Deploying e-Assessment Services in Practice

Mark Molenaar
CTO Open Assessment Technologies
Co-chair IMS QTI® Technical Committee
Meanwhile in France...
Technology Enhanced Items
Technology Enhanced Items

- ... are computer-delivered items that include specialized interactions for collecting response data. These include interactions and responses beyond traditional selected-response or constructed-response.

- To enrich “traditional subjects” assessments.

- To explore “new” competences (21st CS).

- Considerations:
  - Accessibility.
  - Hard(er) to analyze?
  - Expensive to develop; no interoperability?
Accessibility & Universal Design
Accessibility & Universal Design

- The concept of designing all products and the built environment to be aesthetic and usable to the greatest extent possible by everyone, regardless of their age, ability, or status in life

- Accommodations & tools

- Different devices & form factors

- Considerations
  - Psychometric impact
  - Security & BYOD
  - Presentation Fidelity?
Computer Adaptive Testing
Computer Adaptive Testing

- Test construction and test administration are computerized and individualized
- Different types of methods and algorithms
- Less items required; shorter testing time
- Better measurement; accuracy known in advance
- Considerations
  - Large calibrated itembank required; parameters are assumed stable
  - Not usable for all topics/content domains; practical considerations
  - Expensive to develop; no interoperability?
Integration with Learning
Integration with Learning

- The Next Generation Digital Learning Environment (NGDLE) is conceived as an ecosystem, a learning environment consisting of learning tools and components that adhere to common standards.

- N²GDLE adds Learner Credentials, Curriculum Mapping, Learning Pathways & Integrated Assessment.

- Embedded, Stealth, Micro Assessment; collect/share data and provide recommendations.

- Considerations:
  - Data Privacy & Legislation
  - Interoperability?

Points on the production possibilities curve (A,B,C,D,E,F) indicate the possible or attainable combinations of laptops and mobile phones and can therefore be regarded as potential output. These points also indicate the boundaries of production.

To reach any point outside the production possibilities curve such as G₁ or G₂ or G₃, Zanadu would need more resources and/or increase the efficiency of its current resources.

Do the following activity to make sure you understand positions of scarcity.

A journalist at one of the newspapers in Paradise asks your opinion on the following:

Based on the information below, a politician concluded that in the current period the country of Paradise could produce a combination of 4,000 tons of food and five million tons of food.

Zanadu would certainly like to produce at a point such as point G₁ because it would have more mobile phones and laptops, but this is not possible because the country does not have enough resources. Points G₁, G₂, and G₃ therefore represents scarcity and lies outside the production possibilities curve.
IMS Relations
IMS e-Assessment Activities

- Technology Enhanced Items
  - Portable Custom Interaction (PCI)
- Accessibility & Universal Design
  - Personal Needs & Preferences (PNP)
  - QTI 3: Shared Vocabularies
- Computer Adaptive Testing
  - Standard on CAT
- Integration with Learning
  - Competencies & Academic Standards Exchange (CASE) metadata
  - Caliper Assessment Metric Profile
  - Standard on Proctoring
Want to know more and get involved?

- Join the QTI Technical Workgroup and/or subgroups
- Join the IMS Executive Board on Assessment (EBA)
- Join our Bootcamp on e-Assessment Standards tomorrow afternoon!
Merci!

markm@taotesting.com