Reducing Testing Costs Using PowerPoint

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The Problem

• 1400 introductory psychology students
• 35,000 sheets of paper
  – 5 exams per student
  – 5 pages per test
• $1,750 a year in printing costs
• Budget
  – 50% increase in students over 20 years
  – 0% increase in department operating budget
• Storage, environmental, & security concerns
Potential Solutions

• Same exam across all sections and instructors
  – Content not the same – academic freedom concerns
  – Students write on exams
  – Concerns about cheating

• Reducing size of print to reduce number of pages
  – Many complaints
  – Test banks are not efficient users of space

• Administer tests over Internet or PC
  – Concerns about cheating
  – Not enough computer lab space for PC administration

• PowerPoint administration
Literature Search

• Nothing on PowerPoint administration
• Mead & Drasgow (1993) meta analysis
  – Paper administration of cognitive ability tests resulted in higher scores for speed tests
  – No difference for power tests
• Finger & Ones (1999)
  – No difference for MMPI scores
• Dwight & Feigelson (2000)
  – Little difference for social desirability
Questions to Answer

• How much time per question?
  – Long enough to read, think, and respond
  – Short enough not to be bored
  – Class times of 50 and 75 minutes
  – Typical test length of 50 questions

• Should we show the question more than once?
  – How much time for each viewing?
  – What if people are done after the first viewing?

• Should we keep the item stems short?

• Should we use 3 or 4 alternatives?
PowerPoint Test Administration

- 1 question per slide
- 45 second initial viewing
- 15 second additional viewing
- Initially we let students leave when done, but quickly stopped this option
15. Which of the following psychologists is most associated with operant conditioning?

a. Skinner
b. Freud
c. Rogers
d. Wundt
Implementation

• Fall, 1999
  – 90 students took alternate-form PowerPoint exam following actual exam
  – No differences in test scores

• Fall, 2000
  – Instructors asked about exam preference
    • 6 sections had PowerPoint administration
    • 6 sections had paper administration
  – Scores on second test monitored
  – Sections were compared on common 20 questions

• Fall, 2001
  – All sections use PowerPoint administration
Participants in Fall, 2001 Study

- 808 introductory psychology students
- 12 sections
  - 6 PowerPoint administration
  - 6 paper administration
- 67% were female
- Average age 18.5 (17 – 42)
## Score Equivalence

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<th>PowerPoint Administration</th>
<th>Paper Administration</th>
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<tr>
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\[ F (1, 806) = .006, \, d = .007 \]
Are fast test-takers different from slow test takers?

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<thead>
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<th>Fast</th>
<th>Average</th>
<th>Slow</th>
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</table>
Test Taking Speed and Satisfaction
Satisfaction higher for paper
No interaction

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</table>
Student Reaction
They Hate it!!!

- They feel rushed
- They want to get out early
- They want to write on the test
Our Response

- Explain our reasoning
- Show students our data
- Provide practice tests after each chapter
- Adjust test times as needed
- Allow ADA accommodations
References


Questions about this Presentation?

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