Delivering Assessments to Mobile Devices

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What will we cover in this session?

- Tips for mobile and embedded assessment
- Using QR Codes with Questionmark Assessments
- Example applications of mobile assessment
- Embedded assessments
Growth in Internet Connected Mobile Devices: 41% from 2009 to 2010

Source: ComScore
Tips for Creating and Delivering Effective Mobile Assessments

- Mobile delivery enables new possibilities for observational assessment and mobile exam rooms
- Surveys and course evaluations: Sometimes less is more
- Embedded assessments can add value and provide useful metrics on social/informal learning
- Think small: Screens, input devices and bandwidth
- Use QR Codes: Make taking your surveys and assessments easy
- To Flash, or not to Flash? Be aware of what technologies your participants’ devices support
- Test and test again: Try before you deliver!
Mobile delivery enables new possibilities for observational assessment and mobile exam rooms
Inexpensive, very portable Internet-connected mobile devices
What are the potential applications?

- Observational assessments
- Mobile exam rooms
- Deliver to the device in your hand
Observational Assessments
Observational assessment vs. ‘traditional’ quiz, test or exam

**Traditional assessment**
- Participant is presented with questions for direct response

**Observational assessment**
- Observer is presented with questions to ‘rate’ participant according to pre-determined criteria
What are Observational Assessments?

- Observational assessments provide a mechanism for an ‘observer’ to assess a participant.
- For example, a participant might be observed and rated on:
  - Performance of a specific task or procedure
  - Knowledge acquisition and application
  - Demonstration of skills/abilities that ‘traditional’ assessment may be less reliable in measuring
Typical workflow for “assessor”

1. Assessor logs in
2. Selects assessment
3. Selects participant to be observed
4. Answers/submits responses to questions
5. Results/feedback reported to stakeholders
Mobile Exam Rooms
Mobile Exam Rooms

- Use mobile devices
- Greater flexibility in where you deliver assessments
- Assessments can be conducted ‘on location’
“Securing” an iPad...

- Consider if a standard browser presents security concerns
  - For example, Questionmark provides an app that prevents candidates from easily getting to other URLs

- Consider if access to “home button” (which allows task-switching) presents security concerns
  - Hardware solutions are available to enable use of iPad in a “kiosk” mode
Consider the “stakes” and if monitoring/proctoring is appropriate.

Levels of Monitoring:
- Diagnostic Tests
- Formative Quizzes
- Course Evaluations
- Low Stakes Tests
- Medium Stakes Exams
- High Stakes Exams

Stakes of Assessment:
- Risk of cheating; content security
Formative Assessment
Quizzes on mobile devices

- Low stakes and openly available
- Often appropriate for mobile devices
- Enables retrieval practice to reduce forgetting
- Provides the participant with corrective feedback for revision and learning
- Encourages self-directed and independent learners
When is feedback useful?

- **Dealing with difficult questions**
  Helps participant understand and learn from the experience

- **Correcting misconceptions**
  Provide guidance when there is evidence of a fundamental misunderstanding of a topic
Surveys and course evaluations
Surveys and course evaluations

- Boost response rate by encouraging participants to access via mobile delivery – “on the spot”
True for most surveys; Especially true for mobile surveys

- Consider your objectives:
  - Keep your surveys brief to help increase response rate
  - Put your most important questions at the start of the survey
- Include only one concept per question
- Group related questions together
- Avoid relying on open-ended questions (e.g. ‘essay’)
Authoring the Survey – questions focused on:
- Demographics
- Instructor
- Course Materials
- Facilities
Course Evaluation Analytics

### Course summary report

<table>
<thead>
<tr>
<th>Course name</th>
<th>Course materials</th>
<th>Facilities</th>
<th>Instructor</th>
<th>All topics average</th>
<th>Number of responses</th>
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</thead>
<tbody>
<tr>
<td>Course 101</td>
<td>2.6</td>
<td>2.8</td>
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<tr>
<td>Course 201</td>
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<td>3.0</td>
<td>2.9</td>
<td>2.6</td>
<td>7</td>
</tr>
<tr>
<td>Course 301</td>
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<td>3.8</td>
<td>3.2</td>
<td>3.6</td>
<td>7</td>
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<tr>
<td>Average of all courses</td>
<td>3.2</td>
<td>3.2</td>
<td>2.9</td>
<td>3.1</td>
<td>21</td>
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</tbody>
</table>

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<tr>
<td>Course 301</td>
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<tr>
<td>Average of all courses</td>
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</tbody>
</table>

### Instructor summary report

<table>
<thead>
<tr>
<th>Instructor name</th>
<th>Course materials</th>
<th>Facilities</th>
<th>Instructor</th>
<th>All topics average</th>
<th>Number of responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Janet Wilson</td>
<td>2.8</td>
<td>3.4</td>
<td>3.3</td>
<td>3.2</td>
<td>3</td>
</tr>
<tr>
<td>Roger Wright</td>
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<td>2.3</td>
<td>2.1</td>
<td>2.3</td>
<td>4</td>
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<tr>
<td>Average of all instructors</td>
<td>2.6</td>
<td>2.9</td>
<td>2.7</td>
<td>2.7</td>
<td>7</td>
</tr>
</tbody>
</table>

### Topic score breakdown

- Course 101: 2.7, 2.7, 2.7
- Course 201: 2.6, 2.6, 2.6
- Course 301: 2.9, 2.9, 2.9
- Average of all courses: 2.9, 2.9, 2.9

### Instructor summary report

- Instructor: Janet Wilson, Roger Wright
- All topics average: 3.2, 2.3
- Number of responses: 3, 4

### Topic breakdowns

- Course 101: 2.7, 2.7, 2.7
- Course 201: 2.6, 2.6, 2.6
- Course 301: 2.9, 2.9, 2.9
- Average of all courses: 2.9, 2.9, 2.9
Think small: Screens, input devices and bandwidth
Screen Furniture

- Ensure your form buttons and other navigation controls (a/k/a “screen furniture”) work with low screen resolutions.
Images

- Optimise size and compression of larger image files to minimise bandwidth requirements
- Detail on images should be kept to a minimum to ensure readability on small screens
Input

- Provide short URLs when hyperlinking not possible
  - e.g. writing the URL on the board
- Consider using a QR Code linked to an assessment
Using QR Codes to Launch Questionmark Assessments
What are QR Codes?

- QR = Quick Response
- Type of barcode
- Allows more data than traditional barcode
- Used in marketing, advertising, entertainment
- Increasing use in e-learning/m-learning
QR Codes are read by Apps

- iPhone
  - Redlaser
  - Neoreader
  - ScanLife

- Android
  - Google Goggles
  - QR Droid
  - Scanlife

- Windows Mobile
  - QR Reader
  - BeeTag
  - Quickmark

- Blackberry
  - ScanLife
  - BeeTag
  - QR Code Scanner

www.url.com/xxx
QR Codes for Launching Assessments

- Course evaluation example:
  - Embed demographic data in the Questionmark URL to be saved to “special fields” in the assessment results, e.g.
    - Course name
    - Instructor name
    - Location

- If you are delivering a survey (or course evaluation), QR Codes can help by:
  - Increasing response rates because...
    - Quick and easy to access the right URL (no typing required)
  - Increasing data captured allows...
    - Data easily captured (no typing required)
    - Easier analysis of survey results by demographic
Questionmark Assessment URL and its parameters

[URL]/delivery/perception.php?session=000159900001599&s4=obrien&s5=course101
Questionmark Assessment URL – what you can include

- Assessment (session) ID (to launch a specific assessment)
- Group
- Name
- Password (if using secure login... not necessary or recommended, but possible)
- Language (for multilingual assessments)
- Special fields such as
  - Instructor
  - Location
  - Course name
  - What ever you want (limited to 50 characters)
How to..
Generate QR Codes for an Assessment

› Navigate to http://goo.gl
› Place your assessment URL in the text-box

› Click Shorten
› Copy the resulting short URL
QR Codes

- Paste the short URL into your browser address bar and append `.qr` to the end of it.
- Click Go or press Enter to navigate to the page.
- A QR code will be displayed in your browser.
- Save the image and use in materials such as manuals, notices, presentations, etc.
- Use shorten URLs to increase reliability and broaden your reach to more devices.
Useful Documentation

- Blog article
  - http://blog.questionmark.com/qr-codes-for-surveys-a-perfect-fit

- KB articles
  - How can I pass command line parameters using the short or long URL formats with Questionmark’s OnDemand services?

- URL shorteners / QR Code generators
  - Bit.ly
  - Goo.gl
  - orangeqr.com
Be cautious in use of Flash

Be aware of what technologies your participants’ devices support
Be cautious in use of Flash

- Helps minimise bandwidth requirements
- Strengthens cross-device compatibility
  - Flash will not work on Apple iPhones, iPads or iPod touch devices
  - Flash is compatible with some mobile platforms such as Android phones (and tablets), Windows Mobile, Blackberry (later this year)
Try before you deliver!
Test your content!

- Test your assessment content...
  - With different browsers
  - On as many different devices as practical
  - Emulators can help understand how content will appear on the ‘small screen’ -- but don’t always give a true “user experience”

- Setting up a mobile test center?
  - Test delivery environments when possible – particularly for signal/wifi strength
  - Many free online bandwidth tests are available
“Embedded” assessments can add value and provide useful metrics on social/informal learning

The same technology that can accommodate small-screen mobile devices can also help make it easier to embed iFrame delivered assessments in your learning content
Technologies used to support social/informal learning initiatives

- Portals
- Social Networking
- Wikis
- Forums
- Blogs
Assessment Maturity Model

The Five Phases of Assessment Maturity

1. **Ad hoc**
   - In this first phase, the organization relies on whoever has the vision and energy to champion the assessment process. There are few, if any, processes in place to ensure a consistent, reliable approach to assessments and reports. More information on AMM phase 1.

2. **Managed**
   - In this phase, an organization develops a playbook that people can follow, so they are less reliant on the knowledge and energy of a project champion. For organizations running few assessments, staying in this phase could be sufficient. However, organizations that utilize many assessments should aim to move into stages three and four in order to achieve their goals. Drivers for this transition include the need for defeasible assessments and the planning of additional assessment projects.

3. **Refined**
   - Here, the organization's strategy requires the support of numerous assessments, many of which are high-stakes. The organization might be driven out of this phase and into the next one by the desire to measure customer satisfaction at certain intervals and/or to be sure the employees are qualified for certain roles. As assessments become enablers for business goals, the organization begins working toward Phase 4.

4. **Aligned**
   - Here, processes yield high-quality and are aligned with strategic goals. The organization reaches for this goal in an effort to institute efficient systems that reduce costs.

5. **Embedded**
   - The question marks throughout indicate points of reflection or further reading, suggesting that the organization is deeply integrated into the business process.

**Question**

An exam can be defined as a summative assessment used to measure a student's knowledge or skills for the purpose of documenting their current level of knowledge or skill. Exams are often used by licensure or regulatory certification groups such as plumbers, electricians, and health-care workers to document competency in a skill area.

Given this definition, how frequently does your organization deliver exams?

- Very Frequently
- Frequently
- Occasionally
- Rarely
- Never

**Questionmark**

Question 5 of 7

Questionmark Version 5 Data Program (All enabled)
Embedding in Blogs, Portals, Wiki’s

For Learners

- Focus the learners’ attention
- Practice memory recall
- Identify what was learned
- Provide feedback to assist the learner to:
  - Correct misconceptions
  - Instill confidence
  - Point to relevant material

For Instructors

- Easily use assessments throughout the learning process
- Provide seamless user experience
- Centralised management of assessment content and results
Questionmark’s support for Mobile Delivery
Blended Delivery

Levels of Monitoring

Formative Quizzes
Course Evaluations
Diagnostic Tests
Low Stakes Tests
Medium Stakes Exams
High Stakes Exams

Stakes of Assessment
Access to your Assessments

- Mobile delivery makes it easier for participants to access assessments:
  - Use mobile Apps
  - Place links in content (PDFs, HTML Web Pages, etc)

- Embed within a Portal
  - For employees, partners and customers
Autosensing Device and Browser

Questionmark Packages the Assessment for Device/Browser/iframe

Sends HTML

Auto-Size senses pixel size of window
Benefits

Author once

Schedule once

Single results set

Deliver to any device or context
Apps for Delivery

- Can sometimes offer more control, convenience than built-in browser
- Apps available for
  - Android
  - Apple iOS
What questions do you have?
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