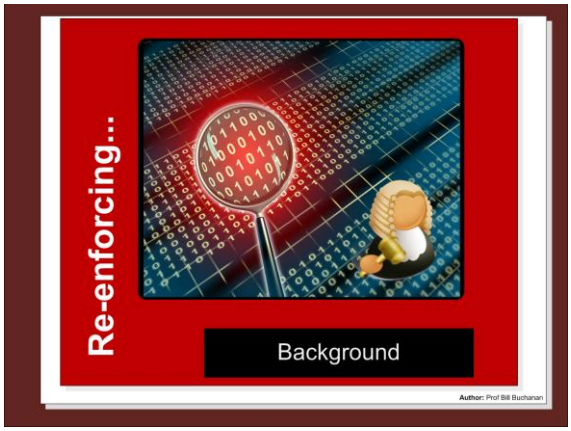
Re-enforcing the Lecture and Tutorial Environment with On-line Lectures, Fun Challenges, Virtual Environments and Demonstrations

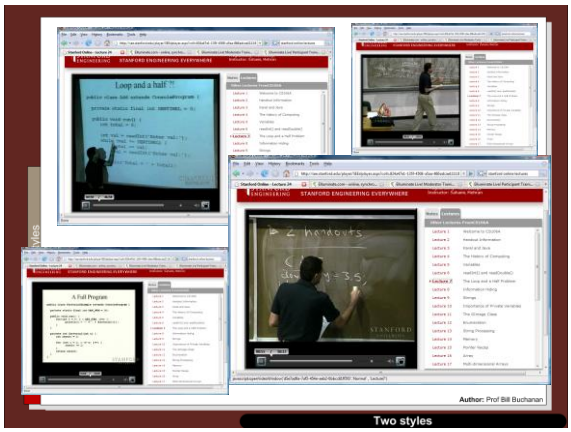
Motivation: Face-to-face lectures/labs and their scheduling are two important factors in structuring academic development in Higher Education … and how do research active academics properly support their teaching?

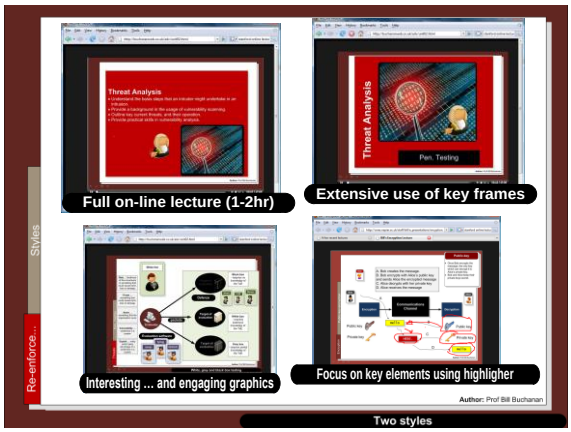
- Show an example of how on-line lectures and labs have been used to support a Computing module.
- Define how the lecture and lab environment are the true core of a module, and how this can be scaled into blended and distance learning.
- Define eight guidelines used in the support of the module.
- Show evidence of student perceptions.

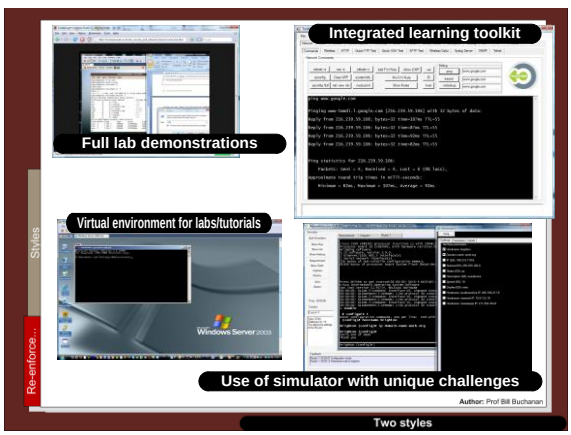
Prof Bill Buchanan

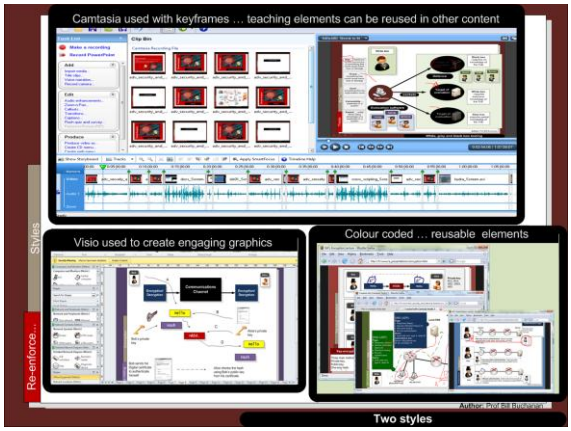
Author: Prof Bill Buchanan

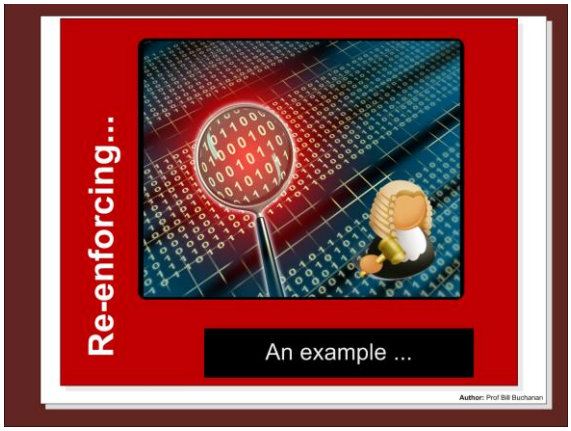


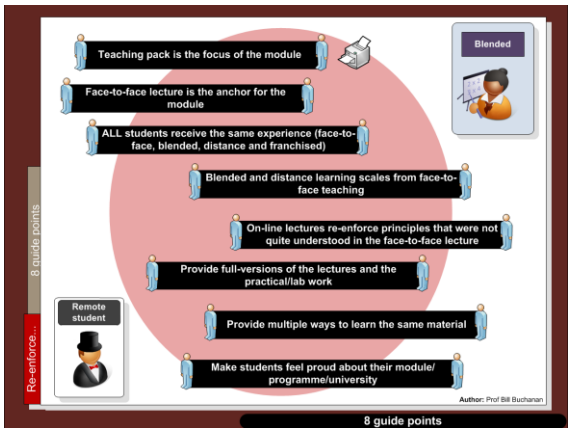


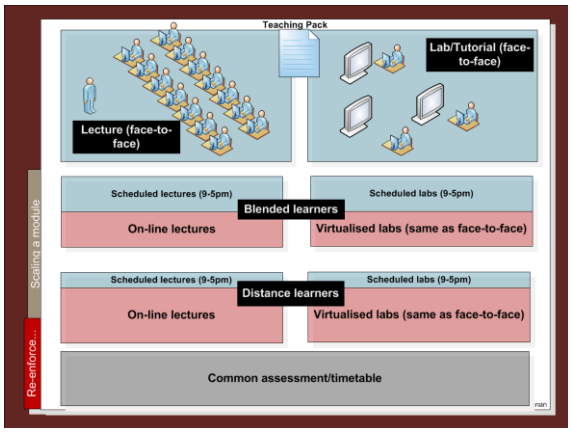


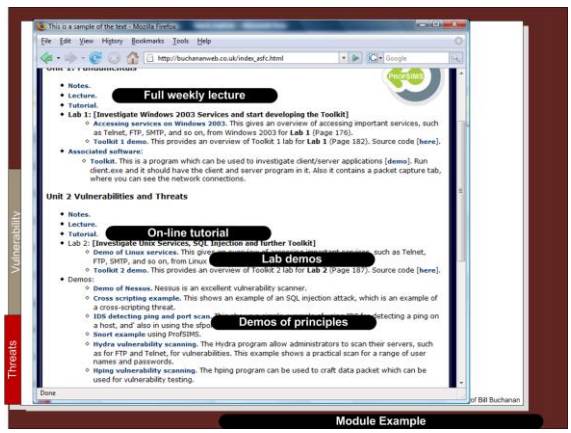



Camtasia used with keyframes … teaching elements can be reused in other content
Visio used to create engaging graphics
Colour coded … reusable elements
Styles
Re-enforce...
Two styles

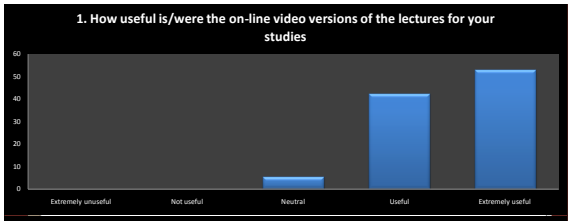

Re-enforcing...
An example ...

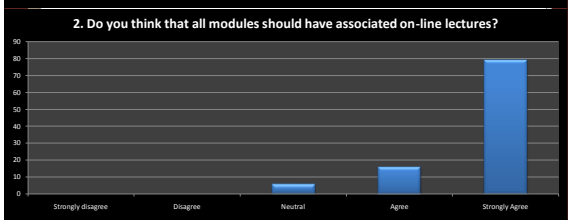

Teaching pack is the focus of the module
Face-to-face lecture is the anchor for the module
ALL students receive the same experience (face-to-face, blended, distance and franchised)
Blended and distance learning scales from face-to-face teaching
On-line lectures re-enforce principles that were not quite understood in the face-to-face lecture
Provide full-versions of the lectures and the practical/lab work
Provide multiple ways to learn the same material
Make students feel proud about their module/ programme/university
Blended
Remote student
8 guide points
Re-enforce...
8 guide points

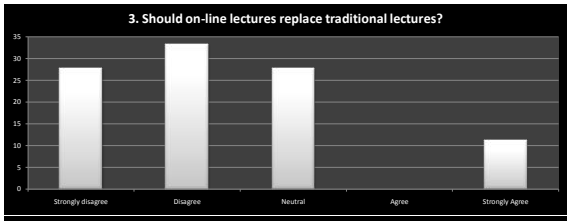

Teaching Pack
Lab/Tutorial (face-to-face)
Lecture (face-to-face)
Scheduled lectures (9-5pm)
Blended learners
Scheduled labs (9-5pm)
On-line lectures
Virtualised labs (same as face-to-face)
Scheduled lectures (9-5pm)
Distance learners
Scheduled labs (9-5pm)
On-line lectures
Virtualised labs (same as face-to-face)
Common assessment/timetable
Scaling a module
Re-enforce...

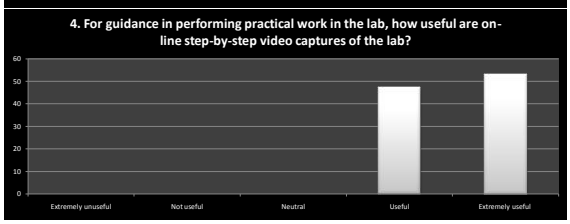

Full weekly lecture
On-line tutorial
Lab demos
Demos of principles
Vulnerability
Threats
Module Example

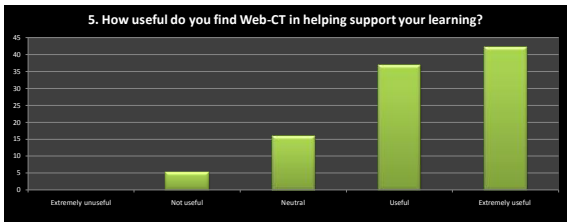

Re-enforcing...
Some results

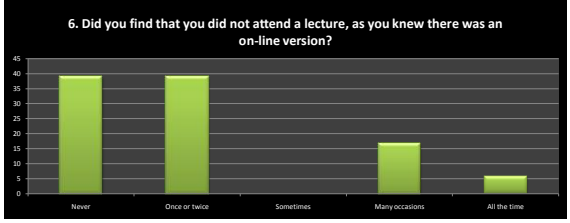

1. How useful is/were the on-line video versions of the lectures for your studies
Extremely unuseful
Not useful
Neutral
Useful
Extremely useful

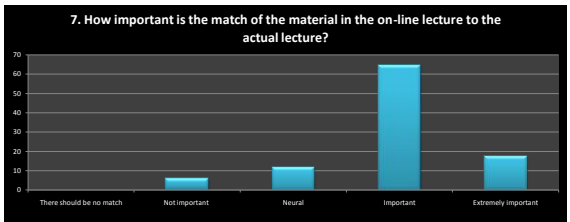

2. Do you think that all modules should have associated on-line lectures?
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

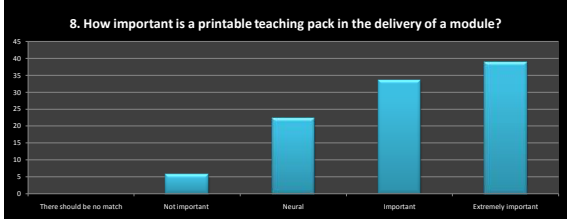

3. Should on-line lectures replace traditional lectures?
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

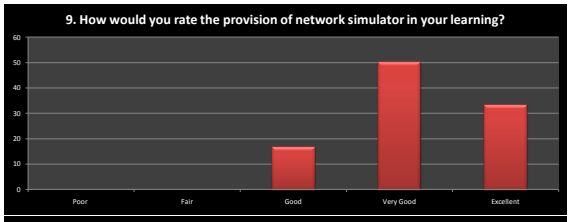

4. For guidance in performing practical work in the lab, how useful are on-line step-by-step video captures of the lab?
Extremely unuseful
Not useful
Neutral
Useful
Extremely useful

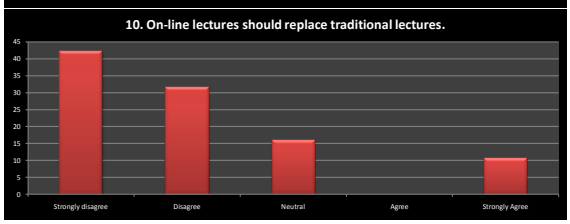

5. How useful do you find Web-CT in helping support your learning?
Extremely unuseful
Not useful
Neutral
Useful
Extremely useful

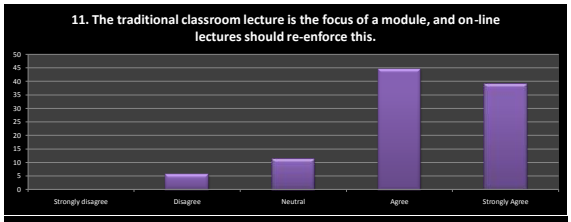

6. Did you find that you did not attend a lecture, as you knew there was an on-line version?
Never
Once or twice
Sometimes
Many occasions
All the time

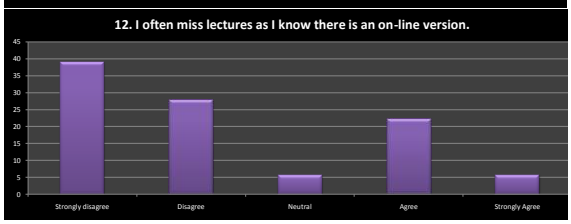

7. How important is the match of the material in the on-line lecture to the actual lecture?
There should be no match
Not important
Neural
Important
Extremely important

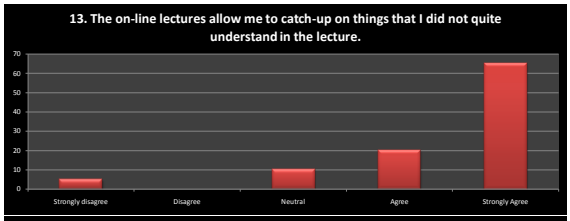

8. How important is a printable teaching pack in the delivery of a module?
There should be no match
Not important
Neural
Important
Extremely important

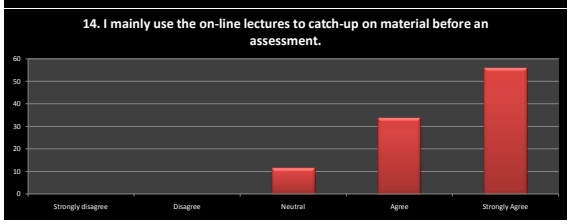

9. How would you rate the provision of network simulator in your learning?
Poor
Fair
Good
Very Good
Excellent

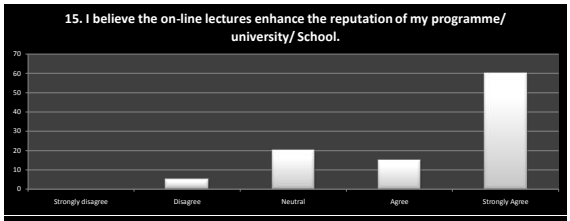

10. On-line lectures should replace traditional lectures.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

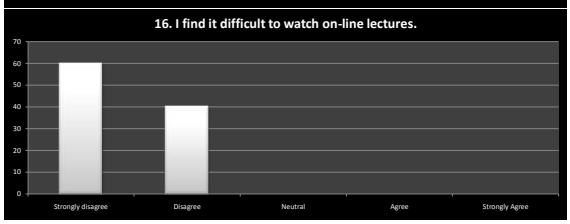

11. The traditional classroom lecture is the focus of a module, and on-line lectures should re-enforce this.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

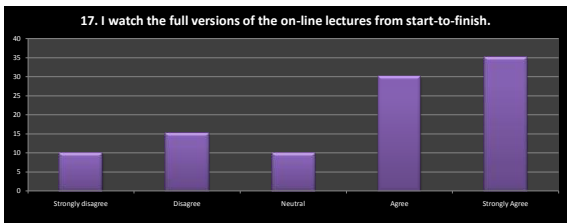

12. I often miss lectures as I know there is an on-line version.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

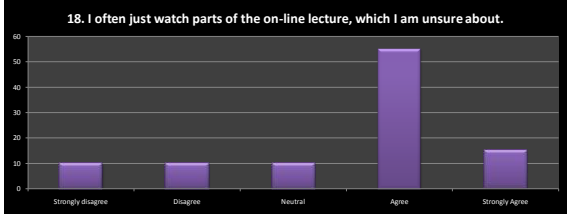

13. The on-line lectures allow me to catch-up on things that I did not quite understand in the lecture.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

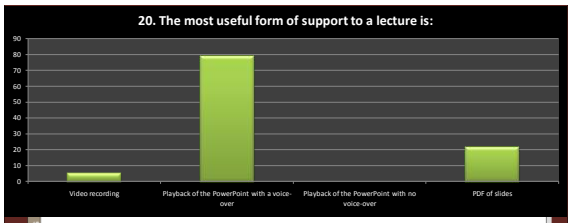

14. I mainly use the on-line lectures to catch-up on material before an assessment.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree

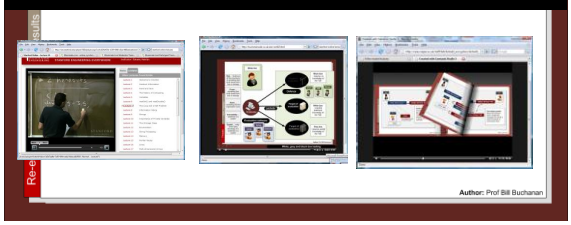

15. I believe the on-line lectures enhance the reputation of my programme/ university/ School.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree


16. I find it difficult to watch on-line lectures.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree


17. I watch the full versions of the on-line lectures from start-to-finish.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree


18. I often just watch parts of the on-line lecture, which I am unsure about.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree


20. The most useful form of support to a lecture is:
Video recording
Playback of the PowerPoint with a voice-over
Playback of the PowerPoint with no voice-over
PDF of slides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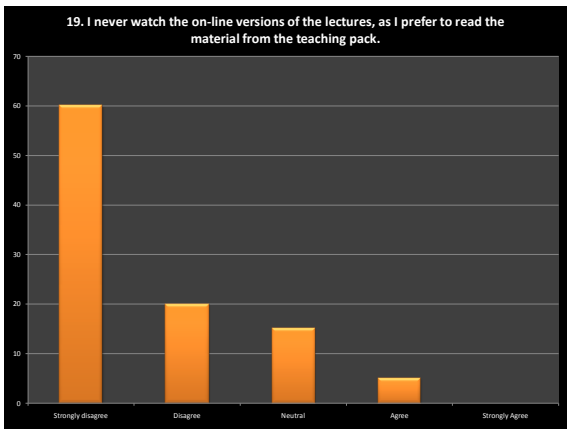
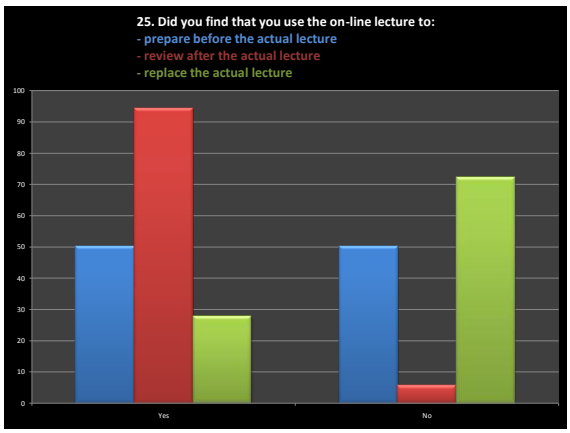
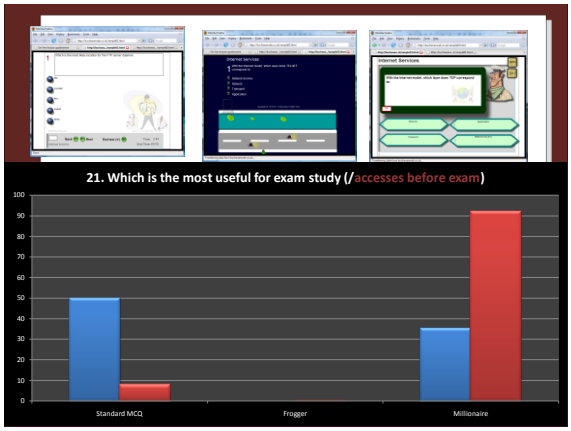
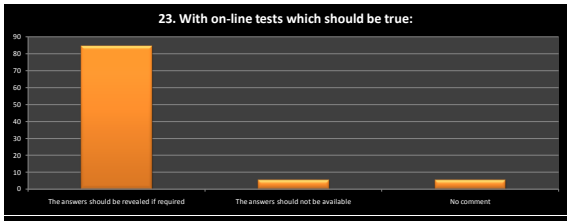
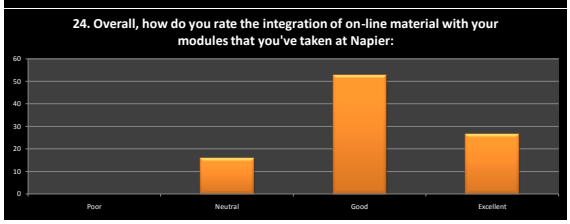
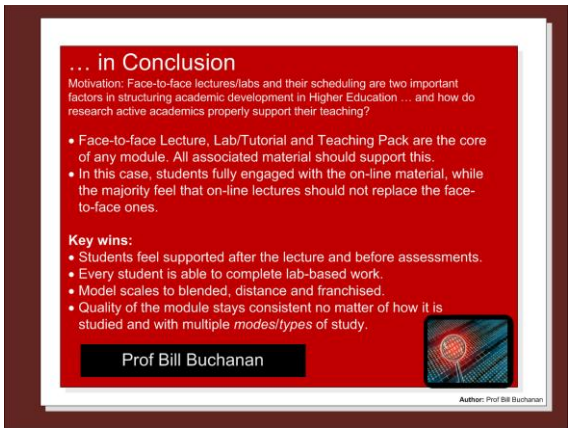

19. I never watch the on-line versions of the lectures, as I prefer to read the material from the teaching pack.
Strongly disagree
Disagree
Neutral
Agree
Strongly Agree


25. Did you find that you use the on-line lecture to:
- prepare before the actual lecture
- review after the actual lecture
- replace the actual lecture
Yes
No


21. Which is the most useful for exam study (/accesses before exam)
100
90
80
70
60
50
40
30
20
10
0
Standard MCQ
Frogger
Millionaire


23. With on-line tests which should be true:
90
80
70
60
50
40
30
20
10
0
The answers should be revealed if required
The answers should not be available
No comment


24. Overall, how do you rate the integration of on-line material with your modules that you've taken at Napier:
60
50
40
30
20
10
0
Poor
Neutral
Good
Excellent


… in Conclusion
Motivation: Face-to-face lectures/labs and their scheduling are two important factors in structuring academic development in Higher Education … and how do research active academics properly support their teaching?
• Face-to-face Lecture, Lab/Tutorial and Teaching Pack are the core of any module. All associated material should support this.
• In this case, students fully engaged with the on-line material, while the majority feel that on-line lectures should not replace the face-to-face ones.
Key wins:
• Students feel supported after the lecture and before assessments.
• Every student is able to complete lab-based work.
• Model scales to blended, distance and franchised.
• Quality of the module stays consistent no matter of how it is studied and with multiple modes/types of study.
Prof Bill Buchanan
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