assessment can provide supportive evidence (see Sarason, 1978).

Accommodations should be made for such students. My experience has been that the Testing Center is responsive to these issues. But if the Testing Center is out of the question, we do have an obligation to provide a more optimal testing environment. Students should have the opportunity to perform as well as they possibly can.

OTHER THINGS YOU CAN DO

- Stop creating purposefully difficult or tricky items. An item that no one can get right creates the problems described above and gives you little information.
- Do your best to create good items in the first place. There are a number of guides available to faculty to help with item construction. But keep in mind that item construction is more art than science.
- Patience is still a virtue. One of the most annoying things that a student says to me (and they say it regularly) is: "Some of these items aren't good." Again remember that students will always tend to put the blame on you (and the test) before assuming responsibility themselves. It's best not to take such statements personally. Recognize that your test is probably not perfect and see if the student's issues can be addressed. If not, you may have to agree to disagree.

CONCLUSION

Tests are only general indicators at best. We should never assume that the score received on the test is automatically and irrevocably a strong indicator of the student's learning. In addition, I regularly tell my students that a test score (important as it may be for an academic career) is still not a reflection of their value as a human being.

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