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Good Pedagogical Practice Driving Learning Analytics: OpenMentor, Open Comment and SAFeSEA

Denise Whitelock

denise.whitelock@open.ac.uk

OM, OC and SAFeSEA born from pedagogical models

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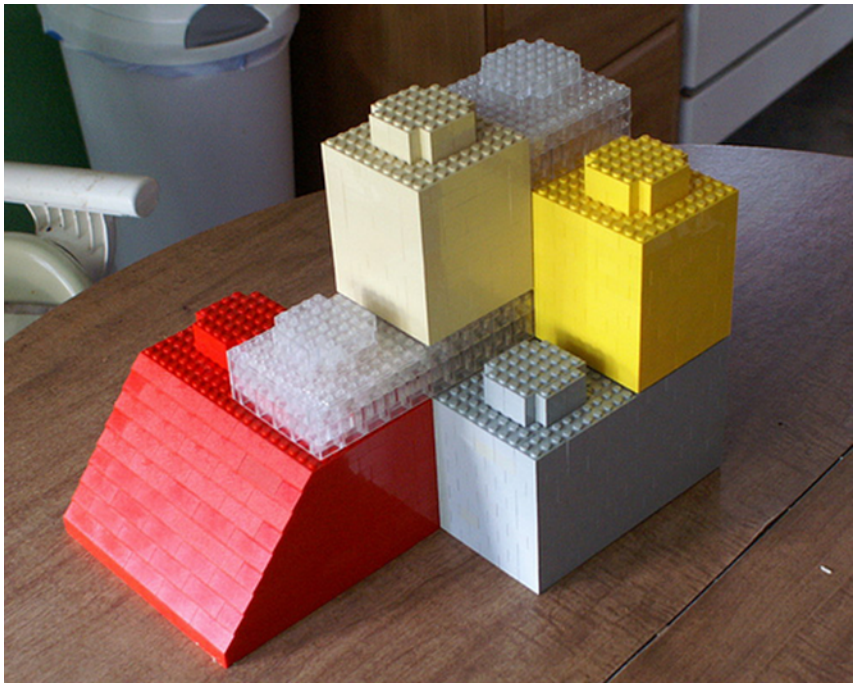
- Building the feedback models in both systems
- Finding a good classification system
- Including socio motive support in feedback
- OM advises how to do it
- OC tries to put that advice in practice
- SAFeSEA builds on OM and OC



What is Open Mentor? http://openmentor.kcl.ac.uk/openmentor-web/

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- "An open source mentoring tool for tutors"
  - "Open source" = free and easy to use, and to embed in an institutions infrastructure and working practices
  - "mentoring" = designed to help people learn how to give feedback effectively, through reflection and social networks
  - "tutors" = primarily intended for teaching staff, but with clear applications for those involved in quality

Bales Categories

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- Four main groupings
- A. Positive reactions; agreeing and boosting the other person
- B. Directing/teaching
- C. Questions: requesting information, clarification etc
- D. Negative reactions: disagreement

Coding the comments

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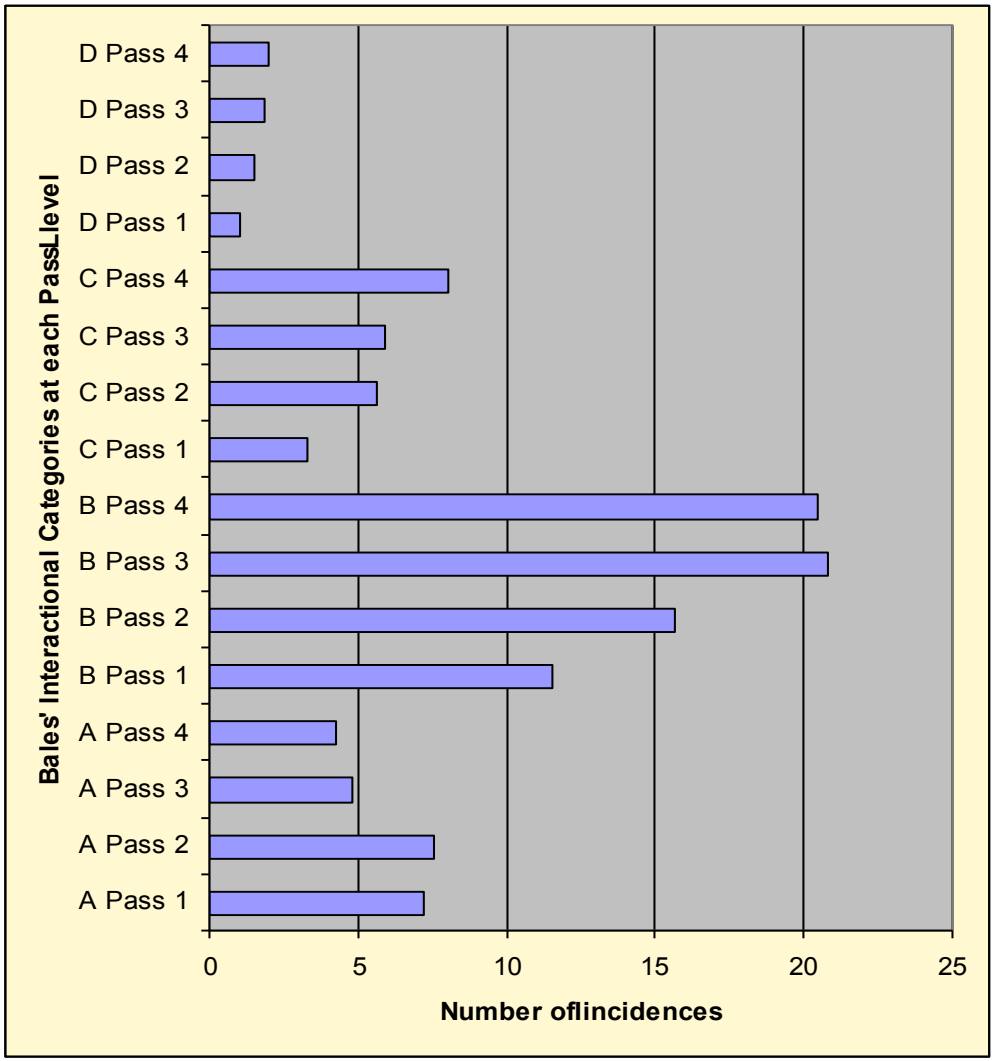
Bales' Interaction Process

Categories		Specific Examples
Positive Reactions		
A1	1. Shows solidarity	Jokes, gives help, rewards others
A2	2. Shows tension release	Laughs, shows satisfaction
A3	3. Shows agreement	Understands, concurs, complies, passively accepts
Attempted Answers		
B1	4. Gives suggestion	Directs, proposes, controls
B2	5. Gives opinion	Evaluates, analyses, expresses feelings or wishes
B3	6. Gives information	Orients, repeats, clarifies, confirms
Questions		
C1	7. Asks for information	Requests orientation, repetition, confirmation, clarification
C2	8. Asks for opinion	Requests evaluation, analysis, expression of feeling or wishes
C3	9. Asks for suggestion	Requests directions, proposals
Negative Reactions		
D1	10. Shows disagreement	Passively rejects, resorts to formality, withholds help
D2	11. Shows tension	Asks for help, withdraws
D3	12. Shows antagonism	Deflates others, defends or asserts self

Identifying trends: H801



Graph to show conflated Bale's categories against mean number of incidences in H801 scripts

How Open Mentor handles comments

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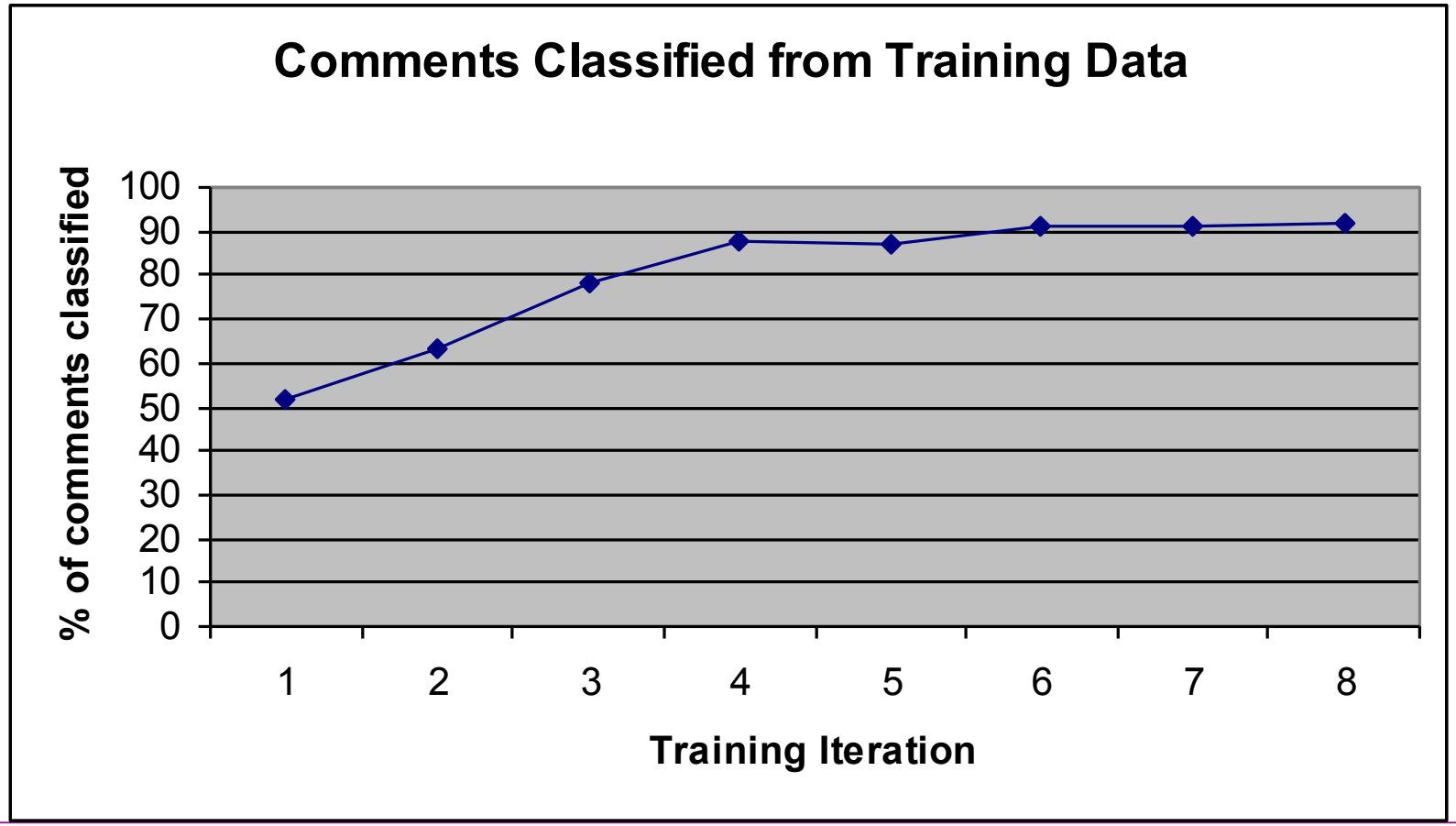
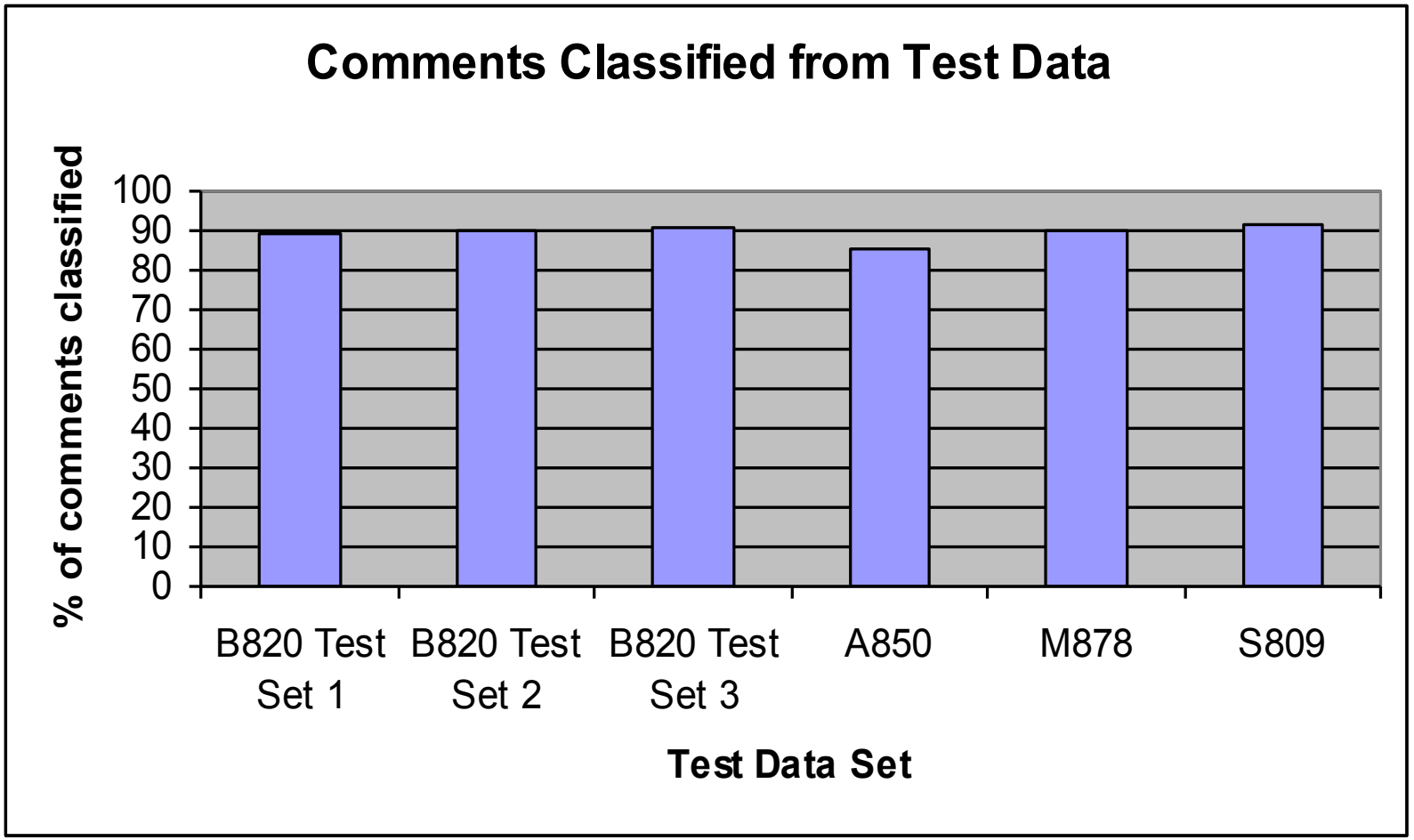
- "**Good** work"
- "**Yes**, well done"
- "**Yes, but** is this useful?"
- "Can you explain **what** you mean"
- "**This does not** follow"

- A = positive reactions
- A = positive reactions
- B = attempted answers, and not a positive reaction
- C = questions
- D = negative reactions

Building the rule set



Is the rule set generic?



Welcome to Open Mentor - Mozilla Firefox

File Edit View Go Bookmarks Tools Help

Customize Links Free Hotmail RealPlayer Windows Marketplace Windows Media Windows [#MPJAVADOC-34] ...

You're signed in as **OM User** Sign out

Welcome to Open Mentor

Options

- *Open Mentor Home*
- Submit assignment
- View reports
- Administration
- Background
- Site index
- Sign out

You're here: OpenMentor >> H804 >> View reports

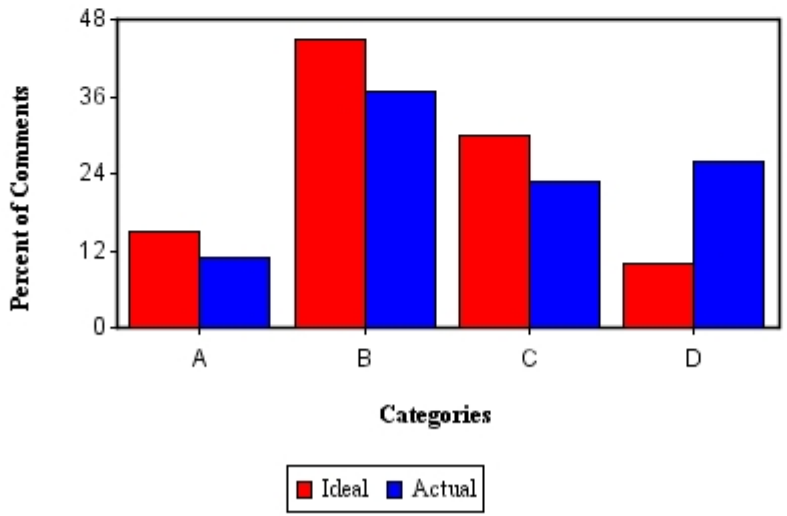
OpenMentor comment analysis

This page shows details of how each assignment's comments have been analysed.

Assignment	Course	Assignments marked
TMA 01	H804	25

Assessment for Sandy Smith: mark assigned 61 (Grade 3)

Bar charts to represent analysis of assignments sent to Open Mentor



Category keys table	
Category A	Positive Reactions
Category B	Teaching Points
Category C	Questions
Category D	Negative Reactions

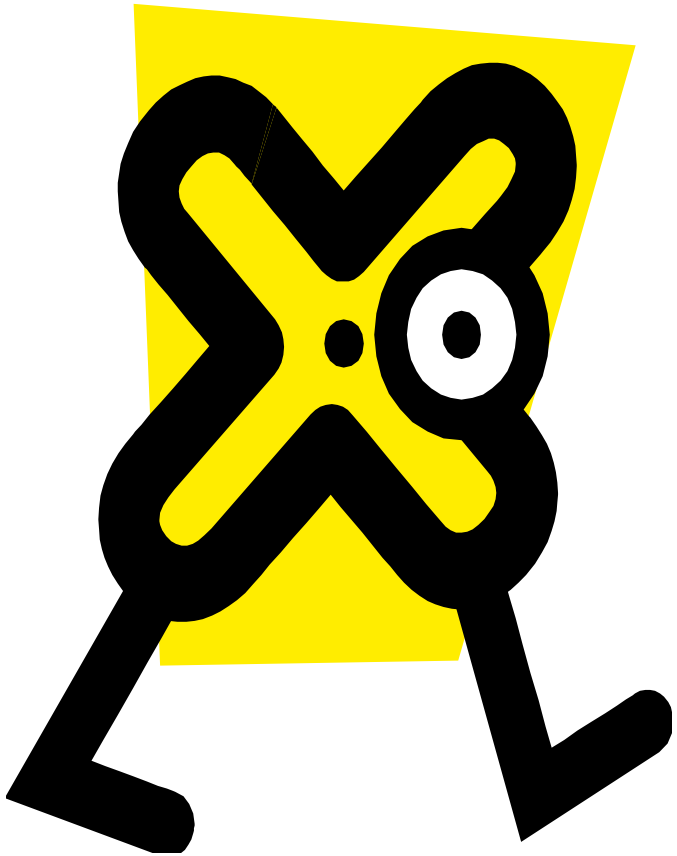
- Show this as a summary table

Done

OpenMentor Transfer: JISC funded

- JISC funded project
- Transfer OpenMentor technology to King's and Southampton
- What changes are needed for cross institutional use?
- Identify strengths and limitations of OM for training tutors

Transferring OM to other HEIs



- Transferred to Southampton and Kings London
- Participating Tutors given face to face training
- **King's College:**
  - 3 tutors.
  - 25. learning experts at TEL forum gave feedback after a demonstration
- **Southampton**
  - 3 tutors.
  - Interviews and questionnaire
- **Open University**
  - 3 distance education tutors
  - Questionnaire and epistolary interviews
  - 113 students in a Masters course focussing on Innovation in eLearning and 5 tutors.

Lessons learned after completion of first cycle of trials

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- Open Mentor's theoretical framework was robust enough to facilitate and encourage dialogue and reflective activities
- Tutors positive about the system's functions to support provision of feedback
- Suggestions for change
- a module for user authentication and management
- the development of OM reports to help tutors to progress towards the ideal 'state' of feedback provided.
- used for training purposes as an academic development tool.
- Our contact details, blog and references - http://omtetra.ecs.soton.ac.uk/wordpress/

What can we learn from modelling tutors marking to construct a formative e-assessment tool?

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- Open Comment project builds on the work of OpenMentor
- Free text entry for History and Philosophy students
- Immediate feedback (in context) to students
- Influenced by ELIZA (Weizenbaum, 1963)

Causal models of explanation

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- First step:
  - Identification of question types where students exhibit causal reasoning
- Looked for questions with:
  - Salient variables
  - Description of these variables
  - Identification of trends
  - Identification of relationship between the variables i.e. causality

Three common types of question types were selected for Open Comment in History

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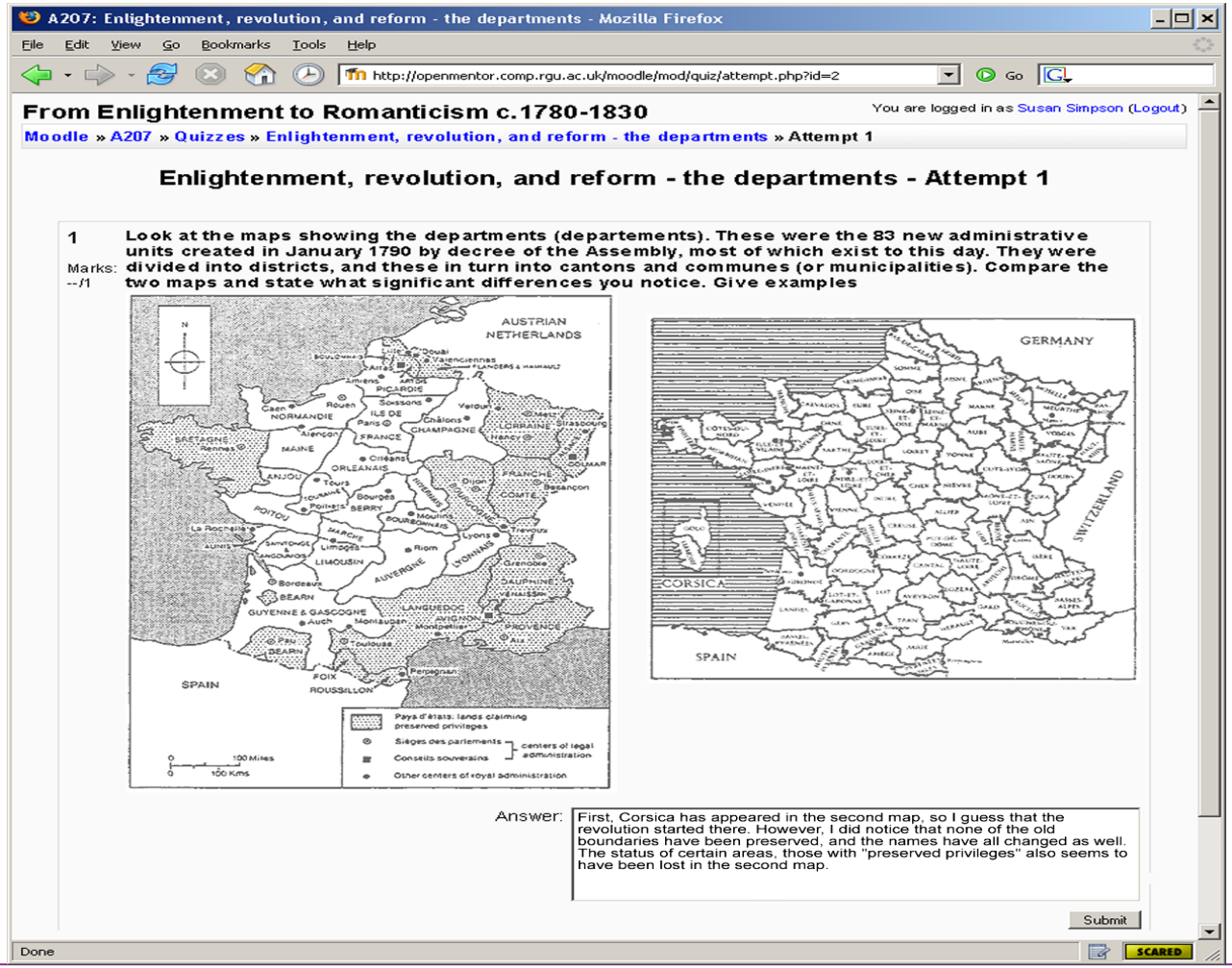
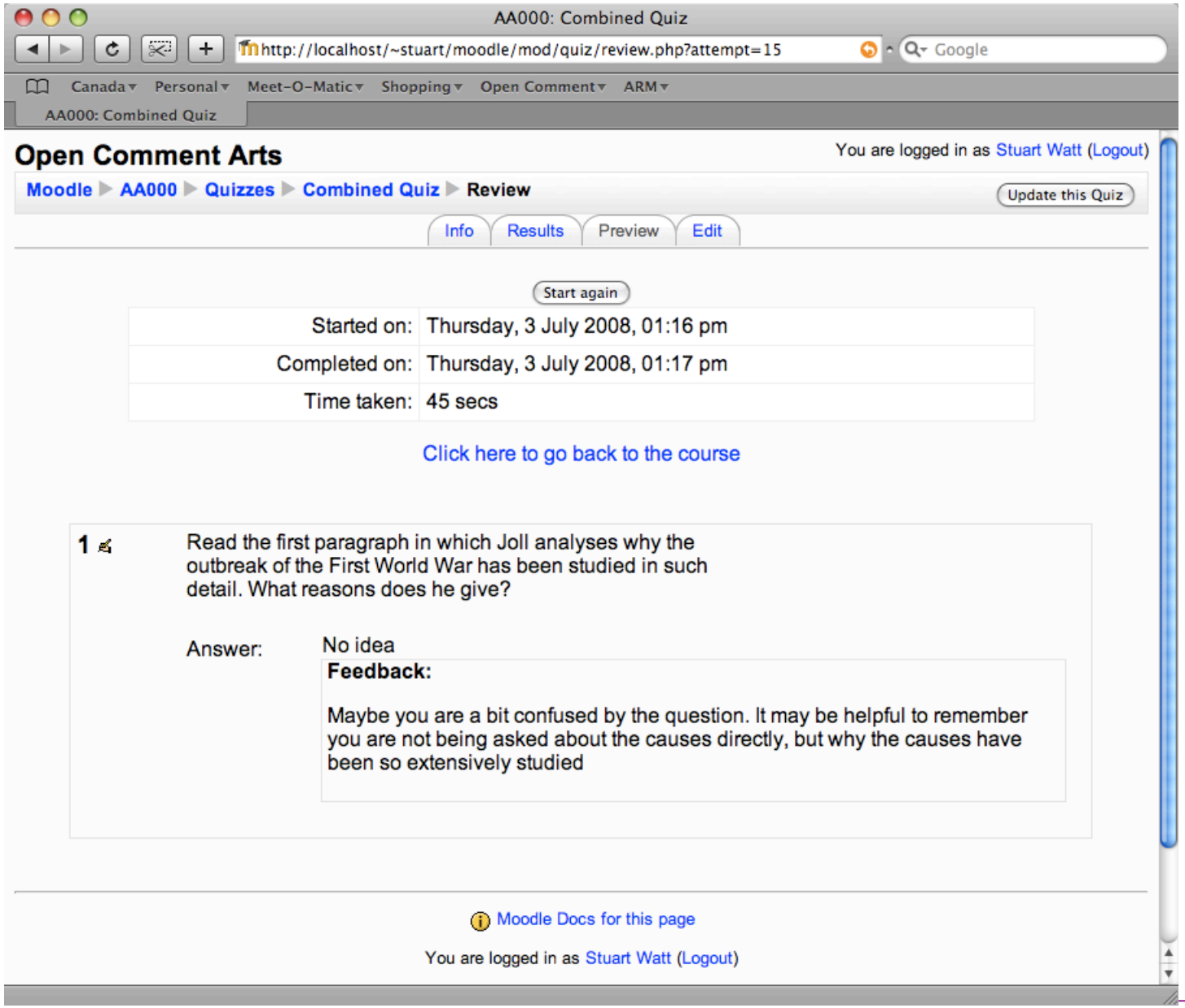
1. Analysis of statistics, usually presented to the student as a table
2. Comprehension of a set text
3. Identifying similarities and differences for a given event

The tool: an example question





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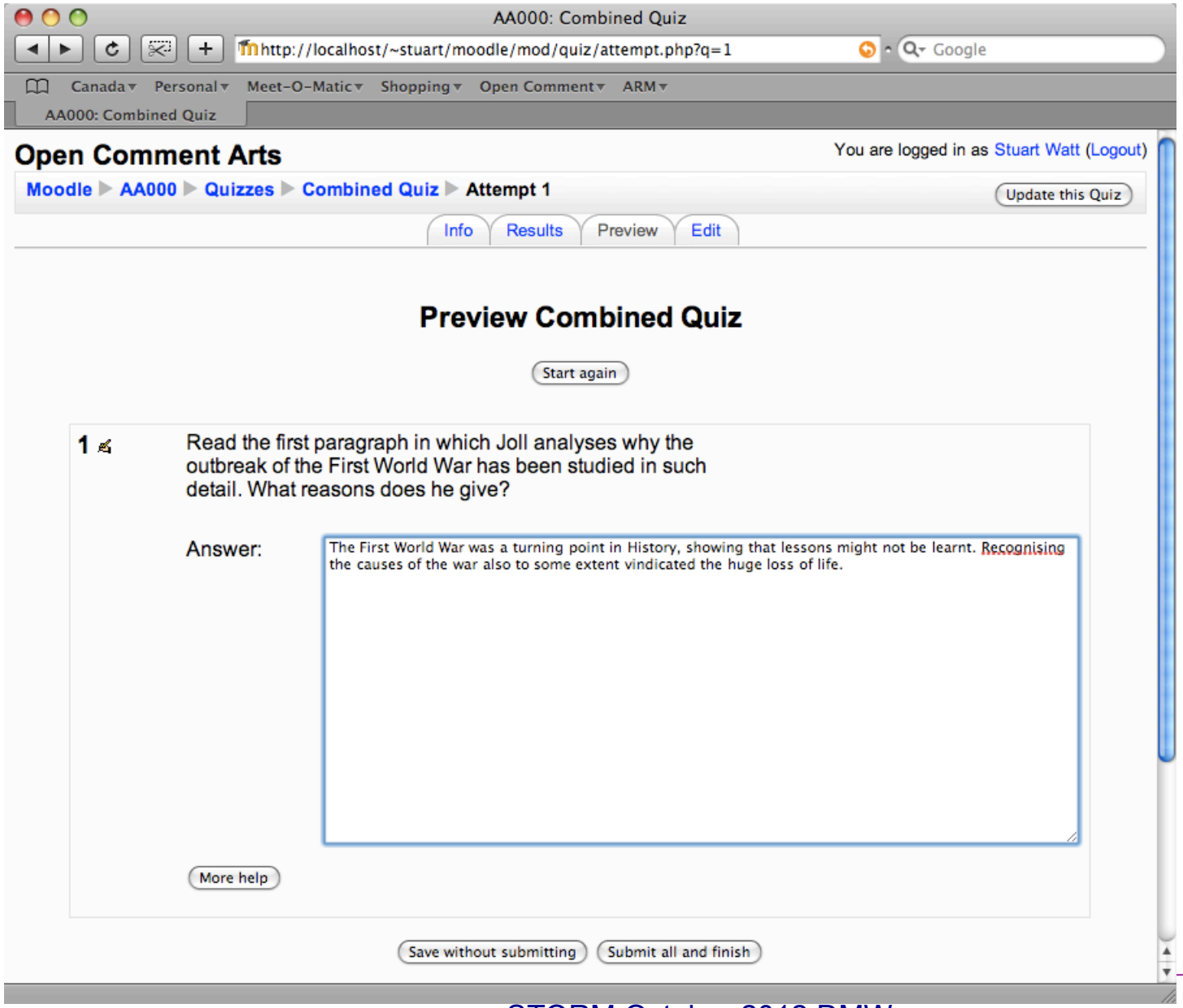

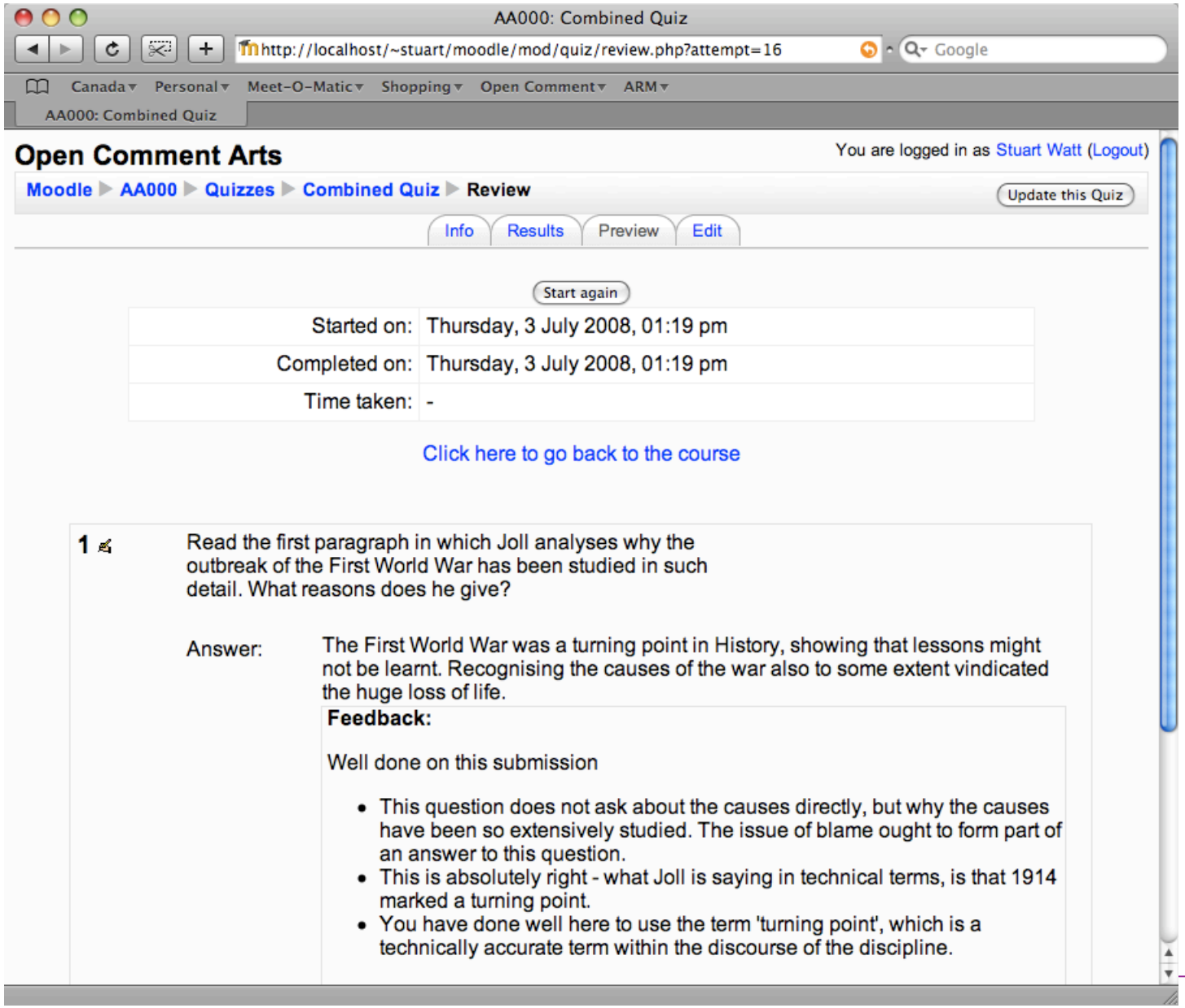

Stages of analysis by computer of students' free text entry for Open Comment: advice with respect to content (socio-emotional support stylised example)

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- **STAGE 1a: DETECT ERRORS** E.g. Incorrect dates, facts. (Incorrect inferences and causality is dealt with below)
- Instead of concentrating on X, think about Y in order to answer this question Recognise effort (Dweck) and encourage to have another go
- You have done well to start answering this question but perhaps you misunderstood it. Instead of thinking about X which did not……. Consider Y

Computer analysis continued

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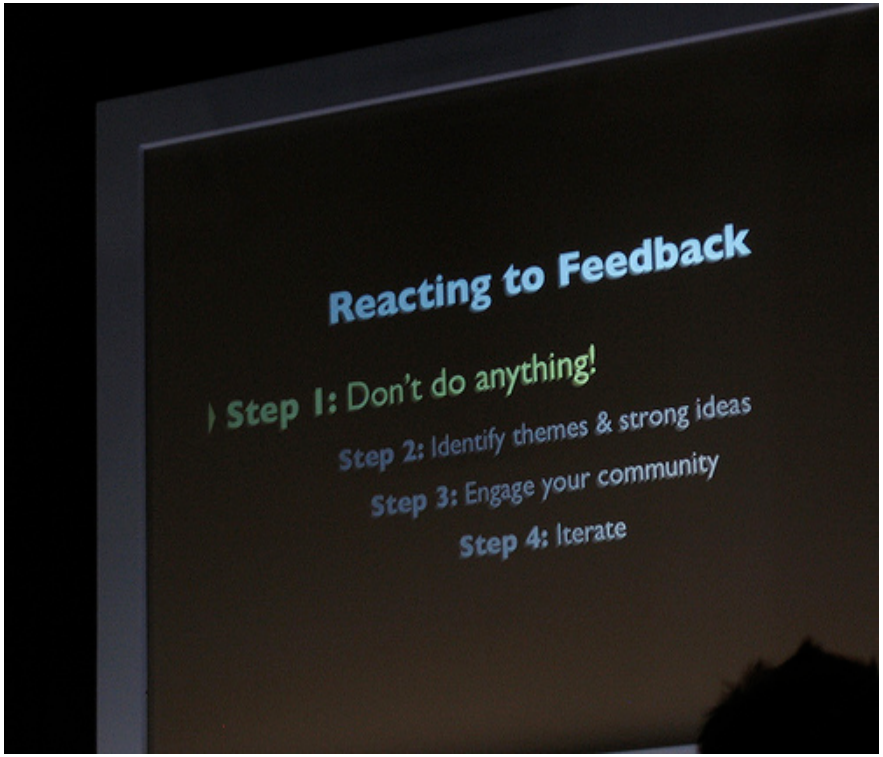
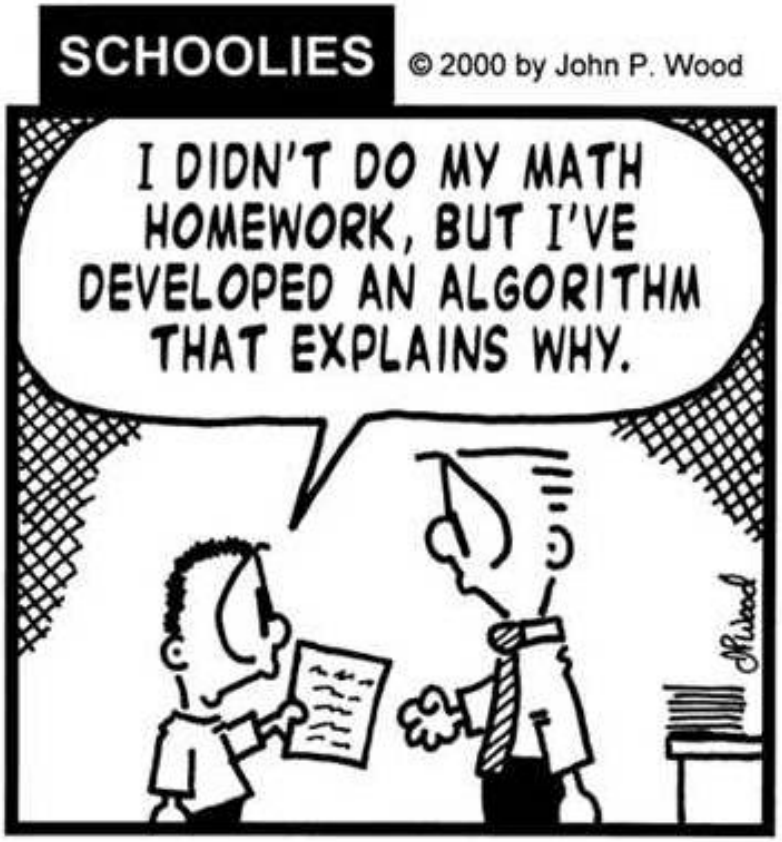
- **STAGE 2a: REVEAL FIRST OMISSION**
- Consider the role of Z in your answer Praise what is correct and point out what is missing Good but now consider the role X plays in your answer
- **STAGE 2b: REVEAL SECOND OMISSION**
- Consider the role of P in your answer Praise what is correct and point out what is missing Yes but also consider P. Would it have produced the same result if P is neglected?



Final stages of analysis

- **STAGE 3:REQUEST CLARIFICATION OF KEY POINT 1**
- **STAGE 4:REQUEST FURTHER ANALYSIS OF KEY POINT 1** (Stages 3 and 4 repeated with all the key points)
- **STAGE 5:REQUEST THE INFERENCE FROM THE ANALYSIS OF KEY POINT 1 IF IT IS MISSING**
- **STAGE 6:REQUEST THE INFERENCE FROM THE ANALYSIS OF KEY POINT 1 IF IT IS NOT COMPLETE**
- **STAGE 7:CHECK THE CAUSALITY**
- **STAGE 8:REQUEST ALL THE CAUSAL FACTORS ARE WEIGHTED**



SAFeSEA: Supportive Automated Feedback for Short Essay Answers

An automated tool supporting

online writing and assessment of essays providing

accurate targeted feedback

EPSRC
Engineering and Physical Sciences Research Council

UNIVERSITY OF OXFORD

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SAFeSEA
Dr Denise Whitelock
Professor John Richardson

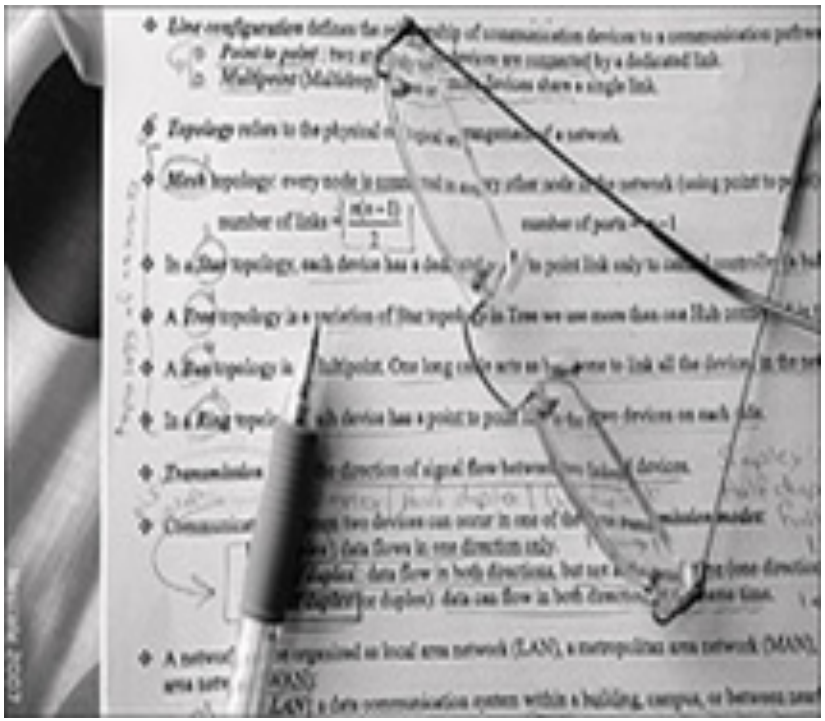
Professor Stephen Pulman

About SAFeSEA

- Effect of summarisation
- What are the beneficial factors?
- Correlate measures of learner activity and essay improvement
- Effect of hints
- http://www8.open.ac.uk/iet/main/research-scholarship/research-projects/supportive-automated-feedback-short-essay-answers

SAFeSEA

- Support for essay writing
- Shape landscape of eLearning and Learning Analytics
- Improves the student experience
- Support advances in NLP



Final thoughts

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- There is a growing consensus in the field of assessment that times are changing and that assessment needs to become more embedded/central in the teaching learning cycle (Hatzipanagos & Rochon 2011).

- Our project provides another phase in this type of research where the balance of socio emotive content contained in feedback cannot be ignored (Draper, 2009).

- Feedback that encourages the student to actively change their ideas and ways of organising their answers and discourse within a given subject domain is what is required and advocated by Whitelock (2011) as “advice for action”.

"Advice for Action", Whitelock (2011)

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- Helping students find out what they do not know and how to remedy the situation can avoid the trauma of assessment
- Are we on the way with new e-tools?

References

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