IFAT – if at first you don't succeed… try, try again

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Although I have often used multiple-choice questions in my courses, it has always been a source of great concern to me that most students never take the time to review the multiple-choice items after they have received their graded exams. As a consequence, they never obtain confirmation that their correct answers were indeed correct, nor do they learn the correct answers for the items that they got wrong on the exam.

Recently however, I have introduced into my courses a new technique for multiple-choice testing that has some tremendous advantages. The Immediate Feedback Assessment Technique (IFAT) was developed by Professor Michael Epstein, of Rider University, in New Jersey.

The IFAT form is similar to the more well-known Scantron form that is used in multiple-choice testing. However, on the IFAT form, each of the four alternatives is covered by a waxy opaque coating similar to the coating that is used on scratch-and-win lottery tickets. For each question, the student selects the answer believed to be correct and scratches off the coating. If the choice is correct, a star appears in the box and the student goes on to the next item. If the student's choice is incorrect, a blank space appears. The student then reconsiders the options that remain and continues scratching boxes until the star is found. The student's final choice is always the correct answer.

Students earn full marks for answering correctly on the first attempt, and progressively fewer marks for answering correctly on later attempts.

From a pedagogical perspective, the IFAT has several advantages over standard multiple-choice testing procedures. First, it provides immediate rather than delayed feedback for the test items. Second, this feedback is corrective, allowing students to learn the correct answer to every item before they leave the test situation. Third, because students can still earn marks even if their first attempt is not correct, they are rewarded for their proximate knowledge of the correct answer. Fourth, because students can determine their own test mark, they receive immediate feedback on their overall performance before leaving the test situation.

To determine whether students like the IFAT, Professor John Mitterer and I had students complete a brief questionnaire after using the IFAT on an examination. We found that the students strongly prefer the IFAT to the more commonly used Scantron form, with 83 per cent saying that they would like to be able to use the IFAT in all of their courses.

Students' responses indicate that they like IFAT for a variety of reasons, including the following: it is easy to use; it makes the multiple-choice portion of the test feel a bit like a game; it lets

Professors David DiBattista, left, and John Mitterer explain IFAT.

them know the right answer to every question; it allows them to learn more than the Scantron form; it allows them to get part marks on multiple-choice questions; and it lets them figure out their marks on the multiple-choice portion of the test.

Mike Epstein has recently demonstrated that students do actually learn more when they use the IFAT instead of the Scantron on their multiple-choice tests. So students not only prefer the IFAT, but they also learn more when they use it — a winning combination!