

IMMEDIATE FEEDBACK AND ASSESSMENT TECHNIQUE (IF-AT) TESTING FORMS: AN OVERVIEW OF THE TOOL AND USES

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ABSTRACT

This paper reviews the Immediate Feedback and Assessment Technique (IF-AT) testing forms. It presents the forms as a means to enhance learning and create “teachable moments” while simultaneously performing student assessment. I also present how I use the forms in my own teaching as well as options for adapting to other teaching philosophies.

INTRODUCTION

ABSEL has a long history of exploring new teaching and assessment methodologies. It was no surprise to long-time ABSEL members when universities discovered simulations and experiential exercises and started using them to teach classes and assess learning. One on-going question that has often been debated at ABSEL conferences is how to balance the need to assess students learning with the requisite time constraints placed on the professor. As many professors can attest, grading 50 essays for multiple classes is time consuming. Alternatives such as multiple choice exams provide the ease of grading, but often lack the capability to actually reinforce learning in the students. A complaint that I have overheard often, is that professors love to give partial credit for essay answers where the student’s thought process is shown, but multiple choice exams are either right or wrong.

While developing my own teaching philosophy and style, I discovered a new tool provided by Epstein Educational Enterprises called the “Immediate Feedback and Assessment Technique” or IF-AT form (www.if-at.com). In short, this form has provided me a means to increase learning among students, even during an exam. I have gained the benefits of a multiple-choice exam while still maintaining the capability of providing partial credit for the thought process. Additionally, not only does the exam measure student understanding, but it allows me the opportunity to immediately correct misunderstanding or incomplete knowledge. The student leaves the class knowing immediately the correct answer to each question and not just their final score, thus reinforcing learning.

In the rest of this paper, I will present the IF-AT form, the idea behind it, how I use it in the classroom as well as some alternative ideas for classroom implementation. I would like to stress that like any other tool, it is not the tool itself that makes a difference in student learning, but the methodology that the professor uses when implementing such a tool that matters.

IF-AT FORM

In its simplest form, the IF-AT form is similar to a scratch-off lottery ticket in a multiple-choice exam format as shown in figure 1. The forms are available in 4 or 5 answer variations and can be bought for different exam lengths from 10 – 50 questions.

Figure 1

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT®)
Name _____ Test # _____
Subject _____ Total _____
SCRATCH OFF COVERING TO EXPOSE ANSWER

	A	B	C	D	Score
1.					_____
2.					_____
3.					_____
4.					_____
5.					_____
6.					_____
7.					_____
8.					_____

As with most multiple choice exams, the student is then allowed to choose the best response. In this case, the choice is done by scratching the box that represents the chosen response of A, B, C or D. If the student is correct, they will find a star in the box as in figure 2.

Figure 2

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT®)
Name _____ Test # _____
Subject _____ Total _____
SCRATCH OFF COVERING TO EXPOSE ANSWER

	A	B	C	D	Score
1.	★				_____
2.					_____
3.					_____
4.					_____
5.					_____
6.					_____
7.					_____
8.					_____

If the student’s choice is incorrect, the box will be empty as shown with question 2 in figure 3. The student

immediately knows that their response is incorrect and they can immediately reevaluate their reasoning and choose another answer. To further enhance this learning process, different grading procedures proving partial credit can be used and will be discussed later in this paper.

Figure 3

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT®)
 Name Group B Test # Final
 Subject _____ Total 200

SCRATCH OFF COVERING TO EXPOSE ANSWER

	A	B	C	D	Score
1.	★				4
2.		★			4
3.			★		4
4.				★	4
5.	★				4
6.				★	4
7.			★		4
8.		★			4

The students continue the selection process for each question until the correct response is uncovered as shown in figure 4. The students are then able to grade their own exam (following instructor directions) but more importantly, they leave the exam knowing the correct answer. In this way, students are both assessed for knowledge and instructed simultaneously.

Figure 4

IMMEDIATE FEEDBACK ASSESSMENT TECHNIQUE (IF AT®)
 Name Group B Test # Final
 Subject _____ Total 200

SCRATCH OFF COVERING TO EXPOSE ANSWER

	A	B	C	D	Score
1.	★				4
2.		★			4
3.			★		4
4.				★	4
5.	★				4
6.				★	4
7.			★		4
8.		★			4

The first exam each semester always has a few students who immediately try 1 of 2 actions. First, a student will raise the answer sheet to the light in hopes of seeing through the scratch off areas and determine the correct responses by sight. This of course does not work. The second response is that a student will occasionally 'accidentally' create a random mark on an answer square in hopes of discovering a mark underneath the scratch-off areas. I make a point of telling students that random marks are accepted as a full response to minimize this, but the star under the correct answer moves about so that there is no consistency and discourages such behavior. An example of how the marks move about can be seen by examining

individual questions and answers in figure 4. There has been the rare occurrence when the correct answer was initially chosen but the students failed to clear the answer sufficiently to discover the star and started scratching a second response. This only occurs once.

When ordering the IF-AT forms, you also receive an answer sheet that tells you where the correct answer is for each question for each form. There are thousands of different answer combinations available when ordering the IF-AT form. You also receive access to the IF-AT testmaker which is a free internet based program that allows you to enter your exam, mark the correct answer and then generate the exams that match the IF-AT forms that you have received. At the bottom of each IF-AT form there is a perforated section with the answer sheet number that must be removed before handing the IF-AT form to students.

IF-AT BENEFITS

The questions arise, "why use the IF-AT form" and "what are the benefits"? As already mentioned earlier, I have found the forms to provide a means for me to both assess and teach simultaneously. My basic teaching philosophy is to encourage learning and not simply grade on what the student can regurgitate during the exam. For this purpose, I have other activities that also increase learning for each class and I use the IF-AT forms as one of those tools. But the form can be adapted to meet your own professional teaching philosophy.

The IF-AT website also provides a list of additional reasons for using the IF-AT form. I summarize the information provided by Epstein Educational Enterprises below:

1. IF-AT is a learning system that is 'educationally sound'. Because it provides immediate feedback, compared to traditional testing methods, the students remember and retain the correct answer when leaving the classroom. This reduces the likelihood of students committing a wrong answer to memory.
2. IF-AT improves learning. When students are retested on the same or similar material, those using the IF-AT forms show an increase 20% number of correct answers. This compares favorably to students who take a traditional multiple choice exam who, when retested on the same or similar material, show a slight decrease in the number of correct answers.
3. IF-AT is fair. Instructors can give partial credit for partial knowledge similar to what occurs on essay style exams.
4. IF-AT is fast. Students can grade their own exams and know their scores before leaving the class instead of waiting a week or more for the results.
5. IF-AT is fun. Depending on the class, students perceive the IF-AT form as a type of game which allows them to work through their responses until they figure out the correct answer. (On a personal note, some students find this format more stressful because of the instant feedback.)
6. IF-AT is respectful. Using the form the professor shows that they care more for the learning process of the student and not just the final score.

7. IF-AT builds knowledge. Students learn while being assessed.

Though I do not have the studies to back up these assertions of the IF-AT by the Epstein Education Enterprises, my anecdotal experiences do support them. I have received unsolicited responses from undergraduate and graduate students from 18 years of age to 65, who have provided positive feedback in regards to my testing procedure using the IF-AT forms. One such student is returning to school to finish his MBA as he plans to sell his business and retire to a life of teaching. He approached me and explained how much more he and his group-mates learned through the IF-AT process. It allowed them to discuss their thought process and reinforce the materials in their minds. I have received similar comments over the years sufficient in mind that the previous assertions are reasonable.

IF-AT USE IN MY CLASSROOM

I originally introduced the exams to my undergraduate students who took to them like a fish to water. It was very much a game-like atmosphere during the exam. I slowly introduced the forms to my MBA students as I feared that they might find it too “childish”. I also have 3 different types of MBA students. I shouldn’t have worried. Though, I have discovered that I must only give the briefest overview of the exam process in the syllabus. I tell them that it is a multiple choice exam with both an individual and group component. I save the specific details of the IF-AT form until the day of the exam. This way they spend their time focusing on preparing for the exam and not spend time worrying about the exam format.

The IF-AT form can be used in numerous ways that reinforce your learning philosophy. I have implemented this by a combination of individual and group exam. The individual portion is performed like a regular exam where I collect their responses and grade them manually. Because both the individual and group exam occurs in the same class period, I am required to shorten the exam to fit the available time. I have also had to break the exams down into smaller units. In most cases this means 4 exams for 4-5 chapters each instead of the more traditional mid-term/final exam format for the regular 75 minute class period. This is adjusted depending on course length and class time. I also currently use the 4-answer IF-AT form.

After I collect the individual portion of the exam I then let the students get into their predetermined groups (they use the same groups throughout the semester) and re-take the exact same exam but this time they use the IF-AT form. I find that requiring both the individual and group exam reduces the ‘free-loader’ effect where one student does all the work for the group. By having both exams cover the same questions, the students have a chance to develop their own responses and reasoning first before going to the group.

As a group, the students work together to determine the best answer. This is fun to observe and would be a great area for future research on group behavior. I have found that most groups will first survey their group members on

which answer each believes to be correct. Then, if there is conflicting views, a discussion ensues. It becomes evident very quickly when the loud forceful personality is wrong and subsequently ignored and the quiet personality is correct and encouraged to participate more in the group discussion. Sometimes you will have one member who is adamant that their answer is correct and everyone else in the group is wrong. They will work with all their persuasive ability to inform the group. This does not always work. The group learns very quickly if the answer was correct or not. It does, however, provide another ‘learning moment’ where students practice those ‘soft-skills’ that employers are always asking for.

As for grading, I place the emphasis on the group portion but I provide partial credit on the IF-AT form. The individual exam is worth two points per question. The group portion is worth up to 4 points for each question. If they answer the question correctly on the first scratch, the group earns 4 points. If they get it wrong, then they receive 2 points for a correct answer on the 2nd scratch, 1 point for a third scratch a 0 points if they need to scratch all 4 answers. This weights the individual portion at 1/3rd of their exam grade to remove the free-loader effect and encourage individual study. But with the group portion worth 2/3rds of the grade, the group learns to work together to achieve the highest score. In-line with my personal teaching philosophy of focusing on learning over grading, and by providing other course assignments to increase learning, this grading scale also provides a means for a student to fail the individual portion and still learn from the experience without failing the exam (or class) completely.

ADDITIONAL USES AND GRADING

The grading procedure is easily modified to fit your specific teaching philosophy. I use a 4, 2, 1, 0 process for a 4 question test (going from correct answer on first scratch to last scratch). Other variations might include a 5, 2, 1, 0 or 5, 3, 2, 1, etc.

The IF-AT form can also be used for other purposes beyond the formal exam environment. Send the form home with the student for individual practice or home study. You could also send it home to have them do quizzes there and grade them similarly to the exams without taking up valuable class time. I use the forms in a group learning environment, but it could be used for individual students as well. Although, if used in a large class environment for individual students, you might want to remember to provide multiple versions of the exam, as the IF-AT form is a lot easier to view and copy from a distance.

CONCLUSION

Over the years I have often heard about the “teachable moment”. By using the IF-AT form I have been able to create just such a moment during the exam process. It also encourages thought and reasoning as a student receives partial credit for partial knowledge. I have also found that overall learning and excitement for the class has improved when the IF-AT form is properly implemented in-line with my own teaching philosophy.