



701 Stafford Drive Princeton, WV 24740

POLICY: Summative Examination Validity & Reliability

Effective Date: April 19, 2023 

TITLE: Exam Item Validity & Reliability—EMT & CCT

RATIONALE: To ensure that cognitive examination items are analyzed at regular intervals for validity and reliability.

POLICY:

The analysis of test items should be examined in three phases.

First, the Medical Director and Education Director will approve the exam based on medical content and accuracy. Signatures verifying analysis will be kept on file (this may be either in digital format or on paper).

Second, the instructor is responsible for completing an item analysis after a cohort has completed a low stakes evaluation tool. The determination to remove items from the tool should be based on solid research from the textbook that indicates that the question is misleading or misrepresenting the information. It is important to provide a written justification on each excluded item. It is necessary to deliver feedback to the students in order to assist in test taking skills and the development of critical thinking skills. This can be accomplished in many fashions: including group reviews of the items within the tool or written feedback by physical or digital means. High stakes exams, such as summative course exams and final cumulative course exams should NOT be reviewed with the students directly to protect the test integrity; however, the students should receive a list of objectives that reflect the questions missed on the exam to improve future test taking opportunities.

The third phase will involve the evaluation of major examinations (e.g. summative and final cumulative exams) by the examination committee. The committee will consist of a committee chair, at least one member of the instructional faculty, and at least one field preceptors to review the items used within a given tool. Field preceptors should only be assigned to analyze evaluation tools at his/her current level of training. The item analysis of major high stakes examinations will include difficulty index and discrimination index.

- Item Difficulty Level: Between 0.3-0.7. Any item falling outside this range should be used sparingly
- Discrimination index: Items should exhibit a range of 0.1 to 1.0. Any item that exhibits a "-" (e.g: -0.50) should be carefully analyzed.

The Exam Committee should review items that fall outside of the levels identified above. A decision on the exam item must be rendered and documentation to justify this decision must be provided. The committee can choose any of the 3 following options:

1. The item is deemed "poor" and is stricken from the exam. In the event this is considered, the committee should attempt to identify a replacement item for future examinations.
2. The Item is an accurate representation of entry level competence, has been identified within the textbook, BUT displays a high number of students getting the question wrong. The Committee will request the instructor to review his/her lesson plans to verify that future classes will include the specified content in the curriculum. Current students should receive a review on the objectives that reflect the item.
3. The team feels that the item is an accurate representation of entry level competence and should remain an active test item for the exam.

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PRINCETON RESCUE SQUAD EDUCATION DEPARTMENT



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Examination tools will be revised when any one of the three following conditions exist:

1. Changes in medical science dictate that an exam item is no longer an accurate representations of the expected standard(s) for patient care.
2. A textbook revision no longer validates an exam item as a reliable indicator of student competency.
3. The state or national certifying agencies adopt changes in medical practice that impact the validity of an exam item.

RESPONSIBLE PERSONNEL:

Instructional Faculty, Medical Director, Education Director, Exam Committee