Should feedback be at the centre of Personalised Learning?

Professor Denise Whitelock
The Open University,
denise.whitelock@open.ac.uk

Outline

1. Can we think about personalised learning without feedback?
2. OpenEssayist
3. Anywhere any time Assessment TeSLA project

Personalised Learning

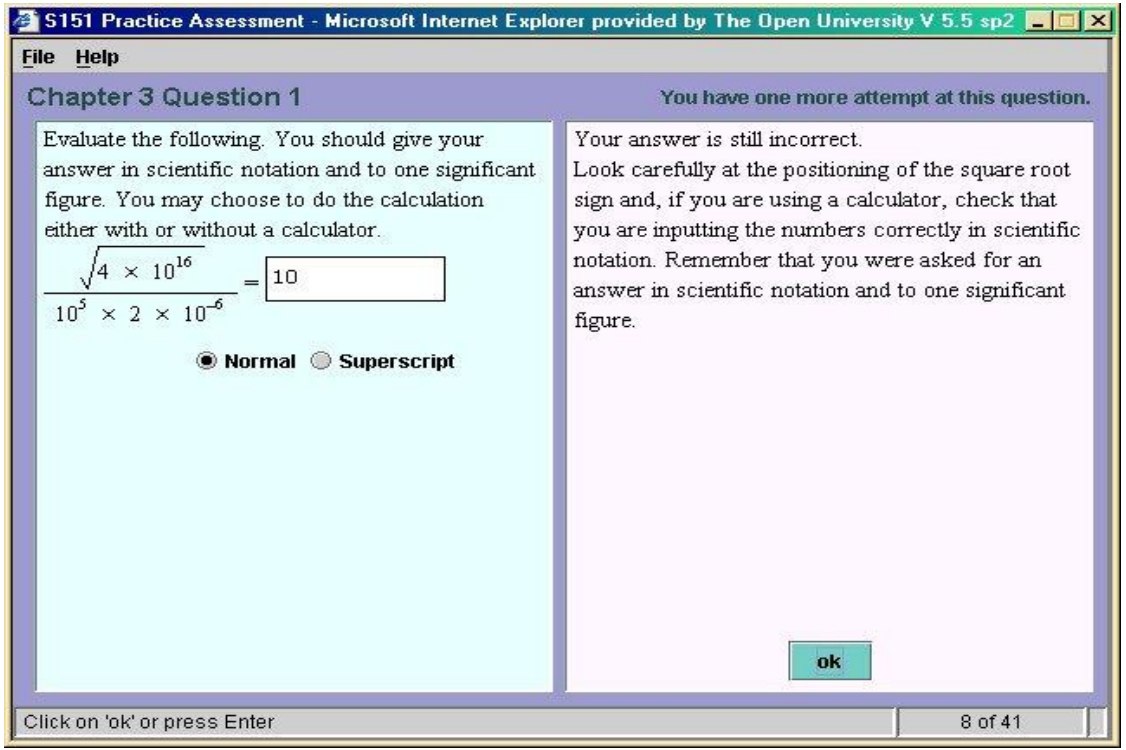
- Not just curriculum choices
- Learning Analytics
- Student models and ITS

Students want more support with assessment

- More Feedback
- Quicker Feedback
- Full Feedback
- User-friendly Feedback
- And ……National Students' Survey

Scaffolding and High Stakes assessment

- Math for Science
- Tutor less course
- Competency led
- No point to cheat
- Web home exam
- Invigilation technologies



Providing meaningful automatic feedback

- Can we provide Advice for Action to assist essay writing?
- How can we capture progress with a visualisation?

SAFeSEA: Supportive Automated Feedback for Short Essay Answers

An automated tool supporting

online writing and assessment of essays providing

accurate targeted feedback

SAFeSEA

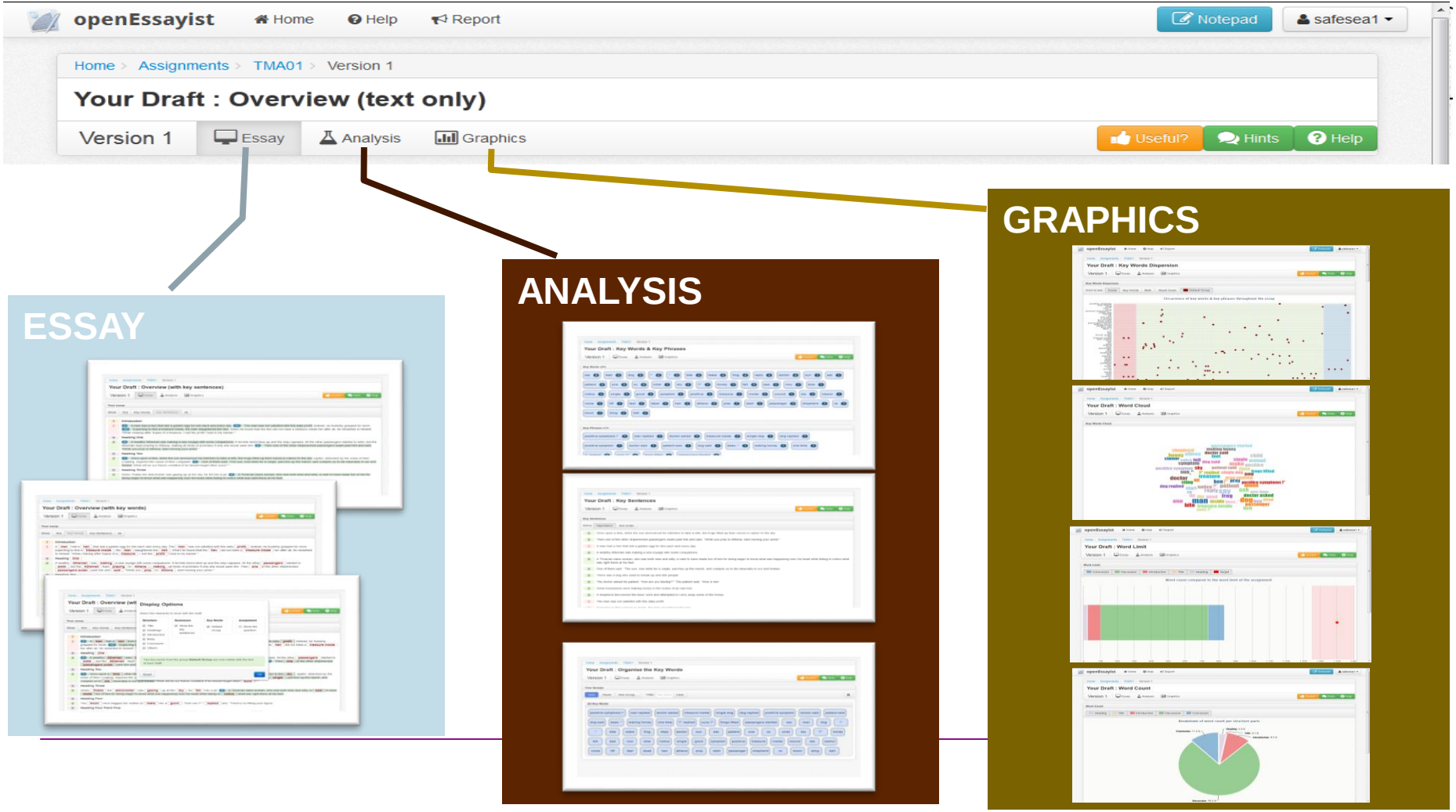
Professor Denise Whitelock

Professor John Richardson

Professor Stephen Pulman

About SAFeSEA

- No tutor support for drafts of first assignment
- Reduce dropout rate with automatic feedback?
- Effect of summaristion
- What are the beneficial factors?
- Correlate measures of learner activity and essay improvement
- http://www.open.ac.uk/iet/main/research-innovation/research-projects/supportive-automated-feedback-short-essay-answers


openEssayist
Home
Help
Report
Notepad
safesea1
Home > Assignments > TMA01 > Version 1
Your Draft : Overview (text only)
Version 1
Essay
Analysis
Graphics
Useful?
Hints
Help
ESSAY
ANALYSIS
GRAPHICS

Your Draft : Key Sentences

Key Sentences

Sort by: Importance Text Order

I Report outlining the main accessibility challenges for students with disabilities in the context of higher education

D Students in UK Higher Education who have a disability face many challenges in terms of accessibility in pursuit of their studies.

D This report draws on my initial experiences of working in a student support role in a different university (X) after 16 years at the Open University which has an established and highly regarded reputation for student support and inclusivity with around 10% of its student body having a disability.

D Institutions can provide for individuals through organising and processing their entitlement to Disabled Student's Allowance (DSA) – individual funds which are drawn down and allocated to students in resources and services that will address some of their accessibility challenges eg through the provision of assistive technologies, additional study support).

D But this does not mean that the experience of all students is equal and much remains to be achieved in declaring a truly level playing field, particularly in relation to disability.

D Over time accessibility to higher education has moved from the preserve of the privileged few to a more inclusive approach in relation to class, gender and disability.

D In an annual student intake of 38,000, University X identifies approximately 600 students (1.6%) who qualify for Disabled Student's Allowance.

D This transition from a virtual to an actual campus requires a rethink of the student experience, and introduces me to more challenges in terms of equality of experience in relation to accessibility to Higher Education.

D All Higher Education Institutions HEIs operate under Equality Act (2010) legislation and Quality Assurance Agency (QAA) code of practice (2010) which oblige institutions to take responsibility for providing their education services without discrimination through making 'reasonable adjustments' to remove barriers to access on the grounds of disability.

D These students are identified through self-referral or through recommendation from teaching colleagues.

D Ideally, a student has already notified student support of their needs before starting term, so that the necessary assessment can be conducted to allocate support in terms of equipment and specialist tutoring.

D For all students there can be a jolt in adjusting to the more autonomous self-directed way of learning that is expected in HE, but for some students with disabilities this is more keenly felt because they may well have moved from a quite supportive environment at school and home where people who knew then well, made adjustments automatically eg by speaking face-on where there is hearing impairment, by allocating space for a wheelchair prior to arrival in class to minimise disruption).

D Access to HE study is not just about access to buildings, data and communication systems, it is about access to intellectual debate and ideas.

D This points to another key challenge for students with disabilities – the attitudes and knowledge of university colleagues and peer students towards disability.

openEssayist Home Help Report Admin Notepad admin

Home > Assignments > TMA01 > Version 1

Your Draft : Organise the Key Words

Version 1 Essay Analysis Graphics Useful? Hints Help

Your Groups

Save Reset New Group... Filter: key words Clear

All Key Words

inclusive higher education | student support | higher education | accessibility challenges | students need | inclusive learning | online learning | studied online | information becomes | navigation points | equal access | education services | student experience | access | study | recommendation | point | make | service | need | inclusive | support | high | use | way | experience | practice | navigation | take | new | become | people | online | term | web | equal | disorientation

Method

study support | accessibility | disability | web accessibility | campus | access information

Topic

challenge | learning | university | student | education | information

Hint

The content of your groups have been saved.
Why don't you check the effect of the changes by going to the main essay?

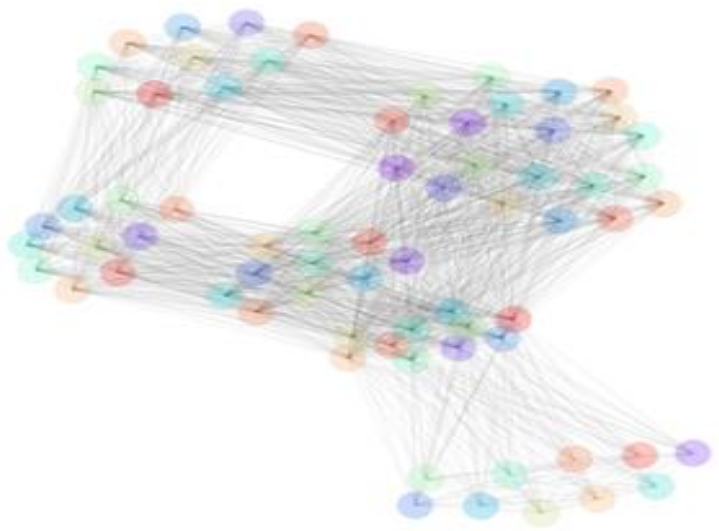
Essay

Grades and use of OpenEssayist with H817

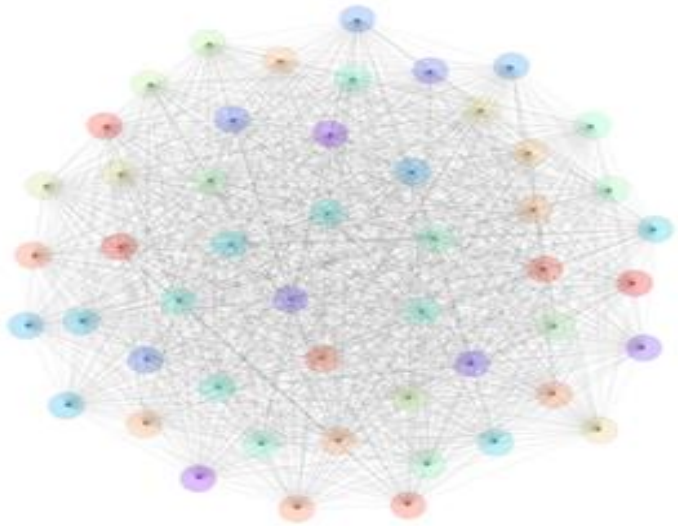
- Used by MAODE students
- Positive correlations

1. Grades for Essay 1 and number of drafts (r=+0.41)
2. Number of site visits and number of drafts (r=+0.65)
3. Number of visits and grade for Essay 2 was significant one tailed test (r=+0.5)
4. Mean grade for overall module for students in cohort who used OpenEssayist (64.2) and students in previous cohort (53.7) (p=0.4)

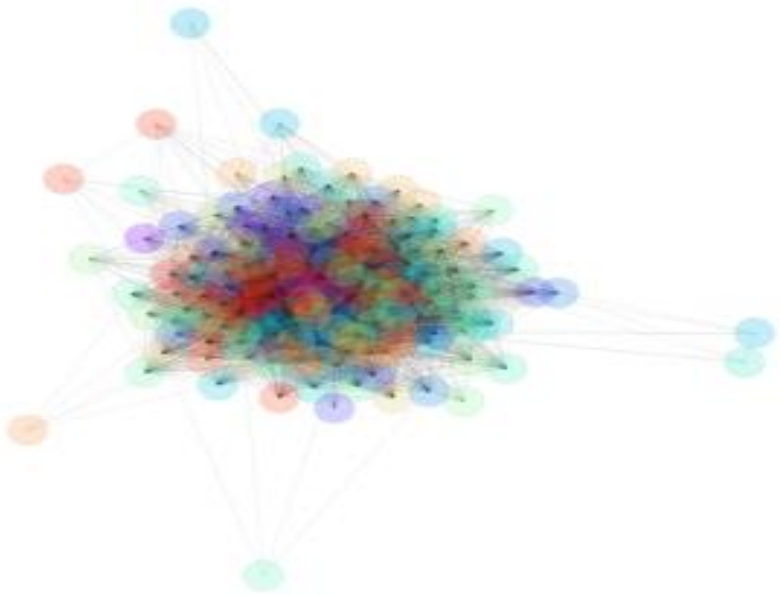
New feature Rainbow Diagrams
Pretend essay: 10 identical paragraphs



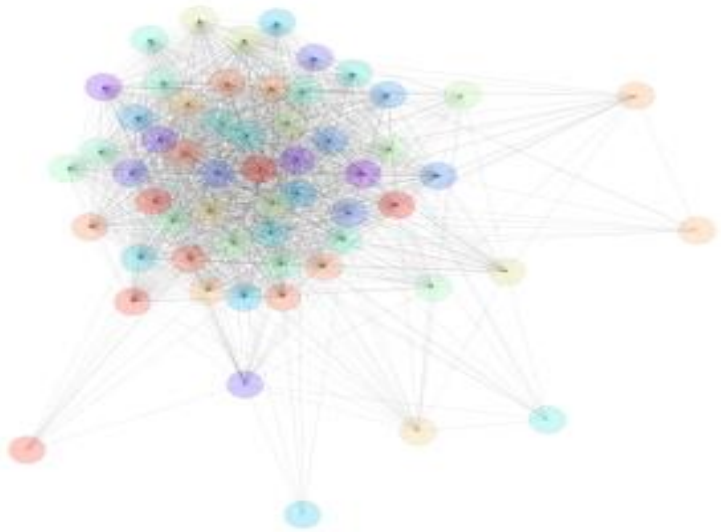
Pretend essay: 50 identical sentences



Stanford University Boothe Prize essay



OU essay awarded high grade



OU essay awarded low grade

Good vs. bad?

Good:

- densely connected
- Red nodes (conclusion) central
- Close links between violet (intro) and red notes

Bad:

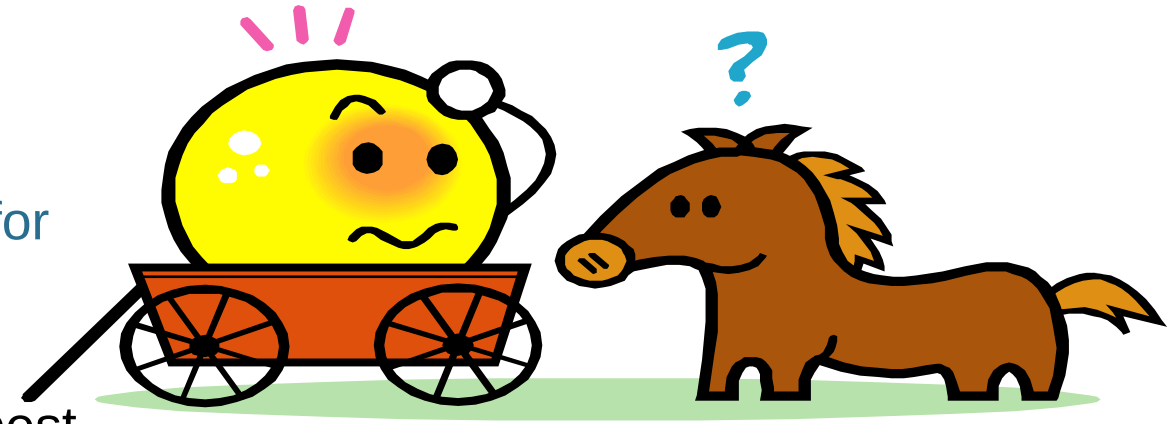
- Not densely connected
- Red nodes (conclusion) not central
- Few links between violet (intro) and red nodes

Rainbow diagrams related to mark awarded

- Multivariate analysis of variance on marks awarded to 45 students
- Submitted two essays
- Rainbow diagrams produced from these essays and rated as high, medium or low attainment
- Covariate showed a significant relationship with the marks
- $F(1, 43) = 5.92$, $p = .01$ using a directional test
- Essays rated as high would be expected to receive 8.56 percentage points more than essays rated as medium
- 17.2 percentage points higher than essays rated from rainbow diagrams as low

How about feedback first?

- Hints before writing?
- R.C.T.
- 2 essays
- $F(1,41) = 3.23$ $p = 0.04$ for hints
- http://www.eden-online.org/publications/best-research-papers.html



How about anywhere anytime testing?
TeSLA: Adaptive Trust based e-Assessment

- AIM: Secure & reliable online assessment
- TECHNOLOGIES: Voice/face recognition, keystoke pattern detection, anti-plagiarism and forensic analysis
- 18 European partners, OUUK responsible for evaluation

http://tesla-project.eu/

What about emotional support in the feedback?

- Difficult at times to receive written feedback
- Not just a cognitive response
- Work of Dweck et al

Praise for effort and not just ability

- Praise for ability per se can hinder learning (Mueller & Dweck, 1998)
- Praise = being clever
- Negative feedback means without ability
- Disempowering and demoralising

Mueller & Dweck (1998)

- Raven’s Matrices (IQ)
- First test pupils praise either for effort or ability
- Second test most difficult
- Third test medium difficulty. Score up 1 points for pupils praised for effort. Down 1 point ability

How does feedback effect mindsets?

1. Your intelligence is something very basic about you that you can't change very much
2. You can learn new things but you can't really change how intelligent you are
3. No matter how much intelligence you have you can always change it quite a bit
4. You can always substantially change how intelligent you are

Mindsets (Dweck, 2006)

Fixed mindset

- Super sensitive about being wrong
- Always trying to prove themselves

Growth mindset

- Stretch themselves
- Confront obstacles as challenges
- Lack of tension when learning as they know they are novices and can improve

What should personalised learning and automatic feedback support?

- Students learning to judge
- Providing reassurance
- Providing a variety of signposted routes to achieve learning goals

Brand Dialogue℠

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