

Innovations in Assessment – Assessing the Possibilities Summary Report

Presenter: Cynthia Parshall, PhD
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Dr. Cynthia Parshall divided her talk into three main categories:

- Spectrum of Innovation
- Alternative Item Types
- Managing Ongoing Change

In the first part of her presentation, Spectrum of Innovation, Dr. Parshall discussed a range of possibilities for innovation in testing as a means of staying relevant in a rapidly changing world. Although one sometimes thinks of innovation in testing as focusing on the test itself, she noted four areas where research is ongoing and change is currently taking place. She aligned these four areas with the topics of the Day 1 breakout session as follows:

- Design and development (assessment engineering and auto item engineering)
- Items and tasks used within tests (use of Internet during secure online testing, game-based assessment, and computer-based simulations)
- Item selection during the test (adaptive testing)
- Delivery of the test (online proctoring)

Alternate Item Types

Dr. Parshall then focused on various alternative innovative item types, providing advantages and disadvantages, as well as an example, for each of them.

Item Type	Advantage/Disadvantage
Video	Advantages <ul style="list-style-type: none">• Present dynamic visual content (physical movement, communication, ethics, diagnosis, scenario reenactment)• Can expand test content into new regions
	Disadvantages <ul style="list-style-type: none">• Potential issues related to examinees with hearing or visual disabilities• Technical considerations (potentially large file sizes)

Drag-n-Drop	Advantages <ul style="list-style-type: none"> • Can be used for matching, prioritizing, or sequencing • For some content, may provide more direct measurement than multiple choice
	Disadvantages <ul style="list-style-type: none"> • Can require too much knowledge/time for a single score point • Potentially complex interface
Multiple Response	Advantages <ul style="list-style-type: none"> • Ideal for content where multiple keys are common • Can be less complex than multiple choice versions of same item
	Disadvantages <ul style="list-style-type: none"> • Can require too much knowledge/time for a single score point • Examinees may confuse multiple response with multiple choice and only provide a single key
Short Answer	Advantages <ul style="list-style-type: none"> • Efficient • Measures recall rather than recognition • Cueing and guessing are almost eliminated
	Disadvantages <ul style="list-style-type: none"> • Tends to measure knowledge level • Difficult to write stems that are clear yet avoid clueing • Difficult to ensure automatically scorable response
Audio	Advantages <ul style="list-style-type: none"> • Present audible content (e.g., heart, lungs) • Can expand test content into new regions
	Disadvantage <ul style="list-style-type: none"> • Need to provide alternatives for candidates with hearing disabilities
Hotspot	Advantages <ul style="list-style-type: none"> • Good for measuring visual content • Some images provide more, or more realistic “distractors” • Responding on image may provide better fidelity • “Non-discrete” images can support measurement that labeling would not
	Disadvantages <ul style="list-style-type: none"> • If images are poorly sized or ambiguous, examinees may be confused • Can be written to measure knowledge level • “Non-discrete” images may need additional scoring rules that are consistent and transparent

Dr. Parshall also described the Generated Auto Response Item in which an existing database of terms already exists. As the examinee begins to type an answer to a prompt, the field pre-populates (e.g., Google search functionality), and the examinee chooses the desired answer from among the list. This item type is used frequently in simulation testing to help save typing. It may also be used for actual prompting, if desired.

Managing Ongoing Change

In the final section of her presentation, Dr. Parshall made the point that continual changes in the testing environment are likely, caused by advancements in medicine, technology, and management. These changes may offer new and better assessment options and require the use of innovations to maintain fidelity to the real world. Dr. Parshall advocated what she called “agile strategies for continuous innovation.” She suggested a “little bets” approach, in which innovation is pursued in a series of quick iterations that are small, low-cost, and low-risk. Over time, expertise is developed with deeper understanding.

She suggested that stakeholders rate all potential innovations for complexity, cost and risk, opportunity, and value. By combining the ratings and plotting the results, we can determine the best course of action and help manage the process. Dr. Parshall’s final point was that it is likely that we have entered an era of ongoing change. As such, the first set of innovations the ABP implements may very well be followed by others in fairly rapid order.