Computer Based Testing
Desirée Joosten, IPO/CELSTECC, Open Universiteit Nederland
31 August 2010

Overview of the presentation
• Computer based testing (CBT) at the OUNL
  – From paper and pencil to CBT
  – Project and implementation
  – Quality improvement

The context of testing at the OU
• started in 1984
• Organizational context: Central department and study centres

History
• 1984 – 1987
  – Module system of courses; each course an exam
  – Written (open ended question or multiple choice), oral, or assignments
  – Financial and organisational problems
• 1987 – 1990
  – Development of SYS (version 1 – 4)
• 1990 – 2007
  – Technological improvements
  – Decrease in educational support in test development
• 2007 - 2009
  – Introduction and piloting CBT
  – Product selection (Questionmark perception)
  – Pilots.
• 2009 - ...
  – Implementation

Forms of testing
• Four major forms of testing:
  – Paper and pencil (mc and open ended)
  – SYS (mainly mc)
  – Skills labs (reports, presentations, projects (performance assessment, peer assessment, portfolio assessment, ...)
  – Oral exams
• But also:
  – Intake assessments and self-assessment
  – Assessment of Prior Informal and Non-formal learning (APL)

Computer based testing (CBT)
Digital exploration of the whole examination trajectory:
  – Development, run, results, testanalyses and reports
This trajectory opens possibilities of quality improvements of examination.
Question Mark Perception
Integrated software to create items, itembanks, and tests for online testing.

Vraagsoorten
- Essay
- Multiple Choice
- Multiple Response
- Numeric
- Text Match
- True/False
- Yes/No
- Explanation
- Fill in Blanks
- Hotspot
- Pull-down List
- Ranking
- Select a Blank
- Spoken Response
- Captivate/Robodemo
- Drag and Drop
- Macromedia Flash
- Matching
- Matrix
- Likert scale

Computer based testing
- Itemconstruction and itembank management
- Test profiles and test construction
- Import- and exportfacilities
- Related OUNL processes
- Reports and analyses
- Process control and workflow support

Implementation strategy
Implementation strategy
- Start with a small set of pilots
- During a short period
- Transition to a largescale implementation in phases.

Pilots
- 5 courses with group assessments:
  - Literary culture (multiple choice)
  - Groups in organisation (multiple choice)
  - Educational science (open ended questions)
  - Introduction administrative law (multiple choice with cases)
  - Urban development (multiple choice with photos, figures and cases)
- 4 courses with individual assessments
Evaluation

- User-friendly
- Satisfied with prompted feedback
- Readable answers (for the correctors)
- Noise of typing
- Student contact
Implementation

• Describing processes
• Manuals
• Infrastructure
• Information systems (connection OU systems and QMP)
• Conversion (44 courses CBI and 4 courses CBG)
• User support
• Workshops and training

Quality improvement

• From multiple choice question to more innovative questions (for example Scalise and Gifford (2006)
  – Use of pictures, videos, animations
  – Better use of cases
  – Adaptive assessment

Conclusion

• Step by step approach
• Large operation, many people and departments involved
• Expectations

Thank you for your attention.

Questions?

more information: desiree.joosten-tenbrinke@ou.nl