Responding to Your Questions about Examinations: Ask the Experts

Panelists

- **Heidi Lincer-Hill**
  Chair, National Association of State Contractors Licensing Agencies (NASCLA) Accredited Examination Committee

- **Steven S. Nettles**
  Program Director, Applied Measurement Professionals, Inc. (AMP)

- **Ada Woo**
  Associate Director of Measurement and Testing, National Council of State Boards of Nursing (NCSBN)

- **Chuck Friedman**, Session Coordinator
  Program Director, ProExam

Additional Presenters

- YOU.........................conference participants
How?

- June: panelists identified hot topics
- July: survey ratings, write in questions
- August: panelists selected topics for discussion based on ratings and write-in questions
- Today
  - Panelist provides response to question
  - Interactive i-clicker
  - Comments from other panelists
  - Audience comments

Session Game Plan: Top Survey Topics

1. Reporting test scores to candidates
2. Number of times candidates can repeat
3. “Recall” questions on exam
4. Exam Security
5. Translating exams, ESL
6. Missed passing by one question

Session Game Plan-2

7. Selecting SMEs for committees
8. Candidate challenge changes correct response
9. New blueprint: pass rate decline
10. Remotely proctored tests
11. Exam as primary screen
12. The future brings
13. More questions from the audience
Which of the following best describes the size of your testing program?

A. Less than 200 candidates/year
B. Less than 500 candidates/year
C. 500-5,000 candidates/year
D. 5,000-10,000 candidates/year
E. More than 10,000 candidates/year

Which of the following best characterizes the organization with which you work?

A. Independent state licensing Board
B. Umbrella agency of state licensing Boards
C. Professional association
D. National certifying organization
E. Vendor or corporation

Which of the following best describes the delivery method for your testing program?

A. Paper-and-pencil administration
B. Computer-based testing in a proctored site
C. Online testing at home
D. In person (practical exam, OSCE, oral exam, standardized patients)
E. Other or multiple delivery methods
Does your jurisdiction provide actual scores to candidates who pass (as opposed to just “you passed”)?

A. Pass/fail only
B. Pass/fail with actual scores
C. Pass/fail with actual scores and diagnostics
D. Pass without scores-fail with diagnostic scores

What information/feedback should our jurisdiction provide to candidates?

Passing candidates:
• “Congratulations you passed” - no score
• Criterion referenced examination not designed to rank candidates
• Score should not be used for other purposes

Failing candidates:
• Overall score and the required passing score
• Results breakdown by content area or by sub-scores
• Number of pretest questions
What information/feedback should our jurisdiction provide to candidates?

Examination Result: Fail
Your overall score is 55%, and you needed 65% to pass.

<table>
<thead>
<tr>
<th>Sections of the Examination</th>
<th># of Questions in the Exam</th>
<th># of Questions Failed</th>
<th>Fail Examinee Failure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Examinations and Presentation</td>
<td>15</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>Clinical Evaluation</td>
<td>11</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Physical Therapy, and Public Health Practices</td>
<td>6</td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td>Community Planning and Development</td>
<td>8</td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td>Joint Committee</td>
<td>14</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Job Site Safety</td>
<td>14</td>
<td>4</td>
<td>15</td>
</tr>
</tbody>
</table>

NOTE: Your examination had 100 scored questions.

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wesatlaure.org

What information/feedback should our jurisdiction provide to candidates?

- Examination study guide
- Instructions for rescheduling
- Appeal procedures

Should our Board place restrictions on the number of times a candidate can take a licensing exam?

A. Yup, three strikes and you're out!
B. Nope, placing limit on number of attempts isn't defensible.
C. Maybe, it depends...

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Unlimited number of attempts - Data to Consider...

- Size of operational item bank
- Operational item pools/test forms rotation frequency
- New item production speed
- Time lapse between exam attempts

Data to Consider... (cont.)

- Historical pass rate data
- Test administration methodology
- Item blocking features
- Threats to test security
- Policy decisions

Example: NCLEX Pass Rate Data

<table>
<thead>
<tr>
<th>NCLEX-PN Pass Rates:</th>
<th>2017</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Pass</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>40,105</td>
<td>37,814</td>
</tr>
<tr>
<td>First time</td>
<td>24,867</td>
<td>24,467</td>
</tr>
<tr>
<td>Repeater</td>
<td>15,238</td>
<td>13,347</td>
</tr>
<tr>
<td>Reference Group</td>
<td>40,105</td>
<td>37,814</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>NCLEX-RN Pass Rates:</th>
<th>2017</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% Pass</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall</td>
<td>135,065</td>
<td>125,694</td>
<td>128,024</td>
</tr>
<tr>
<td>First time</td>
<td>88,799</td>
<td>84,5</td>
<td>96,799</td>
</tr>
<tr>
<td>Repeater</td>
<td>46,266</td>
<td>41,089</td>
<td>41,225</td>
</tr>
<tr>
<td>Reference Group</td>
<td>135,065</td>
<td>125,694</td>
<td>128,024</td>
</tr>
</tbody>
</table>
Do you use recall items on your licensing examinations?

- A. Yes
- B. No
- C. What are recall items?

Should recall items be used on licensing exams?

- Example - memorization of medical terms, at times in a foreign language, regarding body parts.
  - What evidence exists that such questions are an effective means of screening for incompetence or fraud in the workplace?
  - Do such questions present unreasonable barriers for candidates who do not speak English as a first language or have other irrelevant disabilities?

Are recall items effective screens for competence or fraud detection?

Establish validity evidence
1. Job/Practice Analysis
   - Identify Tasks or activities/KSAs
   - Determine cognitive demands of the job
2. Write items at the cognitive level identified in JA, e.g., recall, application, analysis
3. Review items for JA linking
4. Select items for use on exam
   ➢ Thus answer is Yes - if identified by JA
Are recall items fair for ESL or disabled candidates?

Exam committee should evaluate all items for:

1. **Content**: Is the content appropriate for the examination?
2. **Specifications**: Is the task/KSA linking and cognitive level correct?
3. **Stem**: Is the stem clearly worded and at target reading level?
4. **Key**: Is the key the best alternative among the options provided?
5. **Bias**: Does the item avoid potentially offensive language?
6. **Calculations**: Do the calculations reflect job demands?
7. **Reference**: Can the accuracy of the item be supported by current literature?
8. **Other**: Are figures, pictures, terms, or symbols clear and appropriate?

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How concerned are you about exam security?

A. Not concerned
B. Concerned
C. Somewhat concerned
D. Very concerned
E. Extremely concerned
Has your exam program experienced any type of security breach within the last five years?

A. Yes
B. No

What are the biggest threats to exam security today? Best ways to keep program secure?

Threats to Exam Security
Threats to Exam Security

- When: Before, During, After test administration
- Security Threats: Cheating and Pirating
  - Using pre-knowledge of test content
  - Colluding with others
  - Cheating or crib notes
  - Proxy test takers
  - Copying from others
  - Hacking into computers
  - Capturing content with spy devices
  - Memorizing and sharing content
  - Program Insider SMEs

Biggest Threat?

- Program Complacency
  - “It can’t happen to our program.”
- Society cultural norms

Best Way to Keep Program Secure?

- Program Planning
  - Messaging, Deterrence, Prevention

“Anyone who believes that his or her program doesn’t have a serious cheating problem has simply not investigated the concern deeply enough.”

Greg Cizek
Professor Educational Measurement and Evaluation,
University of North Carolina at Chapel Hill
Former President, NCME
CLEAR Annual Educational Conference
Responding to Your Questions about Examinations: Ask the Experts

St. Louis
October 3-5, 2013

- Security vulnerabilities
- Practical cheating prevention/detection strategies
- Lessons learned-actual violations and initiatives
- www.routledge.com

Cheating: For Your Entertainment
- Testing in the Movies and Television
  - Documentary, 40 years of cultural history
- Premiered at National Council on Measurement in Education (NCME)
  - April 28, 2013
- Most commonly identified theme: Cheating
- Available on YouTube http://goo.gl/e5Qqr

How do you handle ESL candidates?
A. Translate/adapt examination in one or more languages
B. Use/allow interpreters
C. Examination given in English only
D. Other

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www.clearhq.org
What options are available for testing ESL candidates?

Translating examinations
• Converting examination from one language to another
• Technical terms do not translate well
• A well-translated examination does not guarantee the validity of candidates’ scores on the examination in the second language (Hambleton & Patsula, 1999)

Adapting examinations
• Linguistic and cultural differences
• Linguistic, psychological, and statistical evidence of equivalence
• Statistical equivalence
• Evaluation of validity

What options are available for testing ESL candidates?

• Interpreters
• Nonverbal/performance-based items
• Establish that examination must be given only in English
I Failed the Exam, But I Am a Really Good Student!

- How do I respond to candidates asking questions like:
  - I missed passing by one question, why can't I pass?
  - Are there trick questions on the test?

Transparency May Help…

- If policy allows, make the following information available:
  - Job/practice analysis report
  - Test plan
  - General test development process
  - Test assembly/scoring information

To the Student who Missed by One Question…

- Check the facts
- Talk about the test plan
- Explain standard setting process
- If score report is offered, go through it with the candidate
To the Student who Suspects Trick Questions...

- Talk about the test plan
- Explain item review process
- Let them know about the pretesting process
- Go through score report

How should SMEs be selected for test-related committees?

- Making your committee(s) representative
- Select SMEs that meet your definition of
  - “Entry-level”, but can include other more experienced SMEs
  - Relevant demographics: practitioners, academicians, geographic location, type and size of practice
  - “Play well with others”

A candidate correctly identifies that there is no right answer to a question. How do you handle it?

A. Change the score for the candidate who brought it up
B. Change the score for all candidates who missed the item
C. Do not score the item for any candidates
D. Change the item in the exam/item bank, but leave candidate scores as they were
If the correct response to a question changes due to a candidate appeal, should all candidates receive credit?

- Squeaky wheel theory
- Examination items are pretested
  - Therefore they are as good as they can be
- Ethical issues
- Legal issues
- Practical issues

New Test Plan = Drop in Pass Rate!

We have a new test blueprint and our pass rates have declined by 5%. Are we denying qualified candidates from entering the profession and guilty of restriction of trade?

A. Yes (we can’t help that)
B. No (that’s not the job of test developers)

New Test Plan = Drop in Pass Rate!

Document the Process

- Job/Practice analysis
  - SME involvement
  - Study methodology
  - Survey sample
- Standard setting
  - SME involvement
  - Standard setting methods
  - Policy decision
New Test Plan = Drop in Pass Rate!
Inform Your Constituents

- Make new test plan available prior to implementation
- Garner support from your policy body
- Provide historical pass rates data
- Predict changes in pass rates

Example: NCLEX-RN Pass Rates

Should our Board consider using less costly procedures such as “remotely proctored” on-line testing?

Remote Online Proctoring

- Proctor over the internet
- Monitor individual test administration
- Replaces bricks/mortar “eyes in the room” proctoring
- Set-Up:
  - Webcam, microphones, continuous internet
  - Offsite proctors
  - Encrypted test, lock down computer
Should our Board consider using less costly procedures such as “remotely proctored” on-line testing?

- Cost benefit analysis
  - Appropriate to purpose and program
- Improved technology
  - Cameras, audio, facial recognition, keystroke
- Social and cultural changes and acceptance
- Licensure: not now, if or when??

Should I use a licensing exam as the “primary” screen for determining eligibility for licensure?

*Exam should be part of the licensing program*

1. Determine eligibility requirements
2. Prepare/Use exam that has validity evidence
3. Administer exam under standardized conditions
4. Ensure scoring is accurate
5. Select defensible passing point
6. Prepare informative score reports
What is on the horizon in the next five years that will affect licensure and certification testing?

Near Future

- Emphasis on test security and candidate identification
- Fewer CAT programs
- LOFT and multi-stage testing
- Technology enhanced item types

Near Future (cont.)

- Paper-and-pencil tests will still be around
- Focus on cost
- Expand test-use regions
- Recertification exams
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- SNettles@goamp.com
- AWoo@ncsbn.org
- Chuck.Friedman1@gmail.com

How good is your vendor’s testing and scoring processes?

- Secure, standardized administration
- Encrypted transfer of scores
- QC procedures for scoring
  - Review data for candidate linking, scoring accuracy, application of passing score, score reporting, etc.
  - Redundancy of IT systems - disaster recovery, period of data retention

What is the role of a licensing agency to assist candidates with examination preparation?

- Public protection vs. promoting profession
- Conflict of interest to be involved in examination preparation
- Provide information on what to expect on the examination
  - content domains, sample questions