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*Closing the Feedback Loop
...or Making Votes Accessible!*

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Who?



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Others: Sarah Gormley, Daniela Gachago, Alex Forrest, Stephen Vickers



Why am I here?

“EVAF – an online tool to provide students and staff with analysis and visual feedback of data captured using 'clickers' in their lectures – for revision and feedback purposes”*



* = Electronic Voting and Feedback



Outline...

- n Electronic Voting Systems @ Edinburgh
- n What's happening to vote data? Feedback?
- n Outline of EVAF & EVAF4All Project
- n Demonstration of EVAF
- n Status & Questions



EVS @ Ed : Past and Present



n Pre-2005 – coloured card used in Physics 1A

n 2005-6 – PRS IR clickers bought and used



n 2007 – ‘loanership’ scheme with ~2500 RF clickers

n 2008 – EVS underpins college strategy.



Data? Feedback?

n Q1: What is happening to all this data?

n Q2: Is there a way to provide personal feedback to students (+ staff!)

n Q3: What is the motivation for feedback anyway?



n A1: Nothing! Just sitting there on staff PCs

n A2: Not easy – class info yes, but not personal

n A3: Lots – student revision, staff development, NSS



Why are we not using this data?

- n Because it is too hard to match up students to clickers
- n Difficult to keep track of students on courses
- n How to give students access to their data alone?
- n Fundamentally - way too much effort for busy staff members – and each member has to do a lot of work!



Wait a minute...Reinventing the wheel?

Q: Don't EVS vendors like have software to do all this?

A: Not really. Solutions are often still too staff time intensive or too intrusive, are not anonymous and/or flexible enough or provide analysis for staff only.

EVAF @ Ed



Seeds of EVAF – late 2007

- n Q: Does the introduction of clicker-loans and better tools allow us to solve this data dead-end and feedback problem?
- n A: Yes – with access to clicker-loan system, we can work out which student has what clicker id – and when – a key issue. And across multiple courses.



EVAF Development

- n Design and problem exploration in late 2007
- n Pilot Implementation in 2008
- n Piloted in Oct 2008, Jan 2009
- n 2009-2010: JISC funded as EVAF4All Project



Initial Aims

“To create a web-based system (EVAF) to provide staff and students with analysis and visual feedback of data captured using 'clickers' in their lectures – long after the lecture is over.”

- n For Students: review their own responses and whole-class performance, highlight weaknesses, re-united with own data
- n For Staff: easy way to present feedback to students, anonymised review, evaluating effectiveness of questions, share with colleagues

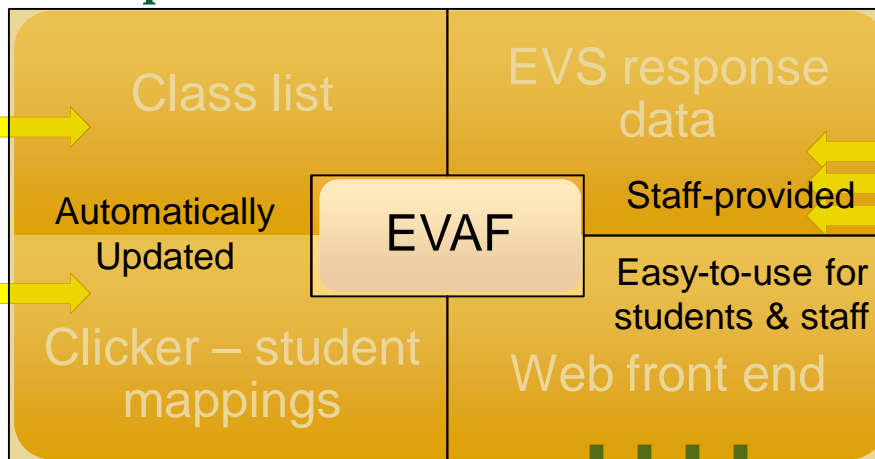


Objectives

- n Easy to Use: even for busy academics – must be easy to upload clicker sessions into this tool. Students must be able to easily identify their weaknesses.
- n Must transparently deal with students, clickers, cohort changes, multiple courses, etc
- n Robust and Secure: Ensure that students only see THEIR individual responses and not those of other students
- n Flexible: work with common question types and with current technologies – PRS v4/5 - 'open' questions, confidence, response time.



Components in EVAF



Uploading PRS Sessions

- n Not possible to automate uploading PRS session data but tried to make this pain free:
 1. Staff use PRS/Response as usual in class
 2. Afterwards, export PRS session as a CSV
 3. Log into EVAF and import the session, supplying extra info not given in export – question title, ‘correct answer’ info and ideally a screenshot
 4. New session processed and made available to students (and staff) immediately.



EVAF Demo

- n As staff member
- n As student



Response from staff/students?

- n Some interest from staff – some uptake within Physics & Biology.
- n Some interest from students – peaking at exam time.
- n Better interest in 2009 – ‘leaderboard’ increasing competitiveness
- n Staff – generally positive feedback on ability to identify good/bad question outcomes after the fact.



Status

- n Demo – current release @ Ed
- n 2009-2010: JISC funded as EVAF4All Project:
 - n Discover HE/FE partners and develop to allow installation and easily integrate it into *their* loanership system and VLEs
 - n To extend to allow other ‘connectors’ to institutional systems inc. loan-systems and VLE. Voting System neutral (e.g. TurningPoint)
 - n Other functional improvements, UI customisation, installation.
 - n New Authentication options – LDAP, etc
- n Plan to pilot at partner institution Jan’ 2010
- n Release late Q1 2010 – SourceForge
- n Further Development?



Contact & Questions?



- n For more information about EVAF and the EVAF4All project, please contact **Simon Bates** (s.p.bates@ed.ac.uk) or **Keith Brunton** (keith.brunton@ed.ac.uk)
- n For more information online, visit <http://www.ph.ed.ac.uk/elearning/projects/evaf>

Questions?

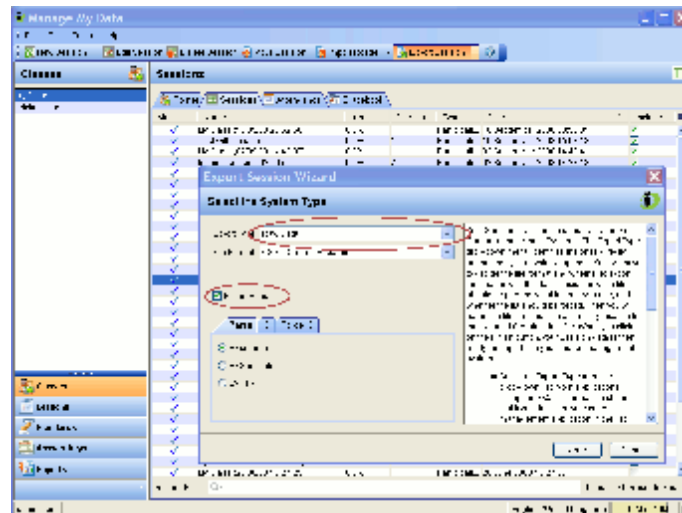
End



Extras



Exporting from PRS v5



Screenshots from PowerPoint?

Screenshots are optional but provide valuable context to students and staff

- n Save As...
- n Choose GIF, JPG or PNG
- n Select 'All Slides' when prompted...

Example of 'Connector' with EVAF

Loan-connector: Either

1. Sftp download (formatted CSV),
2. Direct ExternalDB connection

For Edinburgh, Option 1 meant development of and script to query DB for all clicker loans. Updated nightly for sftp download by EVAF.



Technical aspects

- n Backend: SQL
- n Front end for Web: Ruby/Rails
- n Peripheral technologies: SOAP, XML, AJAX (Prototype), Google Chart APIs
- n Authentication: EVAF, Cosign (SSO), LDAP
- n Connectors:
 - n Clicker-Loan-Systems – SFTP download or Network DB connection
 - n Course Student Info – Webservice to WebCT, possibly Moodle 2.0 and BB. (Optional)

