Policy Area: Assessment	Subject: Exam Question Item Analysis
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1. **Rationale or background to policy:**
To establish a consistent method for evaluating exam item statistics and addressing under-performing items.

2. **Policy Statement**:
A course coordinator will send the item analysis report to exam authors after all exams. Faculty will evaluate every exam's item analysis report and address items that do not perform well using the guidelines below.

3. Procedures:
The **p-value** is a measure of item difficulty, and ranges from 0 to +1.0. There should be a range of difficulty levels on any exam.

The **point bi-serial (rpb)** correlates student scores on one question with their scores on the test overall. The rpb can range from -1.0 to +1.0. Point bi-serial values closer to +1.0 are indicative of more reliable questions because they discriminate well among students who mastered the material and those that did not. While +0.3 is preferred, a value of at least 0.15 is desirable.

While item statistics may identify poorly performing question items, peer review/discussion and/or instructor review are the factors that ultimately determine the final outcome of a question. Here are some general guidelines:

1) p value <=30%: eliminate the question unless the associated rpb is >0.3, in which case the question would qualify to be used for extra credit.
2) p value 30.1% - 50%: for rpb >=0.15, closely review the question wording and type, eliminate (reduce total number of points possible) if necessary; for rpb <0.15, eliminate the question.
3) p value 50.1% - 80%: rpb > 0.15 = OK; rpb = 0 - 0.149, review the question; rbp <0, eliminate
4) p value >80%: rpb >0 = OK; rpb < 0 = do not use again.

If the author of an under-performing exam item does not wish to adhere to the recommendations above, all instructors in the course should discuss and vote upon an appropriate course of action for the item in question. The course coordinator serves as the tie-breaker if needed. In the event of two course coordinators, one shall serve as the tie breaker and that designation will be determined per course. If this decision cannot be made between coordinators, administrative input will be provided.

The accomplishment of the courses' item analysis evaluations should be recorded in the annual CQI, and a summary of decisions made on underperforming exam items must be documented.