Teaching Students Effective Test-Taking Strategies

- Focus on helping to reduce student’s cognitive test-taking anxiety (CTA).
- Anxiety reduction: Environmental adjustments and student behavior modification (Quinn & Peters, 2017).

Teaching Students Effective Test-Taking Strategies

- Practice, practice, practice in classroom or online; practice on own (3000-5000 items) (e.g., Silvestri products, NCSBN questions*).
- Take a quality NCLEX Review Course.
Teaching Students Effective Test-Taking Strategies

• Consider a Nursing Student Success Boot Camp after program admission to learn test taking strategies and critical thinking/clinical reasoning to promote SAFETY, if available (Walker, 2016).

Teaching Students Effective Test-Taking Strategies

• Need to address special needs of first-generation and minority student issues to create a sense of community, decrease anxiety, and promote success (Latham, et al., 2016).

Teaching Students Effective Test-Taking Strategies

• If available, take advantage of student success coach. (Note for faculty: Write grant for student success course.)
Teaching Students Effective Test-Taking Strategies

• Take the exam within the first 4-6 weeks after graduation.
  • Note for faculty: if needed, consider incentives to take licensure exam sooner than later.
  • Examples include drawings for prize, individual gift cards, cash.

Teaching Students Effective Test-Taking Strategies

• Note critical words, like most, priority, best, first; note specific information about patient to direct answer.
• For assignment and delegation items, think broadly, not by state or province scope of practice (see handout).

Teaching Students Effective Test-Taking Strategies

• Use collaborative testing:
  • Administer unit exam as usual.
  • Re-administer same exam to groups of 4 selected by instructor; requires less time than individual testing.
  • If group gets an A, 2 points added to each group member’s test grade; B = 1 point.
Teaching Students Effective Test-Taking Strategies

• Participate in test review for ALL tests.
• Use test analysis worksheet to determine test taking patterns and errors. (Also see Wiles article.)

Teaching Students Effective Test-Taking Strategies

• Encourage peer study and tutor groups.
• Encourage groups that are diverse in ability, language, etc. to assist with learning how to study and think like a nurse! (McLain, et al., 2017)

What about commercial standardized testing? Is it helpful to help students learn how to take NCLEX®-style tests? (Sosa & Sethares, 2015)
Best practices/national trends for using standardized testing

• Do not use these tests for high stakes testing!
• Be selective in how and when tests are used.

Best practices/national trends for using standardized testing

• Collect and analyze data from tests to help make program/curriculum changes.
• Select the products that best meet your program's needs and curriculum.

ANALYZING TEST RESULTS

Need these statistics (see handout):
* Reliability coefficient (KR-20)
* Measures of central tendency
* Difficulty level and item analysis
* IDR and/or PBS
ANALYZING TEST RESULTS (cont’d)

Need test analysis software; e.g.:
• ParScore
• Spectrum
• EAC (BB)

www.edassess.net

TEST RELIABILITY

• Measures consistency of test scores
• Use KR-20 or Cronbach’s alpha to measure internal consistency
• Ideal KR-20 is 0.80 or greater, but can be difficult to achieve

TEST ANALYSIS AND ITEM DECISIONS

1. Compute mean, mode, median
2. Review item difficulty
   (The p values of each item) = what percent of the group got the item correct;
   - less than 50%, the item could be too difficult
   - 90% or higher got it correct, it may be too easy or …?
3. Review the discrimination data, or item discrimination ratio (IDR) of difficult items:
   - The percent of upper 27% of class who answered correctly minus the percent of the lower 27% who answered correctly

Acceptable IDR = 25% (.25) or higher; if negative or very low, 3 choices:
1. Nullify item.
2. Throw item out (least desired).

Point Biserial Discrimination (PBS or BS) = more useful to measure discrimination because it shows a test item's ability to discriminate based on test as a whole
TEST ANALYSIS AND REVISION (cont’d)

Interpretation of PBS:

• 0.30 and > … Very Good Item
• 0.20 – 0.29 … Reasonably Good Item
• 0.09 – 0.19 … Marginally Acceptable Item
• Below 0.09 … Poor Item (should be carefully reviewed and possibly nullified)

TEST ANALYSIS AND REVISION (cont’d)

Consider these statistics for a MC item:

<table>
<thead>
<tr>
<th>p value</th>
<th>PBS value</th>
<th>Status</th>
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<tr>
<td>A = 0.75</td>
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<td>B = 0.15</td>
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<td>C = 0.06</td>
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<td>D = 0.14</td>
<td>0.05</td>
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TEST ANALYSIS AND REVISION (cont’d)

Consider these statistics for a MC item:

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<td>A = 0.42</td>
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<td>CORRECT</td>
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<tr>
<td>B = 0.28</td>
<td>-0.02</td>
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<tr>
<td>C = 0.16</td>
<td>0.19</td>
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<tr>
<td>D = 0.14</td>
<td>0.05</td>
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</table>
1. What questions do you have?
2. What 2-3 ideas will you take away and implement in your program?

Form a group (2-4) and develop two application or analysis test items using what you have learned in this NCLEX Camp.

Small Group Activity
1. Write three SLOs for which you want to write test items.
2. Be sure that the SLOs are at applying or higher.
3. Write three test items that align with the SLOs.
4. Identify the Integrated Process and Client Needs Category for each item.
Key References


Key References


Key References

Key References


Example of Testing Statistics

Nursing 240
Unit 4 Exam

<table>
<thead>
<tr>
<th>No. of students</th>
<th>62</th>
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<tr>
<td>No. of items</td>
<td>50</td>
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<tr>
<td>Range of scores:</td>
<td>High 48 Low 27</td>
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KR 20 .68

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<th>Item #</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>Diff. Level</th>
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<td>57*</td>
<td>92%</td>
<td>88%</td>
<td>90%</td>
<td>.08</td>
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<td>3</td>
<td>15*</td>
<td>18</td>
<td>25</td>
<td>4</td>
<td>???</td>
<td>43%</td>
<td>77%</td>
<td>.02</td>
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</table>

1. What is the significance of the KR20?

2. In item #1, might you use this item again? Why or why not? Is there anything you might change for the next time if you decided to use it?

3. Is item #2 a good item? Why or why not?

4. What would you do with item #3? Would you use it next time? Why or why not?
Assignment examples:

1. A licensed practical nurse (LPN) is scheduled to work on the inpatient medical-surgical unit where you are a team leader. Which of these clients would be best to assign to the LPN?

   1. A 43-year old who has a history of substance abuse and uncontrollable pain caused by sickle cell crisis
   2. A 55-year old who had an abdominal hysterectomy and bilateral oophorectomy today and is receiving PCA morphine and blood transfusions for anemia
   3. A 62-year old with controlled Type II diabetes mellitus and cellulitis of her right foot who is receiving intravenous antibiotic therapy
   4. A 75-year old who had an open colon resection and colostomy today for Stage III cancer

ANS: 3 (because the other clients require either frequent and ongoing comprehensive assessments and planning with the interdisciplinary team or health/discharge teaching that are within the role of the RN)

2. A registered nurse (RN) from the pediatric unit floats to your orthopedic inpatient unit where you are the charge nurse. Which of these clients would be best to assign to the float nurse?

   1. A 24-year old who had a craniotomy yesterday and remains on frequent “neuro checks”
   2. A 34-year old who had an open reduction and external fixation for his right distal fibula and tibia two days ago
   3. A 55-year old who had a cervical laminectomy and fusion this morning and is on PCA morphine
   4. An 81-year old who had a total joint replacement yesterday and is experiencing delirium

ANS: 2 (because the other clients have procedures or problems that the RN may not be prepared to care for, such as craniotomy or cervical fusion; pediatrics nurses usually have experience with fractures in children and would know about neurovascular assessments)
Delegation and Supervision Example:

3. You are the charge nurse in a skilled unit of a nursing home. Which of these nursing tasks would be best to delegate to a nursing assistant?

   1. Gastrostomy feeding for a client with advanced stage Alzheimer’s disease
   2. Urinary catheterization for a man with prostatic hypertrophy
   3. Discharge teaching for a client who has received rehabilitative therapies for a stroke
   4. Skin care for a client with Stage I sacral and heel pressure ulcers

ANS: 4 (because the tasks for the first three clients are complex, require comprehensive nursing assessment, or require client education, primary roles of licensed staff)

Prioritization/Decision-making

4. Following shift report in a transitional care unit, which of these clients would you assess first?

   1. An older adult with chronic obstructive pulmonary disease (COPD) who continues to have bilateral crackles in both lung bases
   2. An older adult with a history of congestive heart failure (CHF) who has gained 5 pounds since yesterday morning.
   3. A middle-aged adult with multiple sclerosis who needs health teaching prior to transfer to a nursing home today
   4. A middle-aged adult with alcoholic cirrhosis who sustained a fall without injury yesterday

ANS: 2 (because the weight gain is a significant change indicating possible acute CHF; the nurse needs to do further assessment.)
# Questions Missed

<table>
<thead>
<tr>
<th># Q</th>
<th>Subject</th>
<th>Misread Question</th>
<th>Misunderstood Question</th>
<th>Read into Question</th>
<th>Missed Important Keyword in Question</th>
<th>Did not Remember/recognize subject matter</th>
<th>Did not Understand subject material</th>
<th>Did not recognize rationale for correct answer</th>
<th>Guessed wrong</th>
<th>Changed answer</th>
<th>Marked Scantron Incorrectly</th>
<th>Did not Read all Responses carefully</th>
<th>Used incorrect Rationale for Selecting response</th>
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**Summary.....**