Northumbria Conference- Educating for the Future 3
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Can [computer aided] formative assessment impact on student performance?

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Why were we interested in this?

- 1. Poor student performance....
 - a) in fundamental, but 'unpopular' subjects
 - [bio]chemistry and 'maths'
 - coupled with poor attendance [self fulfilling?]
 - b) in exams
 - resulting in significant differences between modes of assessment

Why were we interested in this?

- 2. How best to address 'over assessment'?
 - University 'ideal' is 1 per 10 credit module
 - BUT
 - common belief that 'if its not assessed students won't attend/ do what is set' [problematic in practical sessions]
 - if there is only one assessment, what if a student performs badly in it?
 - Represents a huge burden on staff [as well as the students]

The plan of action....

- Selection of 'guinea pig' modules....
 - 1. [CH346] Skills for Applied Sciences I
 - level 4 module which covers range of prac & transf skills incl basic numeracy & data handling
 - lots of 'issues'
 - 2. [CH426] Biochemical Pathways
 - level 5 module
 - main problem poor end exam marks

The plan of action....

3. [CH365] Animal Biotechnology

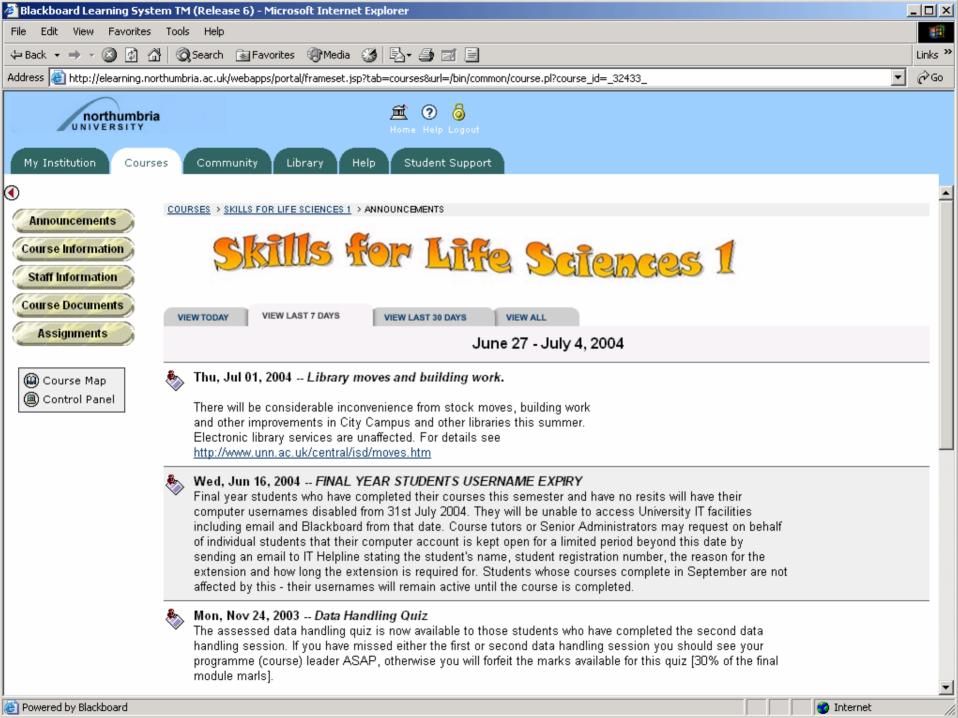
- an applied level 6 module
- main issues all practicals assessed and poor end exam performance

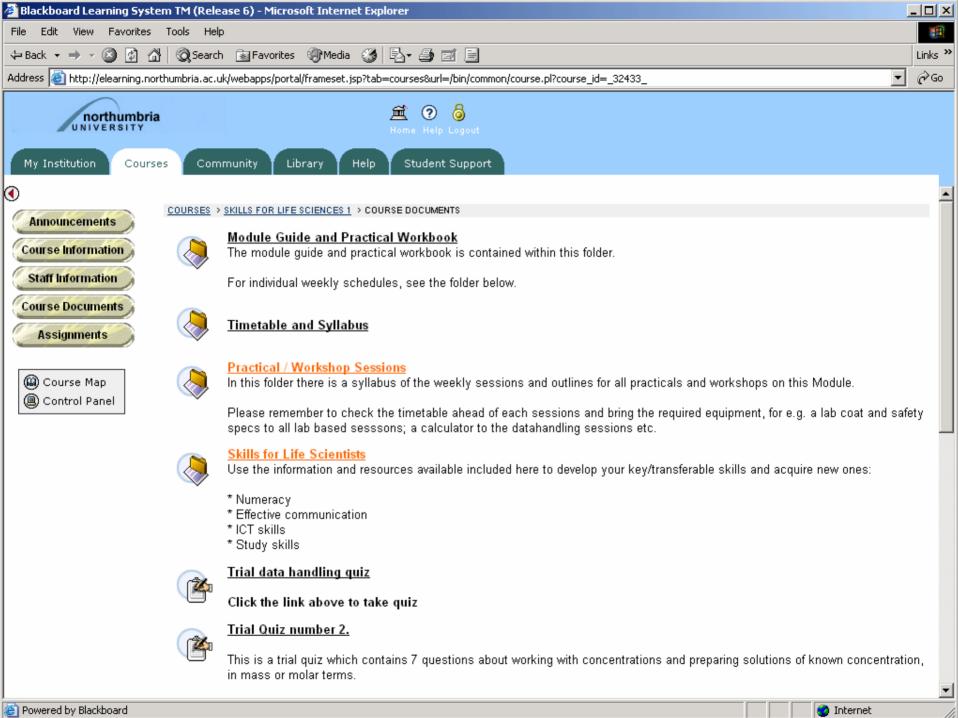
4. [CH363] Bioethics

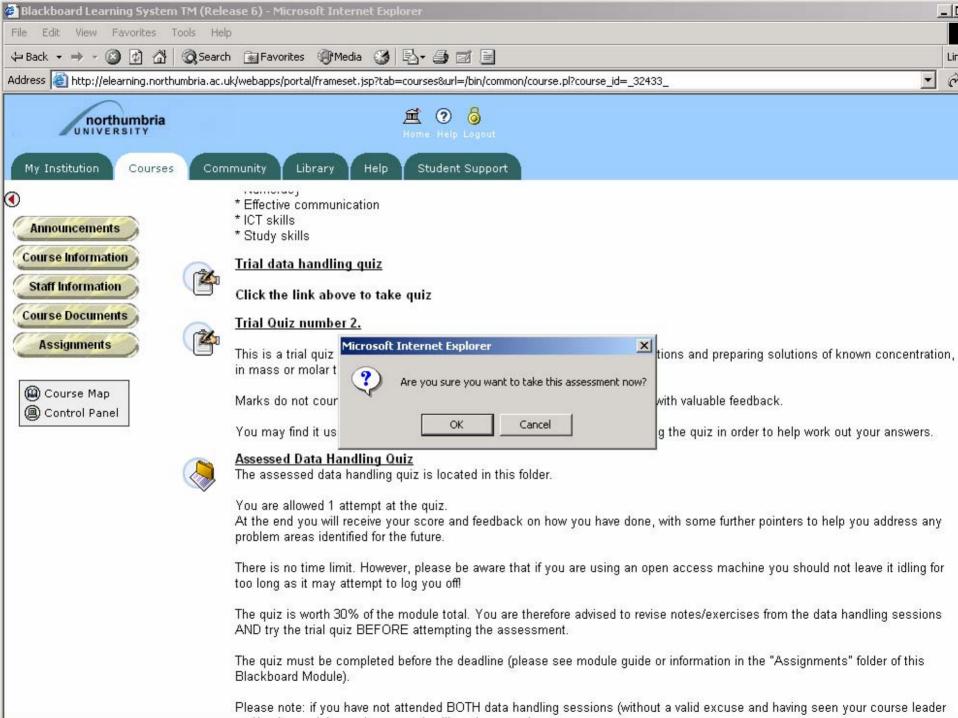
- level 6 module where students are introduced to ethics as a discipline
- main issues- students struggle with unfamiliar concepts *etc*. and overassessed

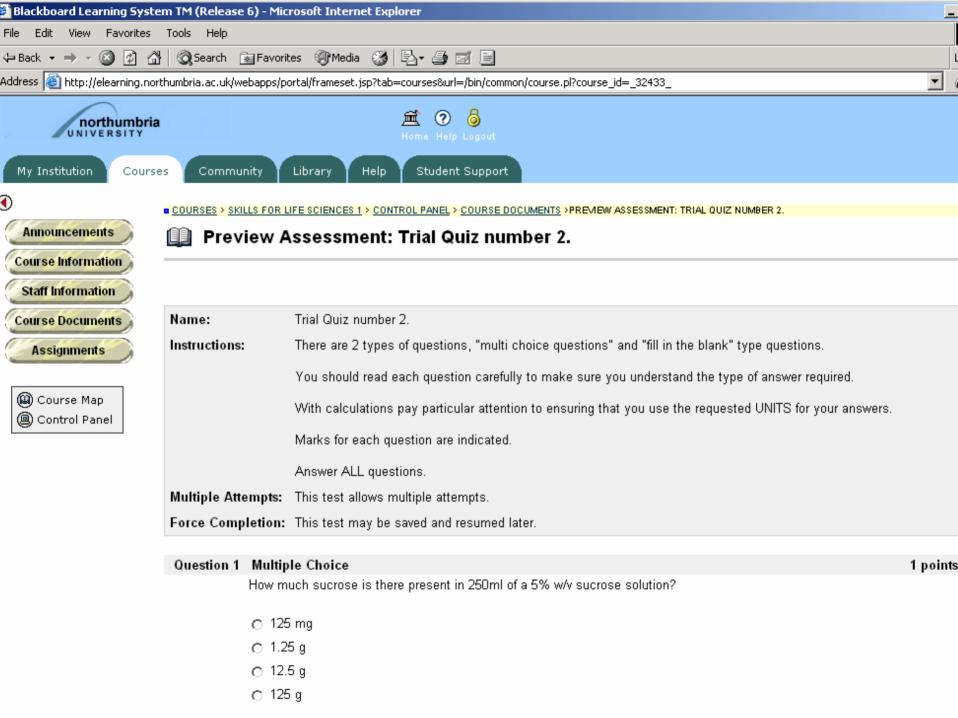
1. [CH346] Skills for Applied Sciences I

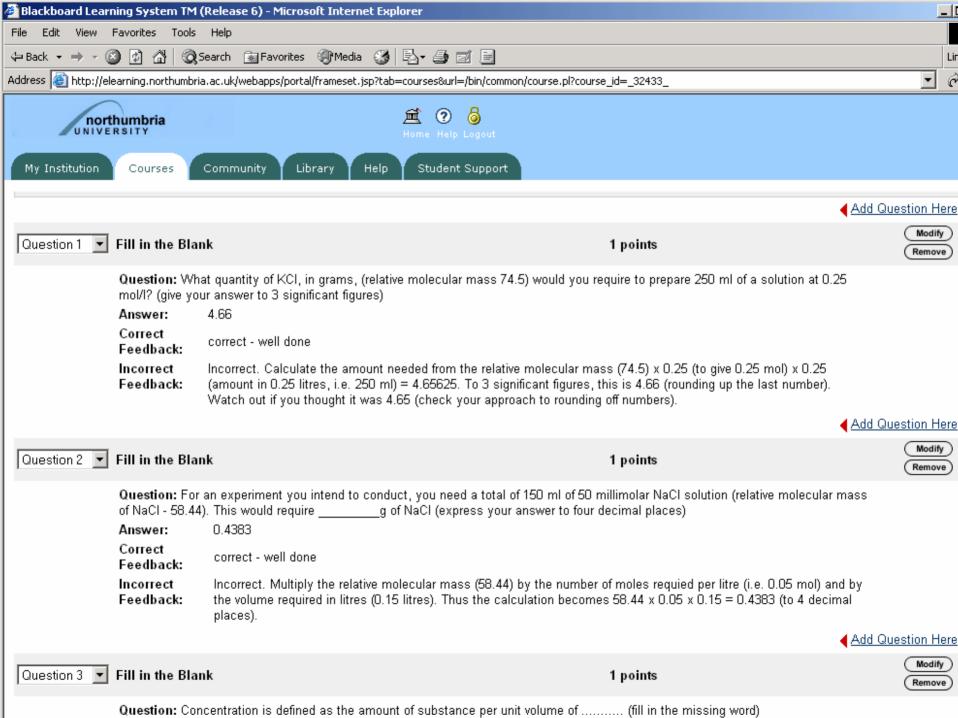
- [most] sessions assessed in session
 - much better attendance
 - each session small summative score, but instant individual formative feedback
- range of on line resources and formative quizzes in Bb
 - same format and style as summative quiz
 - BUT <5% accessed resources and <30% tried formative quizzes
- after discussions with students—new 'rule' planned for next year

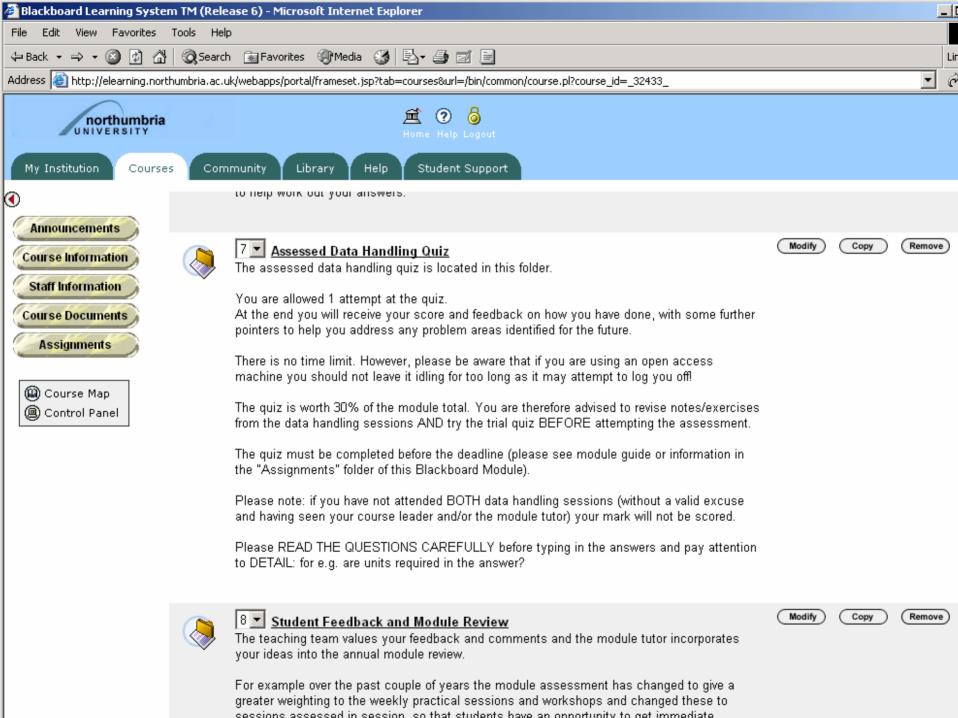




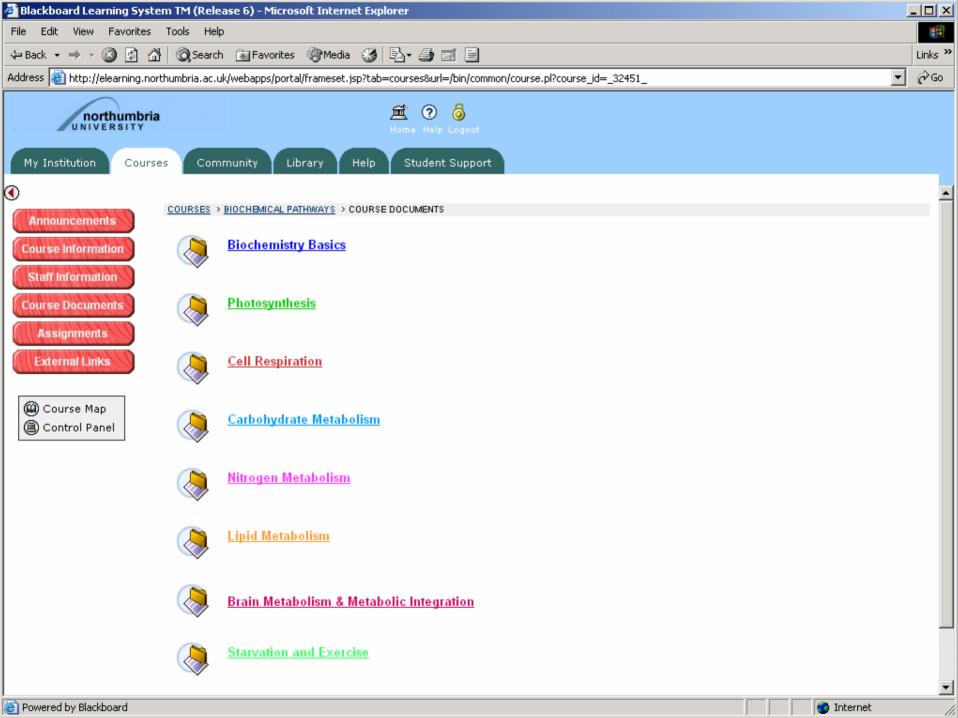


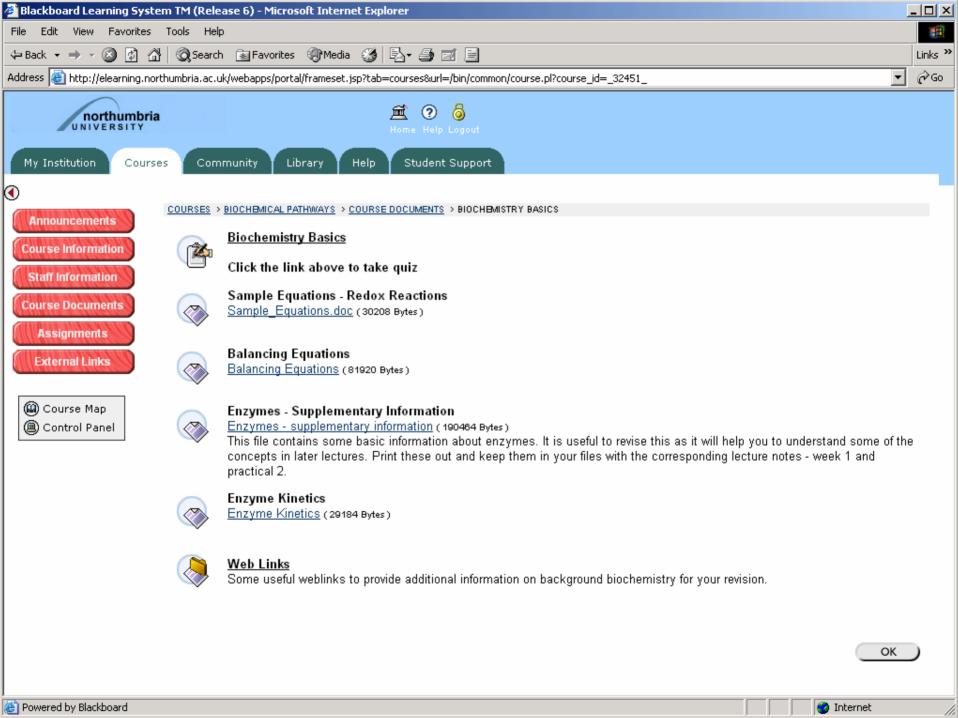


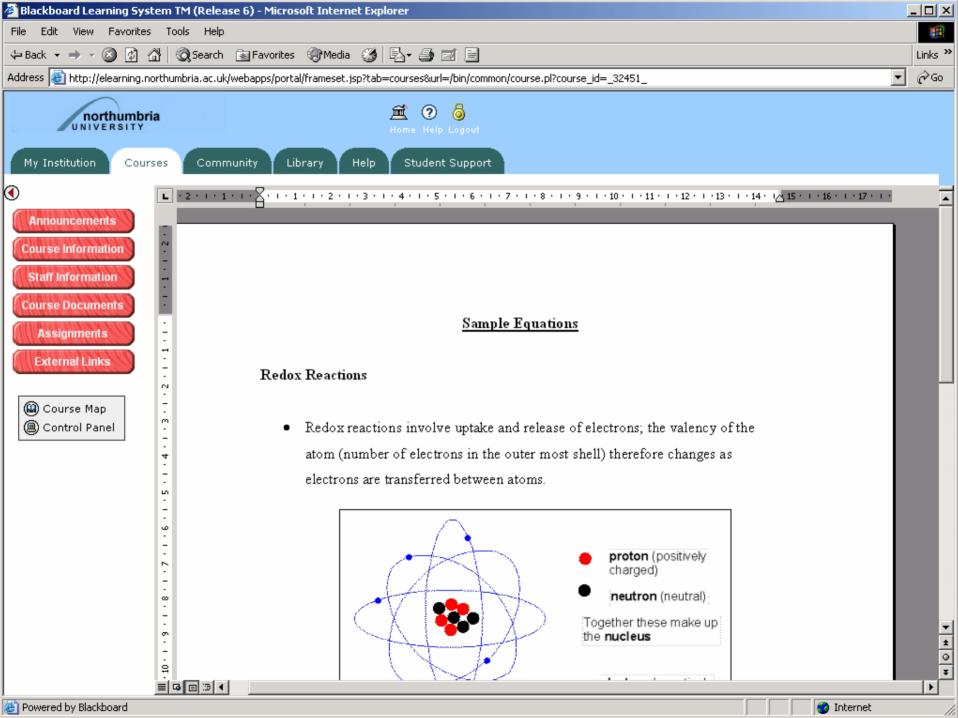


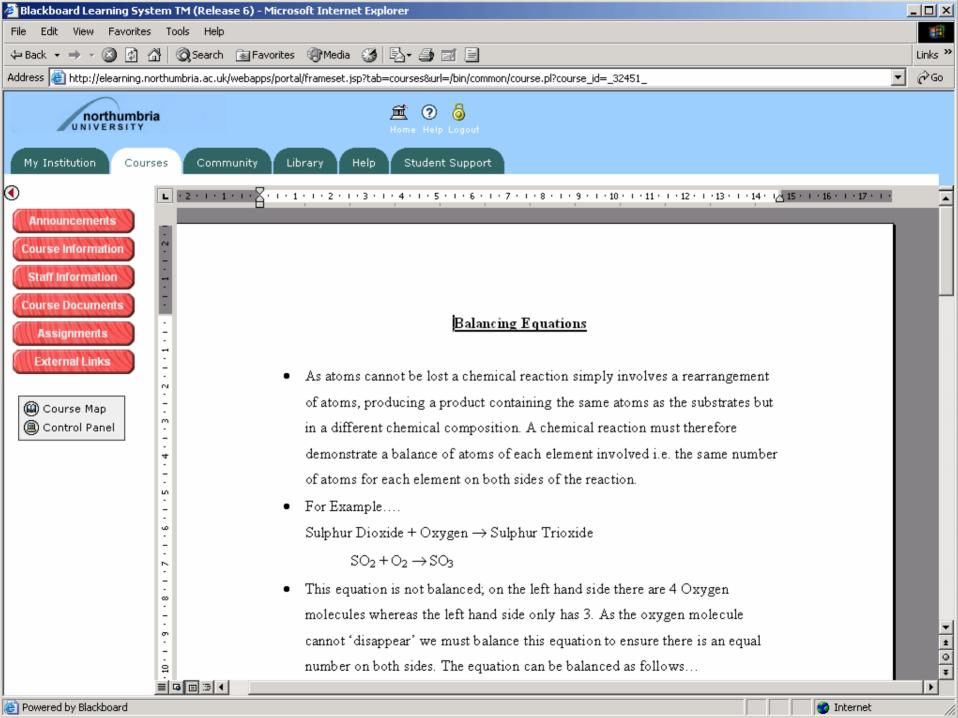


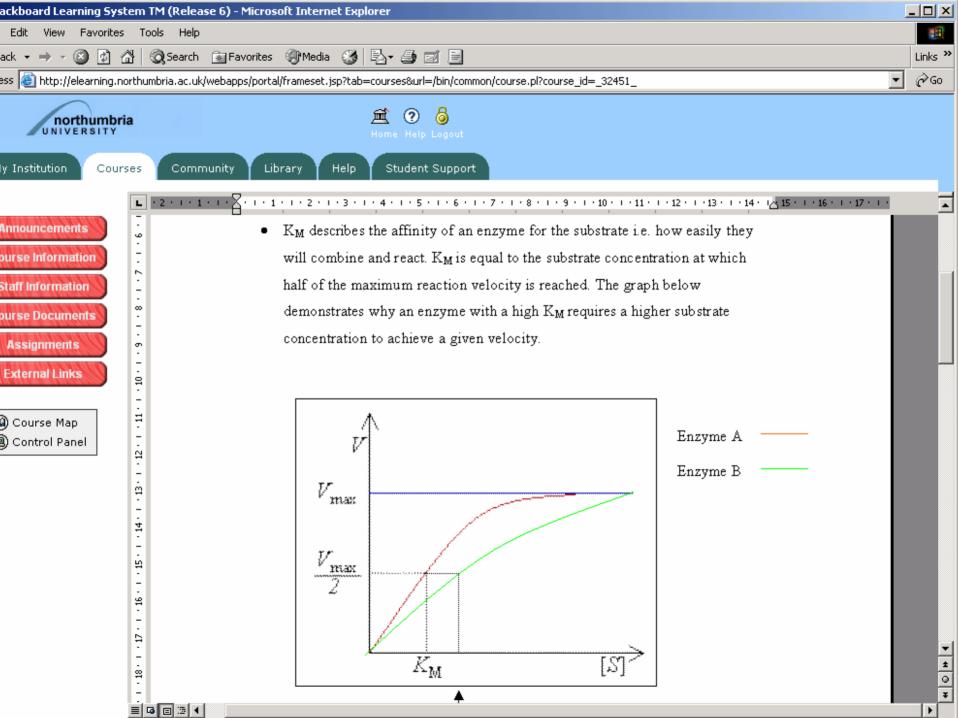
- 2. [CH465] Biochemical pathways
 - two graduates employed to develop online resources in Bb
 - gain student perspective
 - range of material developed [quizzes; helpsheets; applications etc.]
 - linked to end exam
 - most students, again, did not access resources
 - new tactic again planned for next year

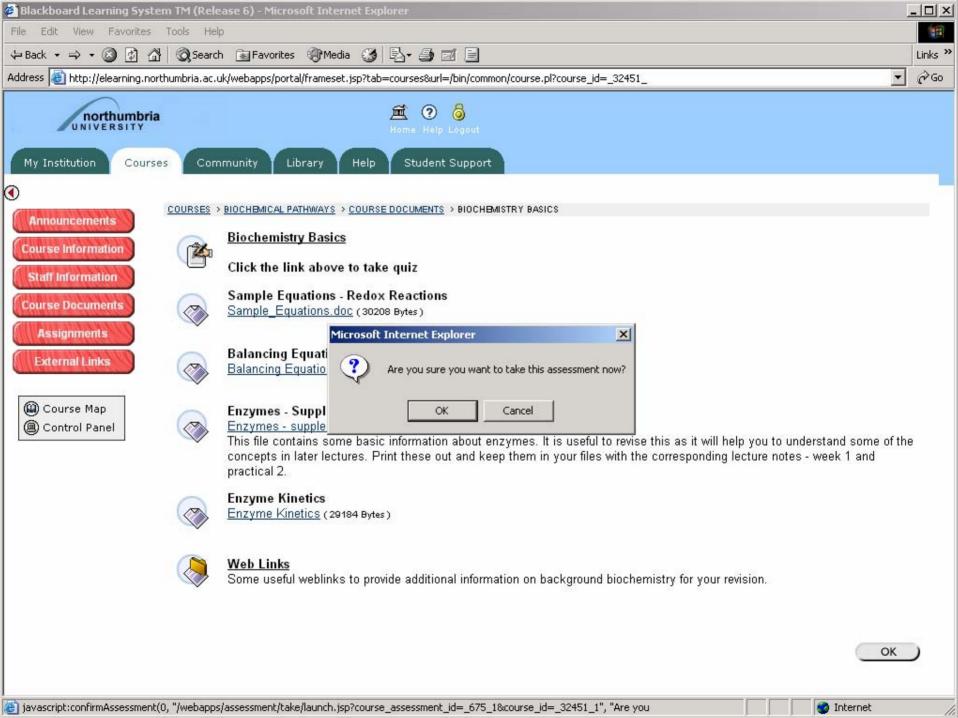


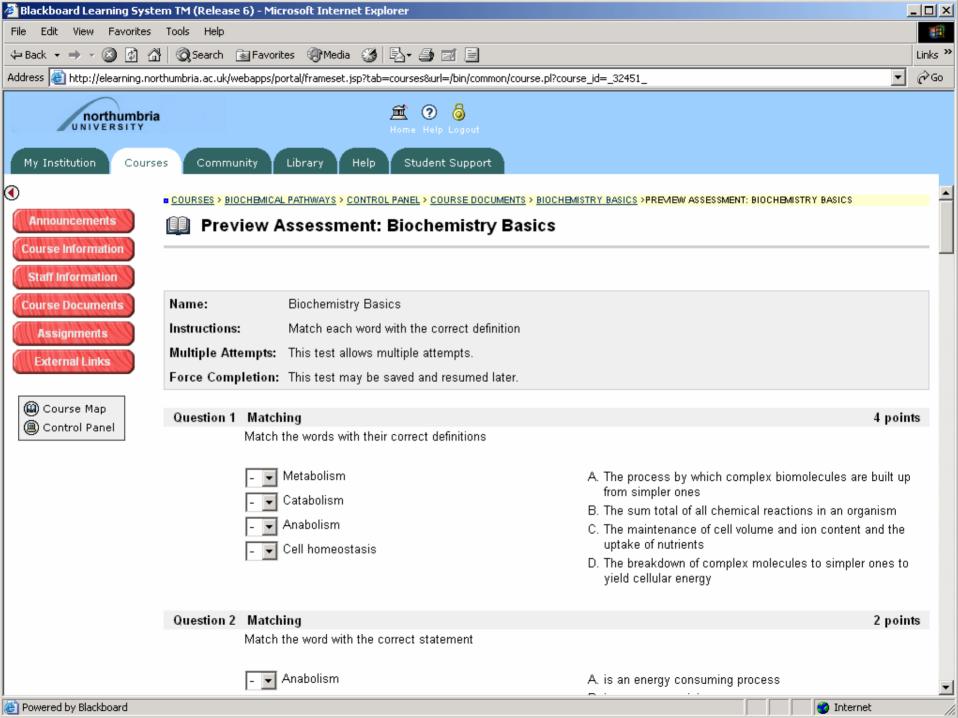










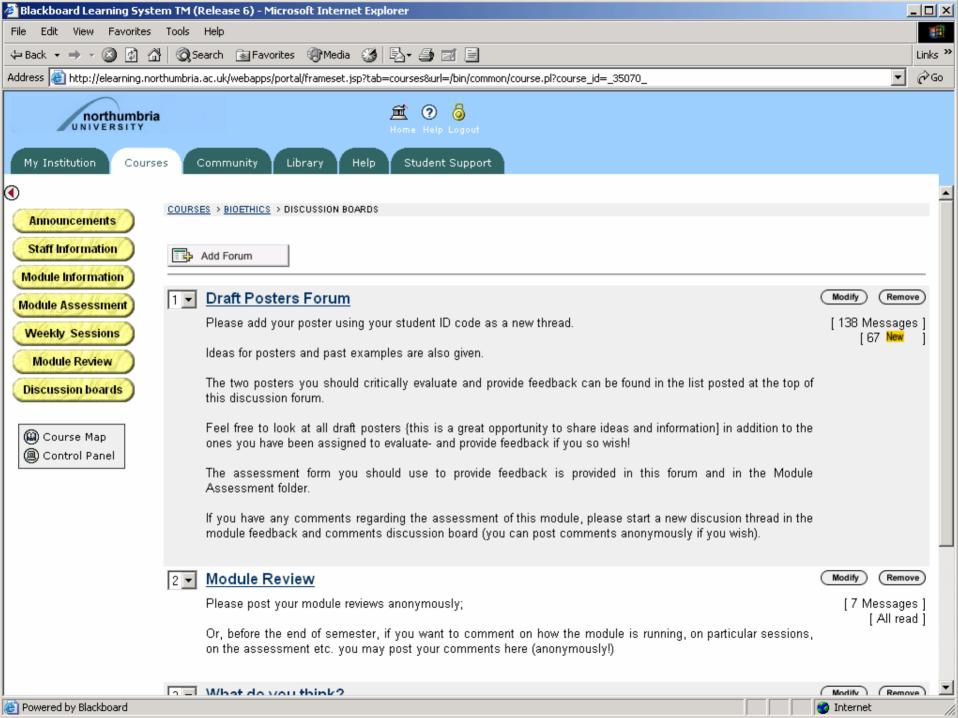


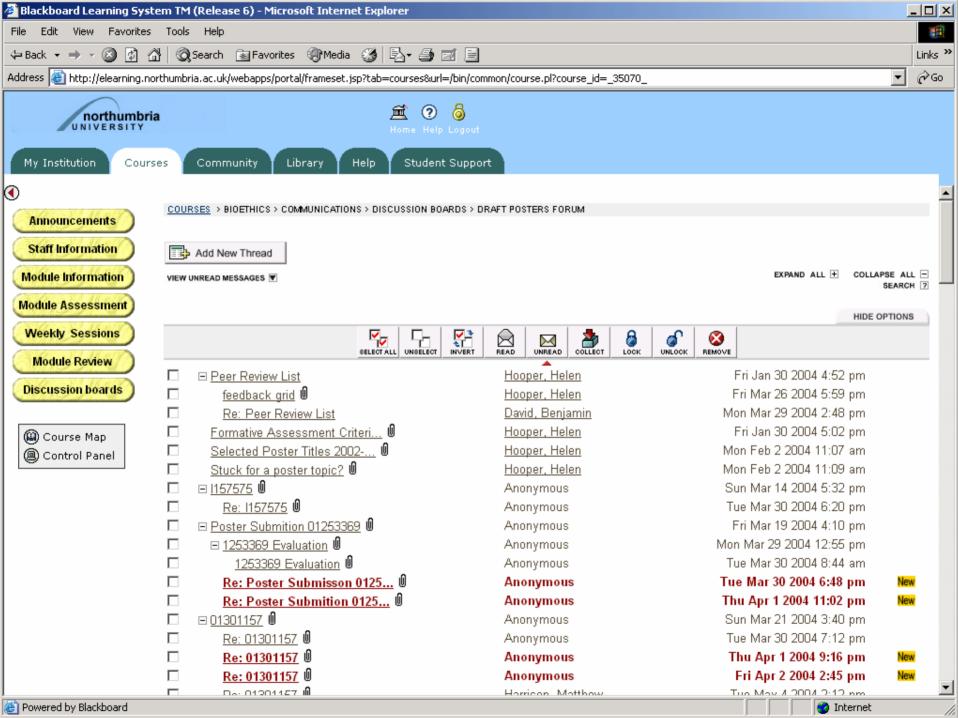
3. [CH365] Animal biotechnology

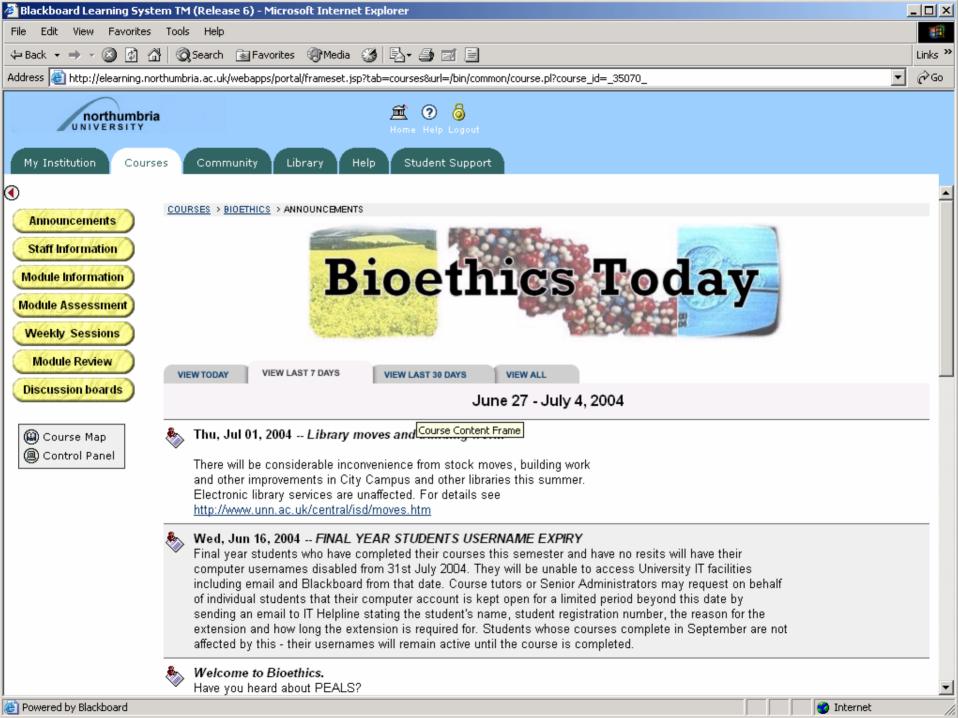
- students informed that 2 practicals would be formative assessed
- past exam questions were discussed in taught sessions each week
 - good attendance at lectures and formatively assessed practicals
 - mixed response from students re. formatively assessed pracs
 - modest improvement in end exam performance

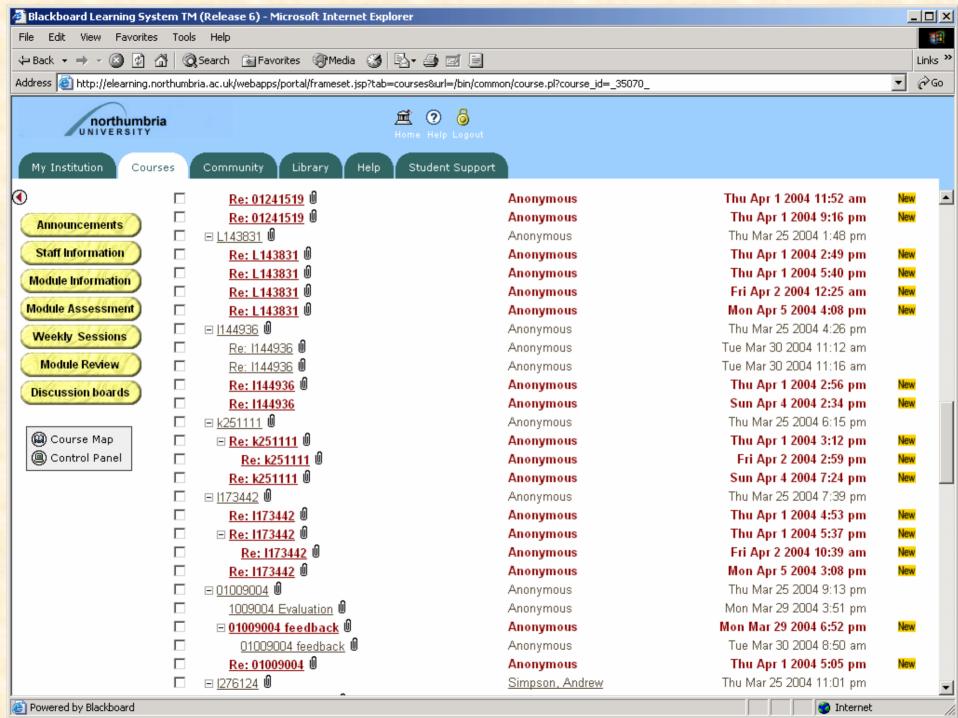
4. [CH363] Bioethics

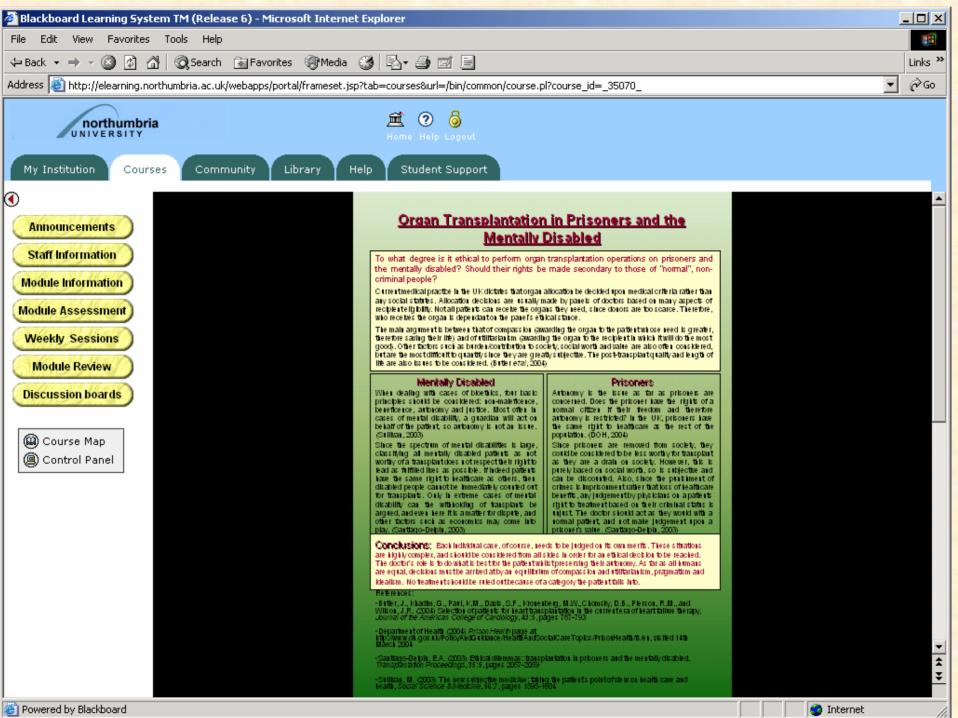
- one end assignment only
 - poster and oral defence
- drafting exercise introduced
 - students had to draft and submit on Bb
 - peer assess 2 other drafts
 - all anonymous
 - staff also gave detailed feedback on every draft
- most successful
 - interesting range of student feedback

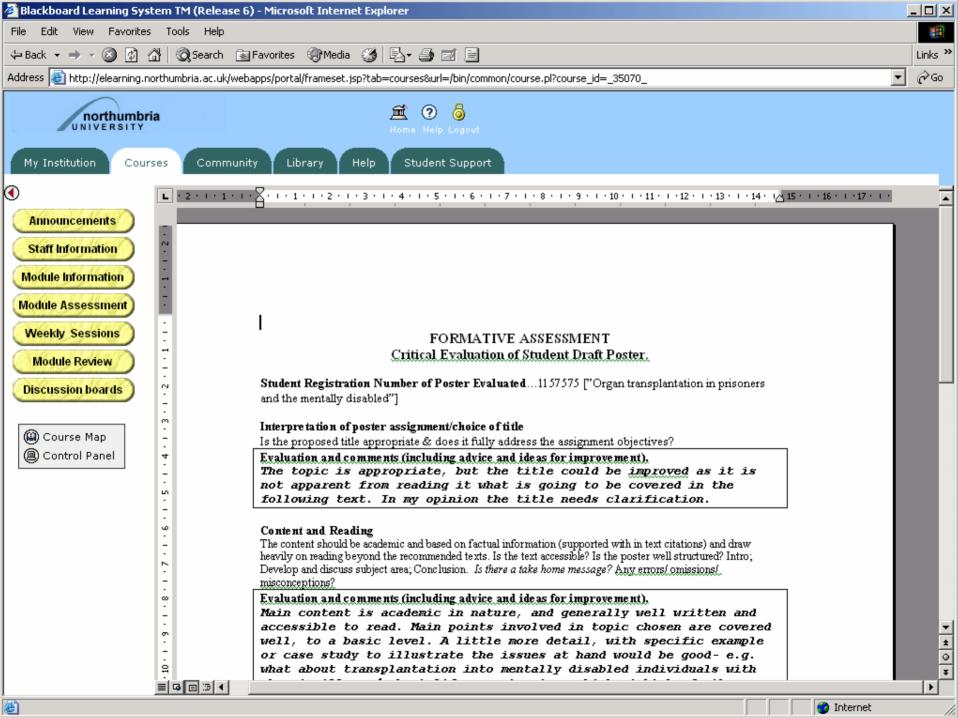


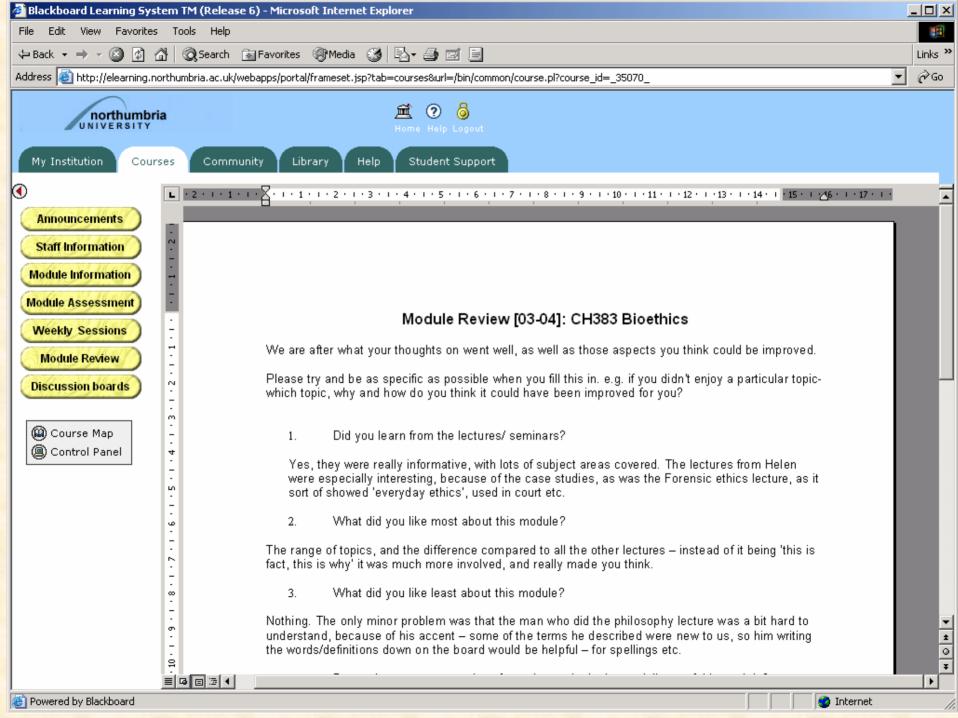


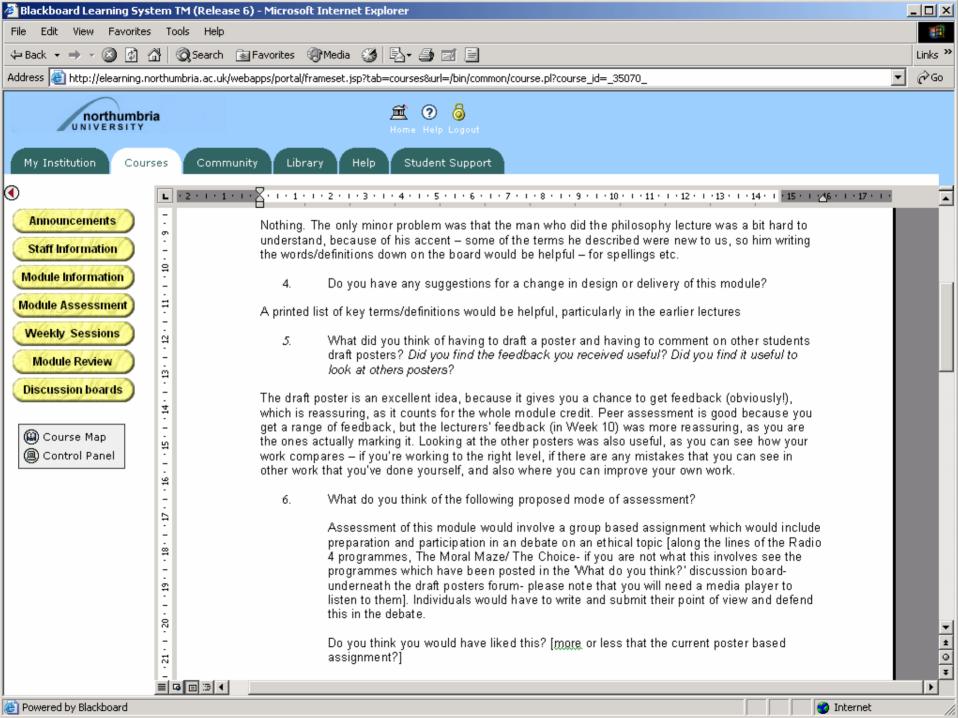


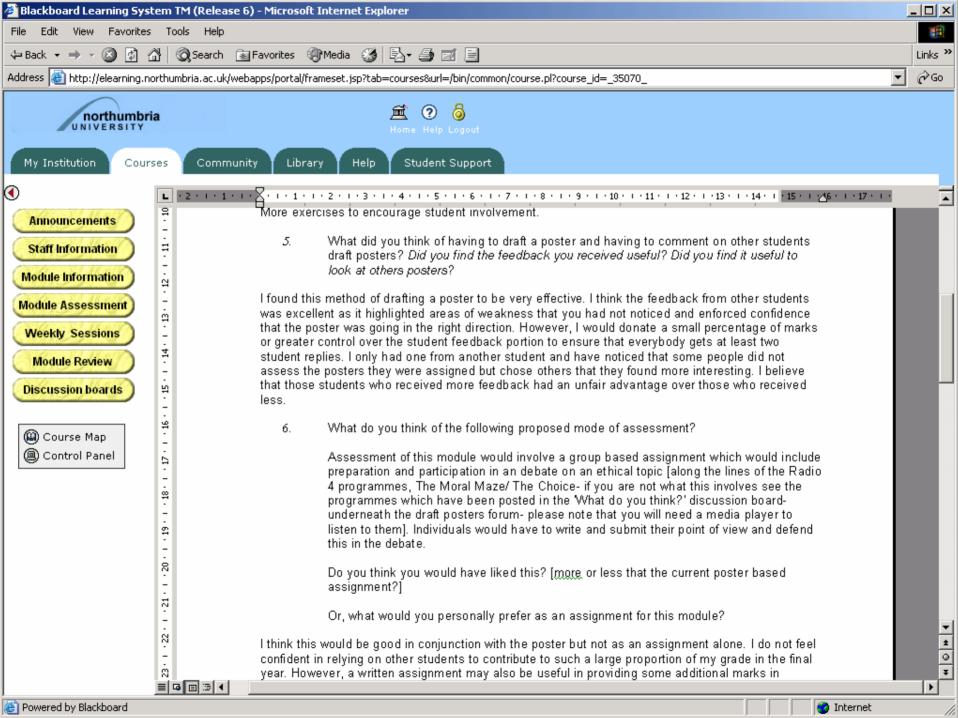












Summary

- Formative assessment
 - has great potential
 - but students are resistant to the idea [if no "marks" are attached]
 - and takes a lot of staff time [to prepare and provide "useful" feedback]