

**LOS ANGELES COUNTY COLLEGE OF NURSING AND ALLIED HEALTH  
SCHOOL OF NURSING  
POLICY & PROCEDURE MANUAL**

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Subject: <b>TEST ITEM ANALYSIS</b>		Original Issue Date: 1996	Policy #: <b>321</b>
		Supersedes: November 26, 2012	Effective Date: June 9, 2016
Individuals / Committees Consulted: Curriculum	Reviewed & Approved by: Semester Coordinators Faculty Organization Administrative Committee College Planning	Approved by:  Dean, School of Nursing (signature on file) <hr/> Provost, College of Nursing & Allied Health (Signature on file)	

**PURPOSE:**

To establish the process for evaluating multiple choice test items

**Definitions:**

**Reliability Coefficient:** Refers to the accuracy of the test in measuring what it is intended to measure. Reliability increases with the number of questions on the test.

The range is from 0.0 to 1.0.

- 0.7-1.0 high degree of reliability
- 0.5 – 0.69 suggests need for revision
- 0.0 – 0.49 needs revision.

**Test Item Difficulty:** The percentage of students who answered the item correctly. The larger the percentage getting the item right, the easier the item.

- Difficulty level of 50-70% is preferred
- <50% may be too difficult
- >70% may be too easy.

**Discrimination Index (Point Biserial):** A good test item discriminates between students who do well on the test and those who do poorly. If the item discriminates perfectly, the index would be +1.0. An item discriminates negatively if more students in the lower group respond correctly than in the upper.

**Point biserial of:**

- 0.3-0.7 is desirable
- 0.2 or greater is considered acceptable
- Below 0.2 indicates that test takers probably answered the item correctly by chance or the item encouraged guessing. The item may require revision.
- Below 0.15 is considered a poor item and may need revision/re-evaluation
- Negative values need revision/re-evaluation.

**POLICY:**

Multiple choice questions use the 4 selection format.

Test items are evaluated and approved by the semester committee prior to entering them in the test database.

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## **TEST ITEM ANALYSIS**

Test item analysis is conducted by the semester committee to identify items that do not meet specified criteria after each test is administered.

Test items that fall outside the guidelines are reviewed.

Guidelines:

- Difficulty level:  $< 50\%$  or  $> 70\%$
- Point biserial:  $< 0.2$

Items with a difficulty level of  $\leq 10\%$  are discarded and reviewed/revised (credit is given to all students as per grading policy).

The semester committee has the authority to take action on test items that fall below guidelines.

The Dean has final authority in case of dispute.

### **PROCEDURE:**

Semester Committee:

- Reviews test items two weeks prior to test administration for test construction components such as:
  - Item is based on objectives
  - Stem is clear, concise, and without extraneous information
  - Distractors are plausible but inarguable
- Prints out final version of the test one week prior to test administration
- Reviews test items that fall outside the guidelines for factors that may impact test item reliability/validity such as item construction, item performance over time, and content emphasis in lecture/textbook
- Discards items with difficulty level  $\leq 10\%$
- Accepts more than one answer, if correct
- Discards item if unclear
- Makes applicable corrections to scores prior to student grade distribution
- Revises test items as indicated
- Tracks item performance over time.

Dean/designee:

- Addresses and resolves disputes regarding test items
- Consults with content/test experts as applicable

### **PROCEDURE DOCUMENTATION:**

PAR Score Item Analysis Report

PAR Test Database

### **REFERENCES:**

Par Score: Understanding Statistical Information on Item Analysis Reports. Par Score PowerPoint online.

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**TEST ITEM ANALYSIS**

Writing Test Items to Evaluate Higher Order Thinking. Haladyna, T., 1997

**REVISION DATES:**

August 8, 2003

December 16, 2006

February 28, 2011

November 26, 2012

June 9, 2016