ETCP approaches 1,000 certifications

FAQ about the ETCP exams explained

The ETCP program has gained tremendous momentum over the last year as more and more employers and venues are requiring certification in lead positions. There are currently 800 certified technicians holding almost 950 certifications between them, so this is an exciting time for the industry as it relates to safety. With inquiries on the rise, it seems like a good time to address some of the most common questions I receive about the examinations.

How many questions do I have to answer in the three hour time limit?

There are 165 questions on each ETCP examination of which 150 are scored items. Because ETCP is testing so many candidates, it is necessary to have a large bank of questions that can be rotated, so candidates do not see the same test forms as their peers. Our testing company, Applied Measurement Professionals (AMP) includes the 15 pretest items because it helps the exam committees collect meaningful statistics about new questions that may appear as scored questions on future examinations.

By including the pretest items, all examinees are ensured their scores are the result of sound measurement practices and that scored questions are reflective of current practice. These pretest items are interspersed throughout the exam to ensure that candidates answer them with the same care as they do the scored questions. These 15 items do not count towards the pass/fail of the exam. In the credentialing world, most examinations include pretest items.

Why do you not get extra time to answer these non-scored items, you ask? Well, the simple answer is that the data we have received assures us that three hours is enough time to complete all 165 questions in the examination. AMP reports the time allotted per question meets credentialing industry standards and their data shows that only one-third of the candidates that test at a center use the full three hours to complete the exam.

Can I see which questions I missed on the exam?

The short answer is no, it is not possible for candidates to see the individual questions. Each question took hours of volunteer time

to develop. If ETCP released questions with the correct answer, the questions would have to be thrown out and could not be used in future examinations. The score reports that are received at the end of the exam, however, are broken down by the content outline so candidates are able to see the areas that might need some brushing-up.

The new fifty-question practice examinations that are available on the web are an excellent tool for self-study because they show exactly which questions are missed in addition to providing a score report. Candidates can have each question graded as they go or have all of the questions graded at the end; it really depends on how much of a simulation of the actual exam they want to create. We have had quite a few technicians who have already passed an exam go back and take the practice exam because they are perfectionists and want to improve their craft.

ETCP Practice Examinations are available at www.esta.org/etcppracticeexams for $35. These tests include 50 questions and a score report.

What is the Modified Angoff Method?

First, let me give you a little history about how these examinations were created. AMP used job task analyses and validation surveys to define blueprints for the examinations. These validations are time consuming and expensive, and some certification programs do not use them. Considering that ETCP can affect the safety of crew members, performers, and audiences, the ETCP Council felt that it was imperative that these extra steps be taken.

After the information was collected, it was necessary to decide how to test, since not all testing methods have the same function nor do they produce the same results. Standardized testing with a pass mark is a requirement in most certification programs that deal with health and safety, so AMP recommended the Modified Angoff Method.

Here is how the Modified Angoff Method works: A committee of subject matter experts defines a level of competence that a practitioner must have in order to earn the credential that is being offered. Keeping this definition in mind, the subject matter experts review the entire test and rate the expected difficulty of each item for the minimally competent practitioner at the level being

certified. The ratings that they provide take the form of the expected percentage of minimally competent practitioners who would get that item correct. A rating of 25 for an item, for example, indicates it is very difficult. This is because the rater expects that only 25% of practitioners who operate at the level of minimal competence would get that item correct. A rating of 90 for an item indicates that the rater judges it to be very easy, because this rating indicates that the rater expects 90% of minimally competent practitioners to get the item correct. The average across all raters and all items gives us the expected passing point for the exam.

The Angoff procedure is used to set the passing point on the exam, but it does not affect how much individual items are worth. Every item on the exam is worth one point. No items are worth more or less than any others. A test-taker's final score is simply the sum of the number of [scored] items he/she got correct.

A quick example may help illustrate the use of the Angoff procedure. Let's say we have a very short, 10-item test, and only one rater. While considering some level of minimal competence, the rater provides the following ratings:

1	80
2	75
3	80
4	85
5	80
6	75
7	90
8	70
9	65
10	80

Figure 1
Sample Angoff Rating

The average Angoff rating = 78, so based on the difficulty of these 10 items, this rater feels that the minimally competent practitioner should be able to get 78% of the 10 items correct.

If we take 78% of a 10-item test, we get a raw passing point of 7.8, which rounds to the nearest whole number of 8. This means that in order to pass this particular 10-item test, a person must get eight items correct. This cut score is desirable for two reasons: 1) it is based on a criterion (a level of minimal competence), and 2) it is directly influenced by the difficulty of the test itself.

Of course, in the real world, we deal with tests that are much longer than 10 items, and we collect Angoff ratings from more than one judge, but this example illustrates the basic mechanics of an Angoff study.

Why isn't this test graded like other exams I have taken?

An arbitrary standard (i.e., simply choosing a passing point such as 70%) for a credentialing exam, is problematic on a number of levels. Choosing an arbitrary standard would make the credential awarded for passing the exam virtually meaningless. Yes, you can divide test-takers into those who pass and those who fail based on an arbitrary passing point, but what meaning comes from that decision? Why not a passing point of 60? Why not 80? If you arbitrarily choose a

passing point, you have nothing to back up the validity of your pass/fail decision. Criterion-referenced cuts derived from the Angoff method set standards that are directly related to a specific level of competence.

Think about it this way, if the tests used the "academic-style" of grading, which is the one you are I are most familiar with, and a technician answered all of the questions on overhead rigging or power distribution wrong, but answered enough questions right to obtain a passing score, would you want that person calculating loads for you?

Is there more than one version of the test?

When testing large numbers of candidates, you must have different versions (test forms). Should a candidate not pass on the first try, they will not have the same version of the test on the next try. That being said, it is crucial that each test form is weighted in exactly the same manner and are equally difficult; the Modified Angoff Method helps us do that fairly.

Here is how the system works for ETCP: Each version of an exam that is given, (whether it be computer based or paper and pencil) pulls questions from the test item bank. A different mix of questions is used in each test to achieve an overall difficulty level for the exam. If test forms vary slightly in difficulty—which can happen from time to time—it is appropriate and necessary to adjust "the bar" accordingly. AMP makes sure that the varying difficulty level is reflected in the pass point; that is why the pass point is different for each test form.

This method protects both the test-takers and the credentialing organization. The test takers can have peace of mind knowing that whether they take form one or form two for example, they have to possess the same amount of knowledge to pass either form. The credentialing organization (and the public) can rest assured that people who pass form two are just as knowledgeable as people who pass form one.

I hope this sheds a little more light on the ETCP examination process and how the system works. If you have any further questions, please contact me at certification@esta.org. ■