

# Enhancement in Assessment Technology: Is There Steak with the Sizzle?

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# Today's Discussion

- Evolution of web-based employment testing
  - Late 1990's/Early 2000's
  - Mid 2000's
  - Today
- Trends
  - Current usage of enhanced assessments
- Pros/Cons of enhanced assessments
- Where we're headed

# Evolution of Web-based Employment Testing: Late 1990's/Early 2000's

- Advent of web-based testing
  - Part of the e-commerce boom
- Translation of paper/pencil assessments
  - Simple text
  - Simple graphic images
  - Questions of validity (still remains this way)
  - Security issues
- Singular testing sessions
  - No step processing of assessments
- Singular testing platforms
  - Lack of integration



# Evolution of Web-based Employment Testing: Mid 2000's

- Moving beyond simple translation
  - Focus on security and unproctored testing
    - Tippens, Beatty, Drasgow, Gibson, Pearlman, Segall, & Shepard (2006)
    - Test Security
    - Examinee Identification
    - Cheating
    - Ethics
    - Subgroup and Cultural Issues
    - Standardization
- Solutions
  - Web-based computer adaptive testing
  - Item banking
    - Enhancement in security
  - Item randomization
    - Enhancement in security
  - Assessment step processing





# Evolution of Web-based Employment Testing: Today

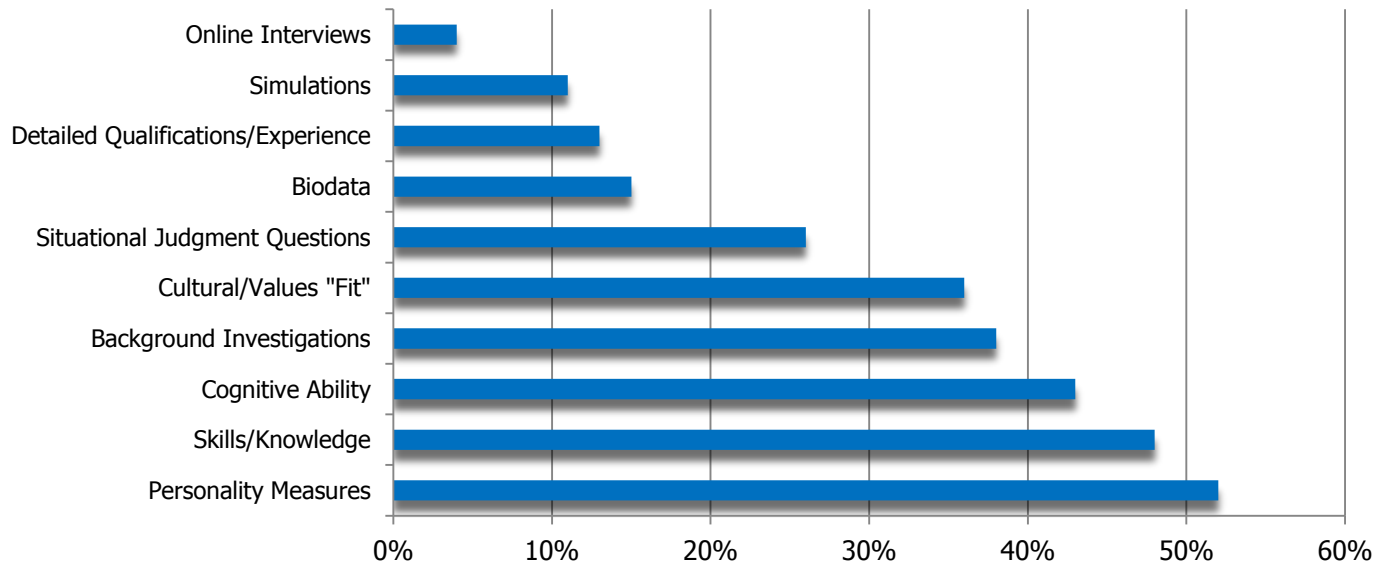
- Focus on innovation
  - Web-based simulations
    - Interactive
    - Realistic
  - Multi-media situational judgment tests
    - Video and audio based
- Focus on data integration
  - System integration
    - Assessment platform with other systems (e.g., ATS, HRIS)
  - Assessment data portability
    - Multiple uses for assessment data



# Usage Trends of Enhanced Assessments

- Use of simulations and situational judgment has grown, though not yet dominant
- Rocket-Hire 2009 Assessment Usage Survey

**Percent of Organizations Using Assessment Type**





# Users of Enhanced Assessments

- Call Centers
  - Computer ability
  - Multi-tasking
  - Accuracy
  - Customer service
- Manufacturing
  - Gauge readings
  - Logical reasoning
  - Safety scenarios
- Managerial
  - Leadership
  - Planning
  - Decision Making
- Healthcare
  - Customer service
  - Diagnostics
- Administrative
  - Interpersonal/Social skills
  - Teamwork/Collaboration
  - Time management

# Various Multi-Media Formats

## Step 1: Scenario

Your store manager has offered a monetary incentive to the employee with the highest total flower sales during the course of a week. The store has more potted roses in stock than other options, but they are also the most expensive (i.e., \$45). You notice that the man is looking at the roses and decide to approach him.



Watch the following video and choose the most and least effective course of action from the options below.

## Step 2: Choose

Try to keep him interested in buying the more expensive roses by coming up with reasons why the purple daisies are inferior, such as having a shorter life span, or being perceived as a cheaper, but less classy, alternative to nicer flowers.

Ask him who he is buying the flowers for and for what occasion, to help focus his attention on the recipient rather than price. Show him a few mid-to-higher priced options that are similar to what he is looking for.

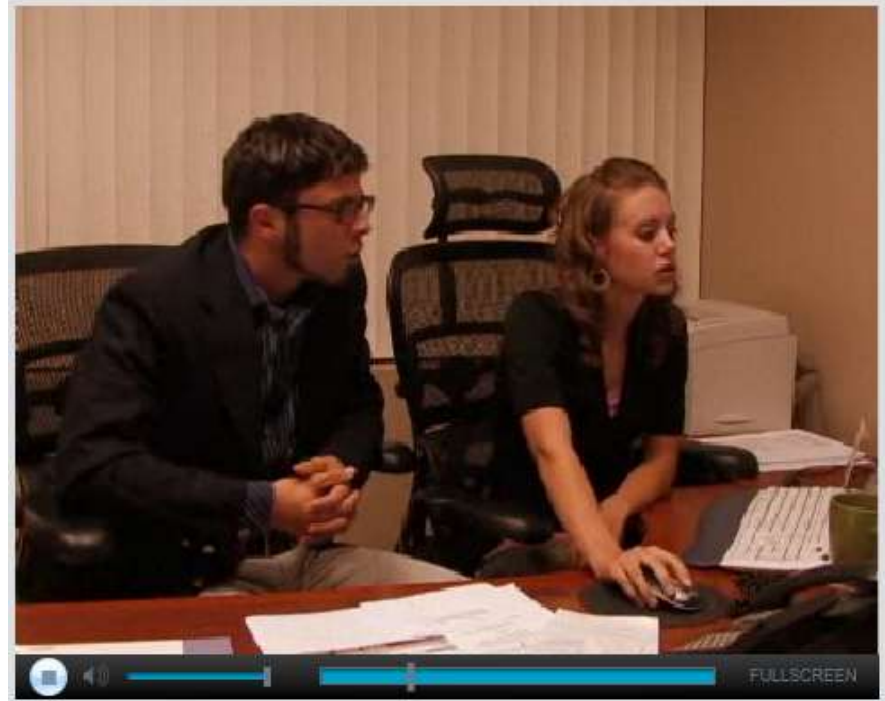
Ask him what he was planning on spending on flowers and show him some options that fit well within his price range.

Mention that the daisies are indeed popular. Describe some notable features of the roses and purple daisies to help him make an informed choice.

Most Effective      Least Effective



Next





# Are Enhanced Assessments “Better” Than Traditional Assessments?

- Issues to Consider
  - Predictive validity
  - Adverse Impact
  - Security
  - Candidate acceptance
  - Development cost
  - Delivery cost
  - Other factors





# Predictive Validity

## Traditional

- Good validity when developed and implemented properly
- Clear guidelines for developing items
- Construct relevance fairly clear

## Enhanced

- Comparable validity coefficients when developed properly
- Emerging guidelines for item development (Sinar & Teeter, 2010)
- Removal of cognitive component (Tuzinski, 2010)
- Psychometric principles must take precedence over technological effects



# Adverse Impact

## Traditional

- Depends on the type of assessment and how it is used

## Enhanced

- Tend to show less adverse impact
- Removal of the cognitive component
- Lack of evidence surrounding cultural issues



# Security

## Traditional

- Other technology changes have improved security, especially for unproctored testing
- Item integrity still an issue

## Enhanced

- Item integrity less of an issue
- Risks of cheating mitigated



# Candidate Acceptance

## Traditional

- Depends on the type of assessment
  - Some personality assessments show low candidate acceptance
- Candidates used to this type of testing... for now

## Enhanced

- High fidelity
- Candidates may enjoy the process



# Development Costs

## Traditional

- Often updating existing assessment items rather than developing brand new assessments

## Enhanced

- More time intensive
  - New item types
  - More complex construct measurement
  - Additional IT requirements



# Delivery Costs

## Traditional

- Technology
  - Browser requirements pretty standard
    - Ease of use for both proctored and unproctored testing
  - High volume testing requires increased bandwidth, but within reason
- Assessments
  - Varies

## Enhanced

- Technology
  - Requires significant bandwidth
  - Usually requires additional browser plug-ins
  - May require streaming media server
- Assessments
  - Custom implementations can be expensive
  - Off-the-shelf pricing is dropping



# Other Factors

## Traditional

- Realistic job preview
  - Often not a primary factor
- Training and Development
  - Increased usage
- IT coordination
  - Important

## Enhanced

- Realistic job preview
  - Very strong, some simulations incorporate this into experience (e.g., Shaker Virtual Job Tryout)
- Training and Development
  - Good synchronization
- IT coordination
  - Integral to further innovation





## Where We're Headed

- Increased interactivity
  - More game-like simulations
- Assessment administration portability
  - Smartphone assessment administration
- Assessment data portability
  - Utilizing assessment data for multiple purposes and organizations
- More off-the-shelf enhanced assessments
  - Tailored rather than completely customized



# Concluding Thoughts

- Enhanced assessments are the future of testing, but...
- Traditional assessments will still be critical to successful selection processes
- Technological advancements will continue to make assessments...
  - More interactive/realistic
  - Accessible
  - Portable
- Psychometric principles must not be compromised for the sake of fidelity and the “wow” factor



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