

The effectiveness of innovative modes of delivery

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Background and rationale

The School of Legal Studies has, since the mid 1990's, been using a variety of different and innovative teaching and learning strategies in a number of areas in its portfolio. Of particular interest so far as this project was concerned is the range of modules in the undergraduate and postgraduate provision that have been supported by the use of CD ROMs, floppy disks and the internet.

In line with the School's long-term plan to turn over the LLB by Distance Learning degree to electronic delivery, and the shorter term aim to encourage the wider use of such delivery in campus-based modules, the authors wished to discover whether the innovations in teaching and learning mentioned above, especially in relation to electronic delivery, are being effective.

The object of the research was to investigate the ways in which students learn and whether electronic delivery improves a student's performance as compared to more traditional teaching and learning approaches. The authors also wished to ask questions about whether electronic delivery favours particular learning styles or whether students adapt their learning styles to the mode of delivery, and hoped to learn more about the extent to which students adopt 'strategic' approaches to their learning. It was also hoped to discover whether electronic delivery assists in developing 'deep' rather than 'surface' learning.

The outcomes of this investigation will inform decisions about future innovations in the development of technologically supported teaching and learning materials. It will also inform decisions relating to the Teaching and Learning Strategy of the School.

The innovation

The School has an established record of research into the use of Computer Assisted Learning/Technology Supported Learning (CAL/TSL) strategies for the teaching of law and this proposal was designed to build on that research.

The project comprised several elements:

1. The design and administration of a questionnaire to a group of students who had experience of CAL/TSL on the law modules they had undertaken (the questionnaire is appended to this report in Appendix 1)
2. The selection of students as part of a piece of qualitative research whereby they completed logs of the hours they spent in study (the logs were designed to reveal the type of study engaged in. An example of a log is appended in Appendix 2)
3. A 'number crunching' exercise where module results were compared over a number of years from data collected from University's student information and management system

The questionnaire

This was designed following advice from colleagues in the School of Humanities, Languages and Social Sciences, in particularly, following advice and guidance from Dr Ray Binns in the School of Computing and Information Technology. The design stage took rather longer than the authors had anticipated. The questionnaire was administered to a group of third year students who had experience of working with technology-supported modules. The authors had 45 responses from a target group of 60. The results are presently being analysed using SPSS and a detailed analysis of the results is expected to be available later in the year. The findings will be published in an appropriate journal.

The student log

The authors regard this as a particularly innovative aspect of the project. A small group of students were asked to give a detailed account of their activities over a two week period. An example of a blank log is

included herewith along with the guidance given to students on completing it. As with the questionnaire the authors are still in the process of analysing the results.

Data from the student information and management system

The authors have employed a researcher to undertake some simple analysis of average module scores of all School of Legal Studies modules back to 1997. This will enable the making of (admittedly crude) comparisons between different modules over time and comparison of overall module scores of modules where technological support is routinely used and modules where it is not. The authors will also examine individual student performance and compare performance in technologically supported modules with performance in non-technologically supported modules. The results of this analysis will be available later in the year.

The outcomes

It is important to stress that the authors are still at the evaluation stage in respect of the large amount of data collected as a result of this project. Some interesting facts are emerging. It seems clear that the majority of students prefer modules in which technological support is used (82% of the sample) to the modules where it is not. It is also clear that students achieve better results in technologically supported modules. Other interesting statistics have emerged, for example, 93% of the sample had computers available to them at home and that 55% of them spent between 2 and 7 hours a week using their computers for University work and 27% spent 8 to 16 hours doing this. The authors found that 75% of the sample were 'very familiar' with e-mail but that 5% of them were 'unfamiliar' with the internet. Perhaps the most interesting findings relate to the use that students make of the technologically-supported materials and the amount of time spent on them. It may be alarming that some 25% of the students in the sample print *everything* out from their CD ROMs and floppy disks rather than being selective, whereas 53% print out only the essential materials preferring to read the other material on-screen.

As noted above, this very brief summary will be followed by a more exhaustive analysis.

The benefits

The authors are hoping that when the data has been fully analysed, the information will help to improve the design and delivery of technologically-supported teaching packages. It is hoped that this will also feed into discussions relating to future strategies and the deployment of resources.

Evaluation and lessons learned

A number of lessons have been learned during the course of pursuing this project. The principal lesson learnt related to the amount of time it takes to develop things like questionnaires, to administer them and to analyse the results. The authors underestimated in every respect! Problems of student resistance to providing information about personal circumstances were also encountered. Finally the authors learned the lesson that undertaking this kind of project is only really feasible if staff are given actual rather than notional time on their timetables within which to conduct the research.

Future developments

The authors were particularly happy with the final questionnaire and will be using it as part of regular evaluation of students undertaking modules that are technologically supported. The authors hope to be able to provide data on a regular basis. In addition, the authors found the information obtained from the student logs worthwhile and shall consider undertaking a similar exercise in the future.

Acknowledgements

The authors would like to express their particular thanks to colleagues from the School of Humanities, Languages and Social Sciences and to Dr Ray Binns from the School of Computing and Information Technology for all the help they have given in designing the questionnaire and analysing the results.

Appendix 1



Questionnaire

In the questions, please tick the box or ring the appropriate number.
Section 1: About you

Q1. How old are you?

18-25 1	26-35 2	36-45 3	46-55 4	56-65 5	66 or over 6		1
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Q2. What is your gender?

Male 1	Female 2		2
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Q3. What is your ethnic origin?

White 01	Black-Caribbean 02	Black-African 03	Black-other 04	Indian 05	Pakistani 06	3,4
Bangladeshi 07	Chinese 08	Asian-other 09	Other 10	Prefer not to say 11		

Q4. How do you live? (select one only)

		5
I live alone	1	
I live with a partner	2	
I live in Halls of Residence	3	
I live with other people (e.g. in student accommodation)	4	
I live with my parents	5	
Other	6	

Q5. How many dependent children have you?

None 6	One 1	Two 2	Three 3	Four 4	Five or more 5	6
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Section 2: About your studies

Q6. Are you full time or part time?

Full time 1	Part time 2	7
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Q7. What programme are you studying?

LLB 1	LLB Combined 2	BA(Human Rights) 3	BA(Criminal Justice) 4	Other programme 5	8
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Q8. What is your year of study?

First 1	Second 2	Third 3	Fourth 4	Other 5	9
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Q9. How many hours per week are you able to devote to your studies in total?

Nine or less 1	10 to 14 2	15 to 19 3	20 to 24 4	25 to 29 5	30 or more 6	10
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Section 3: About your use of computers

Q10. I have a computer at home which I use in connection with my studies

Yes 1	No 2		11
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If you have ticked No to Q10, please proceed to Q12.
If you have ticked "Yes" to Q10, please answer Q11:

Q11. At home, I usually work on my computer in relation to my studies for:

		12
One hour or less per week	1	
2-7 hours per week	2	
8 -16 hours per week	3	
17 or more hours per week	4	

Q12 I use the computer facilities, other than for library loans, available at the University:

Yes	No	13
1	2	

If you have ticked "Yes" to Q12, please answer the following.

Q13. At the University, I usually work on a computer in relation to my studies, other than library loans, for:

		14
One hour or less per week	1	
2-7 hours per week	2	
8 -16 hours per week	3	
17 or more hours per week	4	

Q14. How familiar are you with a computer? Indicate, by circling the appropriate number, the computer based activities you are familiar with:

	Very familiar	Quite Familiar	Unfamiliar	col
a. Word Processing	1	2	3	15
b. Spreadsheets	1	2	3	16
c. Databases	1	2	3	17
d. PowerPoint	1	2	3	18
e. E-mail	1	2	3	19
f. Internet	1	2	3	20

Section 4: Your use of Computer Assisted Learning Materials

Q15. Please circle the number corresponding to the number of modules you are currently studying which use computer assisted materials.

None	One	Two	Three	Four	Five or more	21
6	1	2	3	4	5	

Q16. I specifically chose modules that do not use Computer Assisted Learning Materials.

Yes	No	col
1	2	22

If you do not use Computer Assisted Learning materials, proceed to Q19.

If you use Computer assisted Learning Materials please answer the following questions.

Q17. Printing out materials – which of the following statements best match your experience (circle only one number)

I print out everything I can and work from the print-outs	1	col
I print out the essential materials such as workplans and study sheets but work from the screen in respect of the rest of the materials	2	23
I print out very little and work mostly from the screen	3	
Other (please specify)	4	

Q18. Convenience of use – which of the following statements best match your experience (circle only one number)

I have difficulty in using computer based materials, I prefer print based materials	1	col 24
I don't have difficulty with computer based materials but I find it hard to work from a screen	2	
I prefer to use a combination of computer based materials and print based materials	3	
I am comfortable with using the computer based materials as my main source of study materials	4	
Other (please specify)	5	

Q19. Rank the following statements from 1 to 5 in order of preference – 1 being the statement that best matches your experience with 5 being the statement that least matches your experience. Place the rank number in the box

	Rank	Col
a. I like using the materials on floppy disks/CD ROM because they save me time		25
b. I like using the materials on floppy disks/CD ROM because they give me all I need to pass the module		26
c. I like using the materials on floppy disks/CD ROM because they allow me to do the minimum required for the module		27
d. I like using the materials on floppy disks/CD ROM because they allow me to be more independent in respect of my studies		28
e. I find the materials on the floppy disks/CD ROM difficult to cope with		29

Section 5: Your learning style (circle the appropriate number):

Q20. I am looking to achieve the following class of degree:

Pass	Third	Lower second	Upper second	First	30
1	2	3	4	5	

Q21. My average module grade to date is

F	E	D	C	B	A	col
1	2	3	4	5	6	31

Q22. Which of the following statements best match your experience (circle only ONE number):

I always read all the materials provided for the module	1	col 32
I select and read specific materials	2	
Other	3	

Q23. If you have ticked the SECOND of the above boxes 'I select and read specific materials', please rank in order of preference the specific materials you select. Place the rank number in the box.

This will be a number from 1(best) to 6 (worst).

	Rank	col
a. Study text		33
b. cases		34
c. Statutes		35
d. Articles		36
e. Journals		37
f. Other		38

Q24. I select the material to be read on the basis of what (circle as many numbers as apply):

	Yes	No	col
a. I need to read for assessment purposes	1	2	39
b. the lecturer tells me is important	1	2	40
c. I believe to be important	1	2	41
d. I read the material once and then file it away	1	2	42
e. I read the material several times	1	2	43
f. Other (please specify)	1	2	44

Q25. I believe that I need to do the following in order to achieve a good grade in all my assessments. Please rank each from 1(best) to 7 (worst) and place the number in the appropriate box.

	rank	col
a. Demonstrate that I can remember the material provided		45
b. Demonstrate that I understand and can analyse cases		46
c. Demonstrate that I have undertaken wide reading		47
d. Demonstrate I am able to apply the law		48
e. Demonstrate I can handle a wide range of materials		49
f. Demonstrate that I can write well		50
g. Demonstrate that I can present legal arguments well		51

Q26. Select 'yes' for whichever you do (otherwise 'no')

	Yes	No	col
a. I make my own notes from the cases	1	2	52
b. I make my own notes from statutes and other primary materials	1	2	53
c. I make my own notes from the study text	1	2	54
d. I don't make my own notes	1	2	55
e. I make my own notes from lectures	1	2	56
f. I make my own notes from other sources.	1	2	57

Q27. I spend the following amount of time per week reading: (circle one number per line)

Reading	less than 1 hour	1-3 hours	4-6 hours	7-9 hours	10-12 hours	13 or more	col
a. Study text	1	2	3	4	5	6	58
b. Cases	1	2	3	4	5	6	59
c. Statutes etc.	1	2	3	4	5	6	60
d. Other materials	1	2	3	4	5	6	61

Q28. I spend the following amount of time per week making notes from the:

	less than 1 hour	1-3 hours	4-6 hours	7-9 hours	10-12 hours	13 or more	col
a. Study text	1	2	3	4	5	6	62
b. Cases	1	2	3	4	5	6	63
c. Statutes etc.	1	2	3	4	5	6	64
d. Other materials	1	2	3	4	5	6	65

Section 6: Your use of the internet

Q29. Use of the Internet in relationship to my studies (circle the appropriate number):

	Yes	No	col
a. Never use for studies	1	2	66
b. use at home	1	2	67
c. use at work	1	2	68
d. use at University	1	2	69
e. other	1	2	70

Q30. I spend the following amount of time per week on average using the Internet in relation to my studies:

less than 1 hour	1-3 hours	4-6 hours	7-9 hours	10-12 hours	13 or more	col
1	2	3	4	5	6	71

I have the following to add about the modules delivered using computer based materials:

I have the following general comments to make:

Thank you for taking the time to complete this questionnaire.

Appendix 2

University of Wolverhampton

School of Legal Studies

Research Project – Student Log

Name:

Monday Tuesday Wednesday Thursday Friday Saturday Sunday (please tick)

Date:

Time	Activity	Comment
7.00am		
7.30am		
8.00am		
8.30am		
9.00am		
9.30am		
10.00am		
10.30am		
11.00am		
11.30am		
12.00		
12.30pm		
1.00pm		
1.30pm		
2.00pm		

Student Log

Name:

Date:

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2.30pm		
3.00pm		
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4.00pm		
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11.00pm		
11.30pm		
12.00		

Guidance on Completing the Student Log

Very many thanks for agreeing to contribute to our research.

WE would like you to complete a daily log of your activities for two weeks starting from next Monday.

I attach herewith a copy of the log in word format. This can be completed electronically and e-mailed back to me. Or it can be printed out and completed by hand and given in.

We would like you to be as honest and accurate as possible about the time you spend in respect of your various activities.

We are particularly interested in your study related activities but we would like to know how these interact with your other personal/domestic/leisure activities.

So we would like you to identify your activity under the following headings:

STUDY

Firstly, we would like to know where you are - are you studying at home or in the learning centre or elsewhere.

We suggest you identify this as follows:

H = Home
LC = Learning Centre
L = Other Library
O = Other (it would help us if you could specify)

Type of Study:

RText = Reading text books
RNotes = Reading lecture notes or other materials given to you by your lecturer
ROS = Reading original sources eg Acts/cases
RArt = Reading Articles
WWW = Reading materials from the internet or accessing the internet for purposes of study
ROT = Reading other texts (it would help us if you could specify)

Prep = preparing notes or taking notes from any of the above
Ass = Writing coursework assignments or preparing other coursework assessments
Rev = Revising eg for an exam
Lect = attending a lecture
Sem = attending a seminar
Tut = attending a tutorial
Work = attending a workshop/workplan
Meet = meeting with other students for study purposes
Coun = attending for academic counselling

You can include two or more activities in one entry. For example you may be preparing notes from the WWW at Home so your entry would be: H PREP WWW.

If there are any other activities that we've not identified above – please specify.

With regard to your other activities, could you identify these in the following ways:

Dom = domestic - washing cooking eating sleeping etc
Child = dealing with matters of child care
Trav = travelling to and from University or elsewhere

Leis = watching TV/Video, listening to radio/stereo etc
Ent = going out - cinema, pub, theatre, student union etc
Empl = undertaking gainful employment

As above if there is any activity that you'd like to include which we have not listed above please feel free to do so.

We have also left a space on the form for any additional comment you'd like to make in respect of the activity.