

# Technical Affairs

By Mike Aamodt, Associate Editor

*This month's column contains some thoughts on using arbitrary passing scores as well as another attempt at HR humor. If you have a technical question you want answered or a piece of HR humor you want published, please submit it via email ([maamodt@radford.edu](mailto:maamodt@radford.edu)).*

## The Danger of Arbitrary Passing Scores

**A**t a recent conference, I had the opportunity to have dinner with two other professors who are current or past directors of I/O master's programs. During dinner, the conversation drifted to how frustrating it can be when you want to use established selection techniques to select new graduate students but the rest of the department wants to use invalid or untested methods. The three of us use regression equations to select new graduate students to our programs and have had to overcome resistance from faculty who believe that minimum scores are the way to go.

One of the program coordinators recalled a recent battle in which one of his colleagues insisted that they adopt a minimum score on each section of the GRE. When the coordinator replied, "The regression is working great. Why would we want to adopt a minimum score that you pull out of thin air (not the exact location of where the score was pulled from)?" To which his colleague replied, "Not one that we pull out of thin air, I'm thinking of 410 on each section." Where 410 came from, nobody knew but the proposal for using 410 started to gain momentum in the department.

To stem the momentum, the program coordinator went into his database of former students to determine which students would have been eliminated by the 410 passing score. Much to his surprise, he discovered that 30% of students who successfully completed the program would never have been admitted, including some of the best students the program produced. Even more troubling was the finding that 63% of the minority students who successfully completed the program would have been denied admission had the 410 cutoff been used.

What does this story tell us? The first is the importance of determining whether a passing score or a compensatory system makes sense in any given situation. Clearly in the situation described above, an arbitrary passing score would have been a disaster.

Passing scores should be used when there is a minimum level of something that is needed for an employee to be successful. For example,

- If a firefighter can't lift 75 pounds, he/she will be unable to lift the equipment needed to perform the job.
- If a restaurant server is not 21, he/she can't serve alcohol
- If a police cadet can't do basic math, he/she will not survive the academy
- If a clerk can't do at least 50 keystrokes per minute, he/she will not be able to input enough data for an organization to make money on his/her efforts.

Compensatory systems (usually using regression) should be used when higher levels of one competency can make up for lower levels on another competency. As an example, let's look at graduate school applicants. Most I/O master's degree programs use some combination of GRE scores and undergraduate GPA, with the average GRE score being around 1,050 and the average GPA being around a 3.4. When a regression equation is used, an applicant with a below average GRE of 900 (400 on the verbal section, 500 on the quantitative section) and an above average GPA of 3.8 might be considered as would an applicant with an above average GRE of 1200 and a below average GPA of 2.8. If a score of 410 or higher on each section of the GRE and a 3.0 GPA were required, both applicants would have been eliminated.

In selecting applicants for graduate school, a compensatory system makes sense because the elements of the battery (GRE, GPA, letters of recommendation) are somewhat interrelated. That is, the three elements of the battery are essentially tapping a student's ability and motivation to learn and apply material. A high score on the GRE indicates that a student has taken and comprehended lots of math and English courses. A low score is harder to interpret. It may be that the student hasn't taken many of these courses or it may indicate that they took the courses but didn't learn much (low ability and/or motivation). A high GPA demonstrates some combination of cognitive ability and academic motivation. A low GPA is harder to interpret as it might indicate low cognitive ability, a low level of

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motivation, personal constraints (e.g., full-time work, illness, raising a family), or some combination of the three (it certainly can't represent bad teaching).

The quandary in using passing scores occurs when a student has a low GRE but a high GPA. Using a passing score on the quantitative section would imply that there is a minimal level of math knowledge that a student must have to be successful in a master's degree program. While few would argue that students must have some degree of quantitative aptitude to be successful in graduate school to pass courses in statistics and psychometrics, one must question whether there is really a minimum level of algebra, geometry, and trigonometry needed to be successful in those classes. If there is not a minimum level, and my colleague's data suggest there may not be for a master's program, then a passing score on the quantitative section doesn't make sense. If however, the GRE score is a proxy for cognitive ability and academic motivation, a compensatory strategy that would include GPA, GRE scores, and letters of recommendation in a regression equation makes more sense.

With that being said, there may be plenty of situations in which cutoff scores can be successfully used in academic settings. The key to using cutoff scores is whether there is a true minimum level of something that is needed to be successful and whether the cutoff is set using an appropriate method (e.g., Angoff) rather than pulling one out of...the air.

## HR HUMOR

**A man in a hot air balloon realized he was lost. He reduced altitude and spotted a woman below. He descended a bit more and shouted, "Excuse me, can you help me? I promised a friend I would meet him an hour ago, but I don't know where I am."**

**The woman below replied, "You're in a hot air balloon hovering approximately 30 feet above the ground. You're between 40 and 41 degrees north latitude and between 59 and 60 degrees west longitude."**

**"You must be an engineer," said the balloonist.**

**"I am," replied the woman, "How did you know?"**

**"Well," answered the balloonist, "everything you told me is technically correct, but I've no idea what to make of your information, and the fact is I'm still lost. Frankly, you've not been much help at all. If anything, you've delayed my trip."**

**The woman below responded, "You must be in Management."**

**"I am," replied the balloonist, "but how did you know?"**

**"Well," said the woman, "you don't know where you are or where you're going. You have risen to where you are due to a large quantity of hot air. You made a promise which you've no idea how to keep, and you expect people beneath you to solve your problems. The fact is you are in exactly the same position you were in before we met, but now, somehow, it's my fault."—ACN**

## Call for Nominations

**I**t's time to choose IPMAAC's president and board members for terms beginning in 2005. Our by-laws call for a ballot to be distributed at least 60 days before the annual business meeting (Wednesday, June 23 at the IPMAAC Conference in Seattle) and received back no less than 30 days before the business meeting.

The Nominations Committee, chaired by **Harry Brull** as past president of IPMAAC, is charged with the responsibility of putting the ballot together. We want your input! We are seeking nominations for both IPMAAC president and board terms. Please forward your nominations (indicate your nomination is for president-elect or one of the board member positions) to Harry by **Friday, April 9**. Then be on the lookout for your **electronic ballot** somewhere around **April 26**. Balloting will close **Friday, May 21**. If you are unable to vote electronically, please let Katie Pierce know as soon as possible so that we can make alternative arrangements.

Remember, we want to hear from you. Please get your nominations to Harry at [harry.brull@personneldecisions.com](mailto:harry.brull@personneldecisions.com) or (612) 337-8233 by Friday, April 9. Your nominations ensure the continuity and capable leadership of IPMAAC. We thank you in advance for your thoughts.—ACN