BURRELL COLLEGE OF OSTEOPATHIC MEDICINE
STANDARD OPERATING PROCEDURES

Post Examination Review		SOP #: AA.025.00
Effective Date	1/7/2019	
Last Revision/Review	8/25/2022	

1. Purpose

This SOP describes the procedure for analysis of a written exam's statistical data (measures of central tendency, reliability coefficient, and individual item performance) after delivery of a written examination. This procedure is in place to assure a valid, reliable, and fair assessment process across all first and second year science courses.

2. Related Policy/Authority

3. Faculty/Staff Responsibilities

Department of Evaluation & Assessment/Course Directors/Faculty/

— Analyze exam statistics to identify low performing questions according to these procedures.
— Communicate with the Testing Center on any changes necessary to the exam's scoring.

Testing Center personnel will

— Deliver a list of low performing questions (defined below) to faculty and course directors.
— Make modifications to exam scoring based on faculty feedback and the exam analysis process.

4. Definitions/Abbreviations

Examination Item - a question prepared and submitted for use as part of a graded assessment tool (examination, test, quiz, or other).

Flawed Item - a question deemed to have multiple correct answers; no correct answer; insufficient information provided to determine a correct answer, or other errors that prevent the item from effectively assessing student knowledge of associated objectives.

Low Performing Question (LPQ): any item for which mean student performance falls below 0.5 (50%).

Point BiSerial (PBS) – discrimination correlation statistic indicating question difficulty.

5. Procedural Steps

1. After students have completed an assessment and the submitted assessment has been scored by ExamSoft, the Testing Center personnel creates Low Performing Question (LPQ) reports for each question creator, as applicable. Appropriate faculty/administration will receive an email, with an attachment identifying their LPQ(s) along with performance data pertaining to the item(s), and a date as to when responses are due. The question creator must respond within the indicated time frame with a recommendation to remove or retain the question in the exam, along with a specific justification of their recommendation.

2. Any item deemed to be unanswerable, for any reason, including, but not limited to, absence of correct answer choices; multiple correct answers; major typographical mistakes in the item; insufficient

information provided in the item stem; omission of an image, data table, or other addendum that provided necessary information in the published exam; etc., will be <u>removed from the exam</u> thus decreasing the point value of the assessment by one point for each deleted item.

3. The following guidelines are recommended to faculty when considering how to manage a LPQ.

Performance		PBS	Recommendation
Between 0.40 and 0.50	**AND**	Negative	Remove from exam
Between 0.30 and 0.40	**AND**	Less than 0.05	Remove from exam
Between 0.20 and 0.30	**AND**	Less than 0.1	Remove from exam
Less than 0.20	**AND**	Less than 0.15	Remove from exam

4. Upon receiving responses from the question creator, LPQ recommendations will be reviewed by both the Course Director and Department Head of Student Assessment. The Course Director(s), in collaboration with the Office of Academic Affairs, will make the final determination of the status of any LPQ item(s).

5. As a result of this review, any item deemed to be flawed will be dealt with in the following manner:
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    - Question mis-key: When an incorrect answer is keyed as correct
        o Action: Correct the mis-key item and rescore the exam. After fixing the key, students who got the question right will get the point and those who got it wrong will not, even if the change results in a failing score.
    - Multiple Correct Answers: In the case of multiple correct answers
        o Action: Accept any correct answer and rescore, unless stated that all correct answers must be selected.
    - When there is no correct answer among the choices
        o Action: Students will not receive credit for the question but will get one credit point for time spent on the item. The total number of items scored will remain the same.
    - A poorly performing question with only one correct answer
        o Action: Bonus within ExamSoft (students who got the right answer get the point and students who did not, get the benefit of lowering the denominator by one). This may lead to max score >100%.

6. Reports/Charts/Forms/Attachments/Cross References

7. Maintenance
The policy will be maintained by the Department of Evaluation & Assessment and reviewed by Curriculum Committee as needed.

8. Signature

Approved by	8/25/2022
Department Chair of Evaluation & Assessment	Date

9. Distribution List
Internal

10. Revision History

Revision Date	Subsection	Summary of Changes	New/Cancellation/Replacement of Procedure? (If applicable	Approval Date
7/23/19	All	Update to change from Academic Affairs to Pre-Clinical Education; includes change in numbering (from AA to PCE)		7/23/19
6/29/21		Change Title		7/1/21
6/29/21	1	Removed "clinical"		7/1/21
6/29/21	3,7,8	Updated Department title		7/1/21
6/29/21	3,5	Added "personnel" to Testing Center		7/1/21
8/24/22	5	Added additional verbiage – 5.5		8/25/2022