

## Using a New Tool in a New Way

Many students find studying difficult, perhaps because they've never been taught how to study. There is ample evidence that shows repeated exposure to course material, especially in different contexts, helps move course material into long-term memory (Baddeley, 1997). Furthermore, processing that material more deeply by engaging with it in a meaningful way or through elaboration—rather than simply memorizing isolated pieces of information or focusing on surface details—also helps retain this information in students' long-term memory for later retrieval (Baddeley, 1997; Craik & Lockhart, 1972).

Most educators already know these strategies for helping students retain information; however, our students often fail to apply these principles that can help them succeed in their courses, if they even know them at all. This difficulty in retaining information makes it especially important for instructors to create opportunities for students to learn and practice good study skills, to model them for their peers, and to also use them in their other courses. Reviewing material regularly is one such strategy that can be easily applied in any discipline.

### A New Tool

An inexpensive tool that I use in my general education psychology courses is the Immediate Feedback Assessment Technique (IF-AT). Created by [Epstein Educational Enterprises](#), the IF-AT is a form similar to the Scantron form commonly used for exams. Yet, instead of answering a question by filling in a bubble, the IF-AT form requires students to scratch off their selection, much like a scratch lottery ticket. If the answer is correct, the scratch off reveals a star. (Note: As the instructor, you must ensure that you arrange the answer choices based on the IF-AT answer key that Epstein provides.) If the answer is incorrect, students can try again and scratch another choice, earning partial points for that question. This idea of allowing students to try again is the reason the tool is often referred to by its creators as the "IF-AT first you don't succeed" technique. Although its original intent is for formal assessment, I use it to help students review course content, thus ensuring repeated exposure and rehearsal.

### Using IF-AT for Review

When I first heard about this tool, I feared using it for exams (as intended) for two reasons:

- (1) Students may be more apprehensive using this method, which could increase their test anxiety; and
- (2) There isn't an automatic machine scoring method as there is with Scantron forms, which means instructors have to hand score exams. Because I teach a large number of students, the thought of hand-scoring exams gives me test anxiety!

While I don't use the IF-AT for formal assessments, I do use it almost weekly to help students review course materials. During class following the end of a unit or chapter, I begin by distributing a set of 10 multiple-choice questions related to the unit's content and an IF-AT form to each group of three to five students. Students then work together to determine the correct answer and scratch the corresponding square on the form. If they are correct, they move on to the next question. If they are incorrect, further discussion ensues and they proceed to select another answer.

Scoring works very intuitively as well. Students earn full credit for questions answered correctly on the first attempt (e.g., three points). For each subsequent wrong response, a point is removed. I use three points as the highest possible score per question to make the math easier for students: full credit is three points with three unscratched boxes; a successful second attempt yields two points, with two unscratched boxes remaining; a third attempt leaves only one unscratched box and is worth one point; and a fourth attempt yields zero points. Each group calculates their own score as described and hands in their IF-AT form so I can do a quick calculation of the scores before determining the winner.

This is a very low-stakes task in my class, so students seldom feel stressed about completing it. Some weeks, IF-AT is worth one to two percent of their final mark, so some students seem to benefit from this additional motivation to participate in the activity. I encourage a little competition by giving candy to the winning group, but sometimes I also reward all of the students simply for their overall participation in the activity.

### Benefits

This kind of peer learning benefits all students. Academically strong students benefit from the group discussion, receive immediate feedback about their performance, and confirm that they mastered the previous week's material. IF-AT may also help them focus their studying and reviewing for an upcoming formal assessment. Students who are academically weaker can gain a better understanding of the course

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content through the group discussions. These students may also benefit from the scaffolding that peers provide during the group activity. There is evidence that peers who are also novice learners may be in a better position to help fellow students grasp concepts, as their knowledge networks are more similar to each other than with the instructor's (Bowman, Frame & Kennette, 2013).

In all cases, group activity using the IF-AT may increase student motivation by allowing a less formal (i.e., more fun) way to engage with the course content. The form's design is different from what we normally use in class, and this novelty can be fun in and of itself. When I first used the IF-AT as a review activity, I asked my students whether they liked using the IF-AT, and all of them said they enjoyed it. The majority of students agreed that it would be valuable to continue using it every week for review.

Importantly, this activity serves as another way to help students develop essential employability skills (EES) in our classrooms. Employers want students to graduate with more than just domain-specific content knowledge. IF-AT develops primary EES, including teamwork, critical thinking, problem solving, and, potentially, conflict resolution—all of which are important in the workplace. Students have an opportunity to build teamwork skills by determining how the group will function, collaborating with group members to reach correct answers, and determining who will scratch the IF-AT. Critical thinking skills are developed, first when determining the correct answer, but also when students have to determine the validity of their peers' arguments. When disagreements arise within the group, students may be able to use or develop their conflict resolution or mediation skills. Peer-to-peer interactions have also been shown to increase students' acceptance of diversity (Poole & Sewell, 2007).

### Drawbacks

As with every tool, technique, or activity, it's important to consider the disadvantages as well. First, instructors can only order the IF-AT forms from Epstein Educational Enterprises. The cost is approximately 18 cents per form, plus shipping charges, with a minimum order of 500 forms. In my class of 60 registered students, I typically use only 10 forms, so 500 forms can supply my classrooms for numerous semesters. Perhaps very crafty instructors with small classes could engineer their own forms; however, IF-AT features make cheating nearly impossible, such as printing black bars on the backside of the form to ensure answer stars are not visible.

Additionally, this technique requires some planning. Instructors must create questions that coordinate with the answer key that accompanies the forms. In most cases, instructors can simply reorder their test answers

so they coordinate with the IF-AT answer keys. Social loafing, where one student does all the work or all the thinking, can also be a concern in this activity. However, actively monitoring groups while they answer questions, which is a best practice for any group activity, should minimize social loafing. Finally, although most of my student feedback is overwhelmingly positive, a handful of students dislike the group work, a key aspect of this activity.

### Conclusion

I receive very positive feedback from students using this technique in my courses. For a small investment, I feel students obtain great long-term benefits using this unique tool—and they seem to agree. Forcing students to review course material employs the principles of learning, backed by empirical evidence, that educators know students should use to be successful.

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