

SUPPORTING 1ST YEAR UNDERGRADUATES THROUGH BLENDED LEARNING

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1. Background

The *Learning Communication and Technology* (LCT) unit

- aims to equip students for the Higher Education environment
- includes study skills, ICT and self-management
- is assessed by two portfolios of work from the autumn and spring terms
- forms part of the Department's common first year undergraduate programme for all students undertaking its five single Honours degrees and Combined Honours degrees in Internet Management and various modern languages.

In 2002/3, WebCT's communication tools and one online tutorial (content module) on citing and referencing were used for the first time as part of teaching the unit. An independent evaluation of student views concluded that

"all students were enthusiastic about this new way of learning, commenting particularly on its interactive nature... Students recorded no negative experiences in using the VLE and found it more useful than traditional chalk and talk" Alexander (2004, p.5)

For 2003/4, a radical change to the programme replaced some lectures with a combination of weekly seminars, personal tutorials and staged release of 7 WebCT online tutorials, 2 of which were directly assessed. The aims were to

- Increase flexibility and personalised support for a large group of students of different ages, mixed ability, varied ICT experience and diverse educational backgrounds
- Address attendance and retention problems common in the Information and Computer Science disciplines (Alexander, 2004, p.8)

2. Student use of the content modules

At the end of the academic year, detail from WebCT's tracking facilities (October 2003 to February 2004) was entered into SPSS 11.5 (Statistics Package for Social

Scientists) and combined with details of the students' age, home or international status, face-to-face attendance and summative assessment performance.

Nearly all (86/95 (91%)) students made some use of the online tutorials, with some students revisiting some pages several times. However, the mean number of hits per student for each different page of each tutorial was low for all except two for which completion was rewarded by marks counting towards the first portfolio (Table 1).

Nevertheless, use of WebCT was higher overall (mean number of hits per student = 149) than in a similar initiative in an equivalent Department at the University of North London (Williams and Quinsee, 2003) in which course notes, practical exercises and tutor led discussions were provided rather than online tutorials. In that case, only 62/98 (63%) accessed WebCT at least once during the semester and the mean number of hits per student was only 29.

Table 1. Student use of online tutorials. Directly assessed tutorials indicated by *.

Total No of hits	No of Pages in tutorial	Maximum of hits	Mean No of hits	Std. Deviation
Academic Writing*	22	285	61.65	62.589
Citing*	41	217	48.45	47.645
Power Point	29	49	3.84	10.360
Presentation Skills	12	27	2.83	6.617
Report Writing	20	101	7.39	17.956
Time Management	28	114	19.36	24.758
Working in Groups	10	50	4.73	8.365

For the optional tutorials, tracking showed many students dipping in and out, some accessing only a small percentage of the material (Figure 1). They may have been reviewing the potential usefulness of the tutorial according to their previous experience. As the standard of assessed presentations was higher than in previous years, the low use of the *Powerpoint* and *Presentation Skills* tutorials probably indicates that many made appropriate decisions not to complete them. Some made inappropriate decisions about the *Working in Groups* tutorial however, as was evident in their individual reflections on group activity in the related portfolio assignment. The relatively higher use of the *Report writing* tutorial showed some self-referral as this did not form part of the assessed work for the LCT unit, although it was for other units.

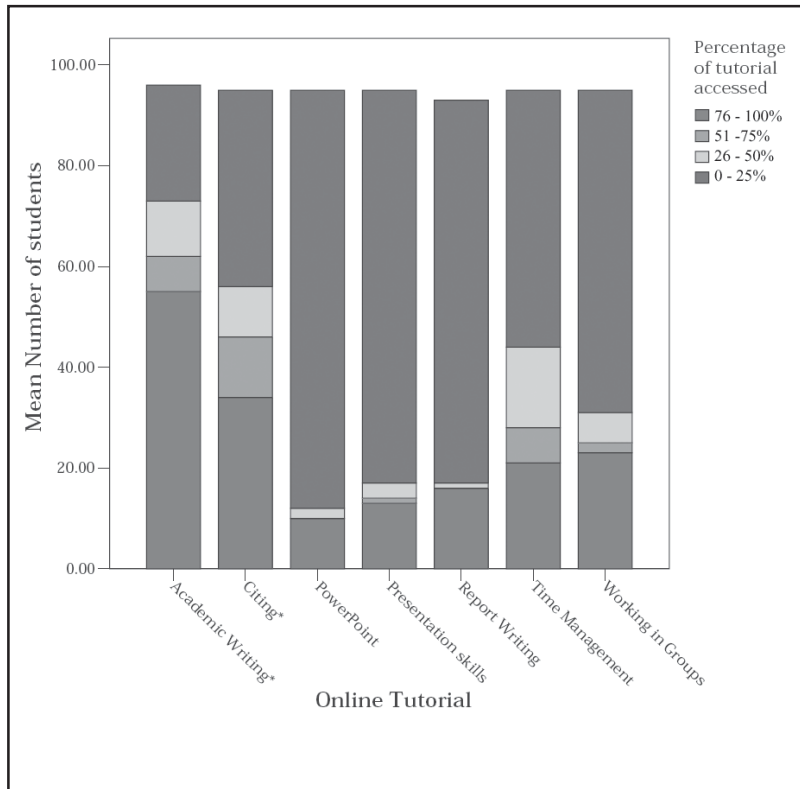


Figure 1. Patterns of use of the online tutorials. Directly assessed tutorials are indicated by *.

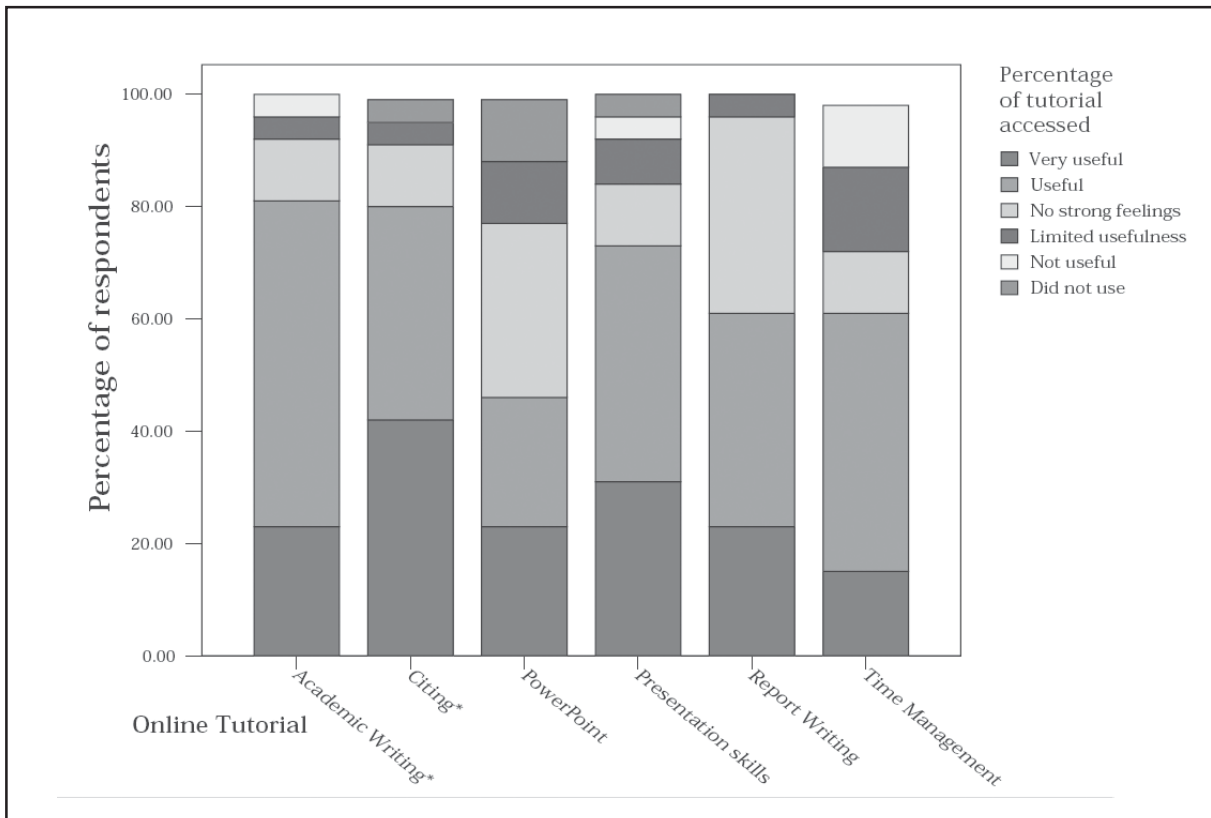


Figure 2. Student views on usefulness of online tutorials.

Although limited numbers of students worked through to the end of each tutorial the results of a short anonymous questionnaire, completed by 26/95 (27%) students, indicated their value to some of those who had used them (Figure 2).

Another question in the survey asked the students to tick statements applying to them, including the following:

I had already used online tutorials before coming to university (23%)

I printed out pages from the tutorials because I don't like reading from the screen (19%)

I liked the flexibility of being able to use the tutorials whenever it suited me (88%)

I found learning this way helped me to concentrate on the topic (50%)

I found learning this way helped me to remember what I'd learnt (58%)

I found the self-tests and quizzes useful in helping me check my understanding (81%)

2.1 Patterns of use by student background

Performance indicators for widening participation show that Manchester Metropolitan University is well above the national average in recruiting mature full time undergraduates (Higher Education Statistics Agency, 2004). Many of the mature students in the Department also have non-traditional entry qualifications and are from low participation neighbourhoods and ethnic groups. Some classed as home students speak English as a Second Language,

Table 2. Cross-tabulation of age ranges of students and provenance

		Provenance			Total
		International Student	EU	Home	
Age ranges of students	Mature students (>21 years)	4	1	31	36
	Students <21 years	5	2	49	56
Total (3 missing values)		9	3	80	92

Table 3 Student performance on assessed coursework.

	Minimum	Maximum	Mean	Std. Deviation
Mark for portfolio part 1	10	94	62.87	17.320
Mark for portfolio part 2	0	85	56.52	20.138

as do most International and EU students (Alexander, 2004).

Data from the students' registration forms were combined with the tracking data for the mean overall use of the two assessed tutorials. This showed some international students amongst the highest users of the tutorials, with many repeat visits to pages. This may have been struggling with the English language, or may have found the reinforcement useful. (Figure 3). Figure 4 shows similar patterns of use by all students, but some lower use by the mature students.

2.2 Patterns of use compared with attendance

Attendance data from the first 6 weeks of term was compared with the use of online tutorials to see if those not attending face to face, were using WebCT (Figures 5 and 6). These show that some of the low attenders were studying online, although they accessed fewer pages of each tutorial. The similar pattern of use by low and high attenders indicates that the directly assessed tutorials increased the motivation of all.

2.4 Student performance

83 (87%) submitted at least Portfolio 1, 68 (72%) submitted both Portfolios 1 & 2. The results for the first portfolio ranged from 33 (40%) gaining over 70%

(First class) to 9 (11%) gaining less than 40% (Fail)(Table 3). There is a strong correlation between marks gained in Portfolio 1 and Portfolio 2 (Pearson Correlation Coefficient = 0.512, $p < 0.001$, $N = 7$)

There was no significant Pearson correlation coefficient found between the mark for portfolio 1 and attendance (0.169, $P > 0.05$, $N = 73$). However, there was a highly significant positive correlation between the mark for Portfolio 1 and the usage (percentage of pages accessed) of the Academic Writing tutorial (0.659, $P < 0.001$, $N = 83$) and the citing tutorial (= 0.574, $P < 0.001$, $N = 83$).

Most of the 12 submitting no coursework were mature students from non-traditional backgrounds. Of these, 3 (25%) had more than 50 hits overall, mostly on the directly assessed academic writing tutorial. It seems that they did make a genuine attempt to engage with the task set, but then abandoned it for whatever reason. The remainder (75%) of non-submitting students did not engage in any way with the online content.

For the Citing tutorial, a maximum of 10 marks (5% of the year's work) were available for the 5 quizzes, which students were able to attempt as many times as they wished.

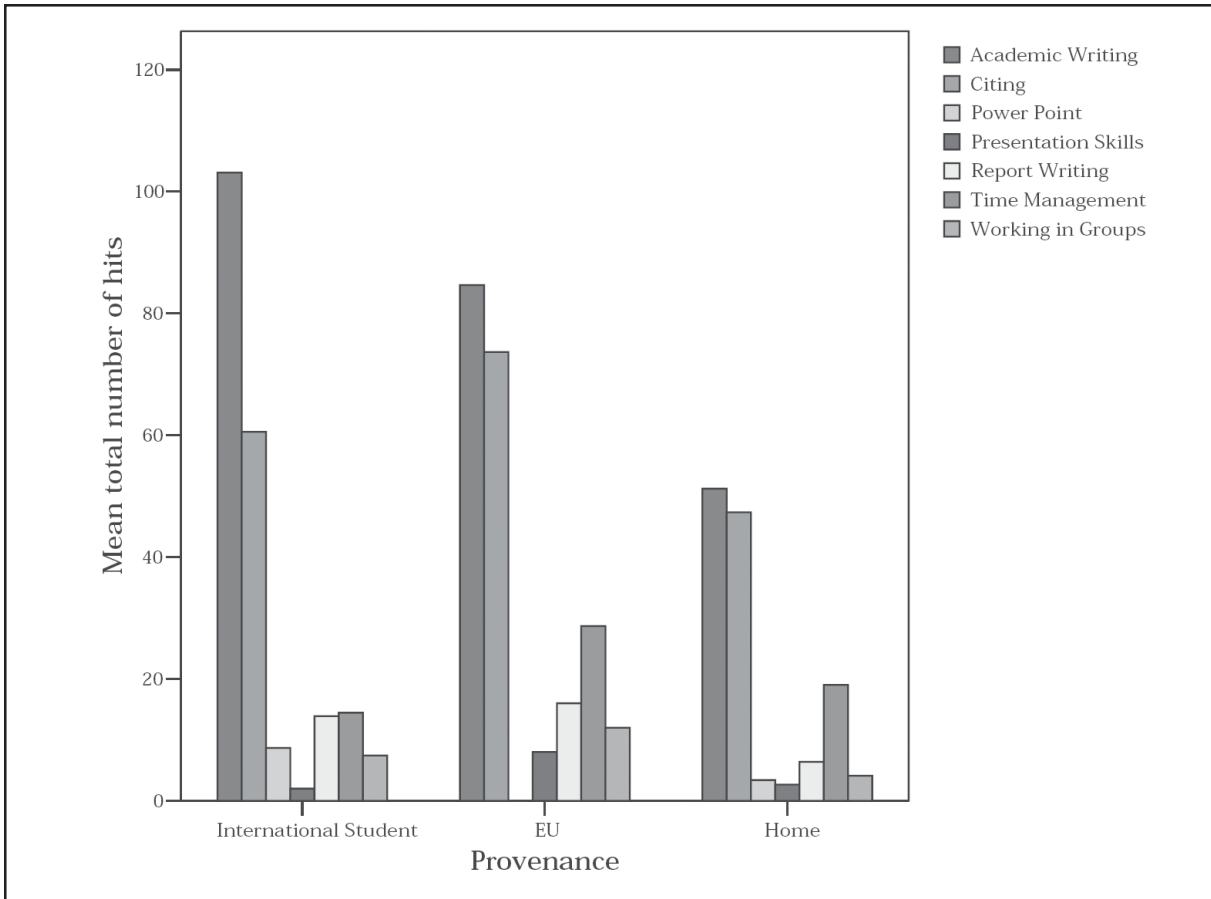


Figure 3. Patterns of student use of the online tutorials by provenance

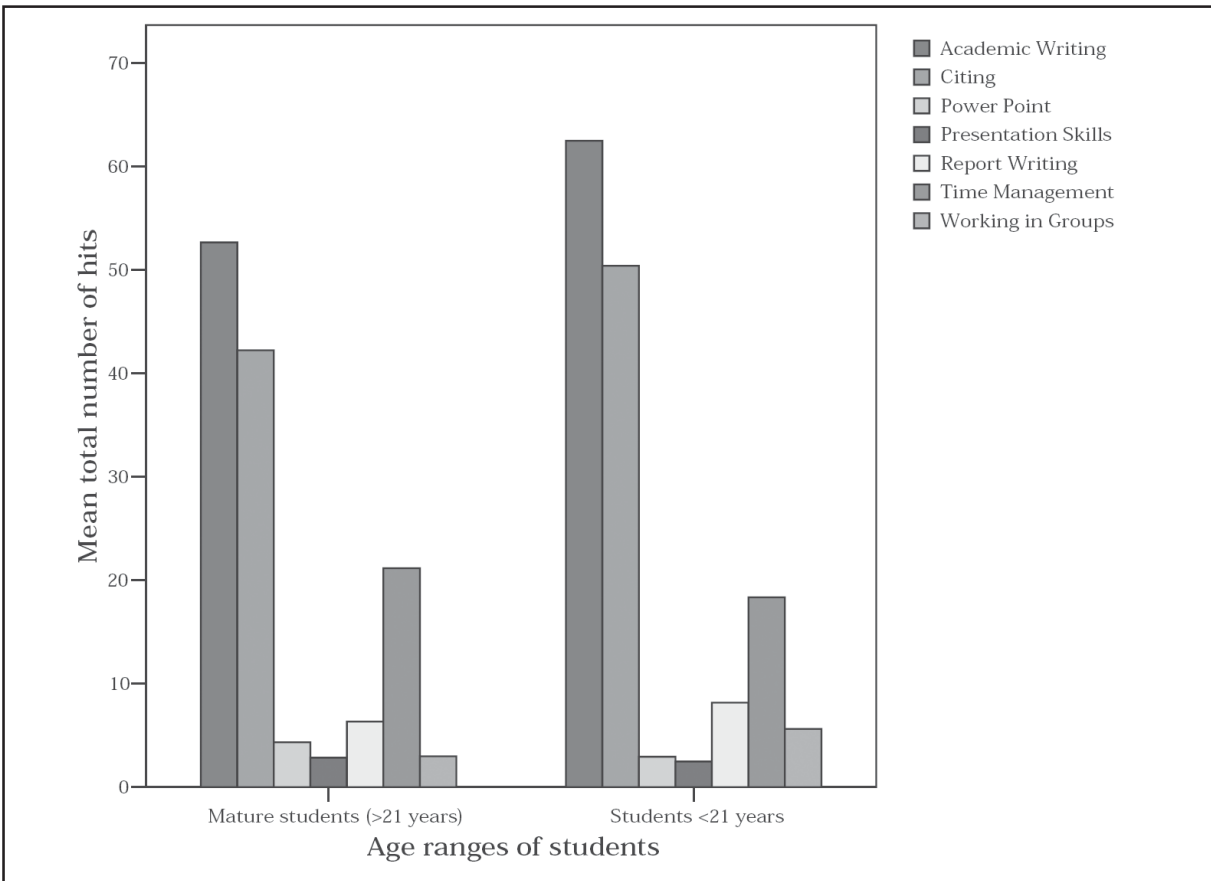


Figure 4. Patterns of student use of the online tutorials with age.

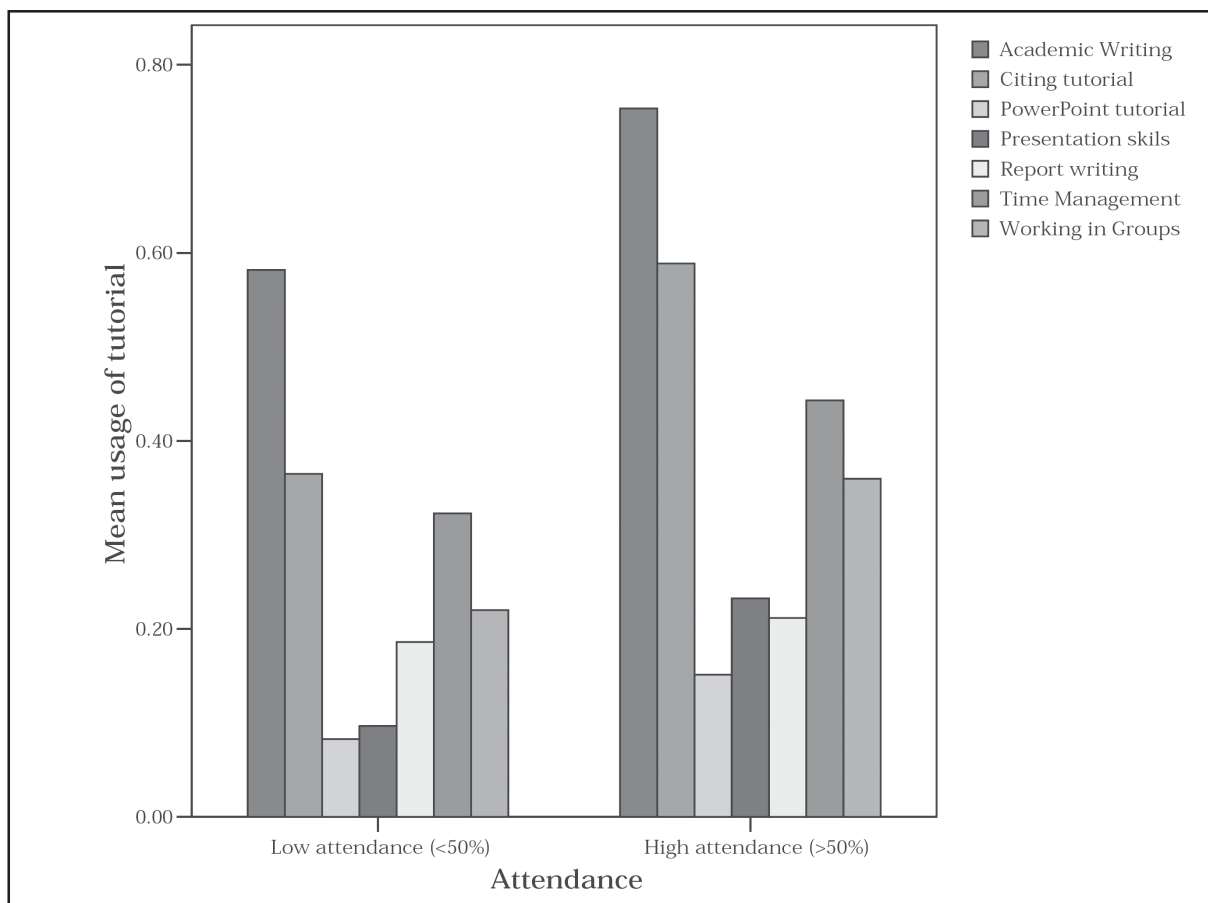


Figure 5 Mean total number of hits of tutorials with attendance.

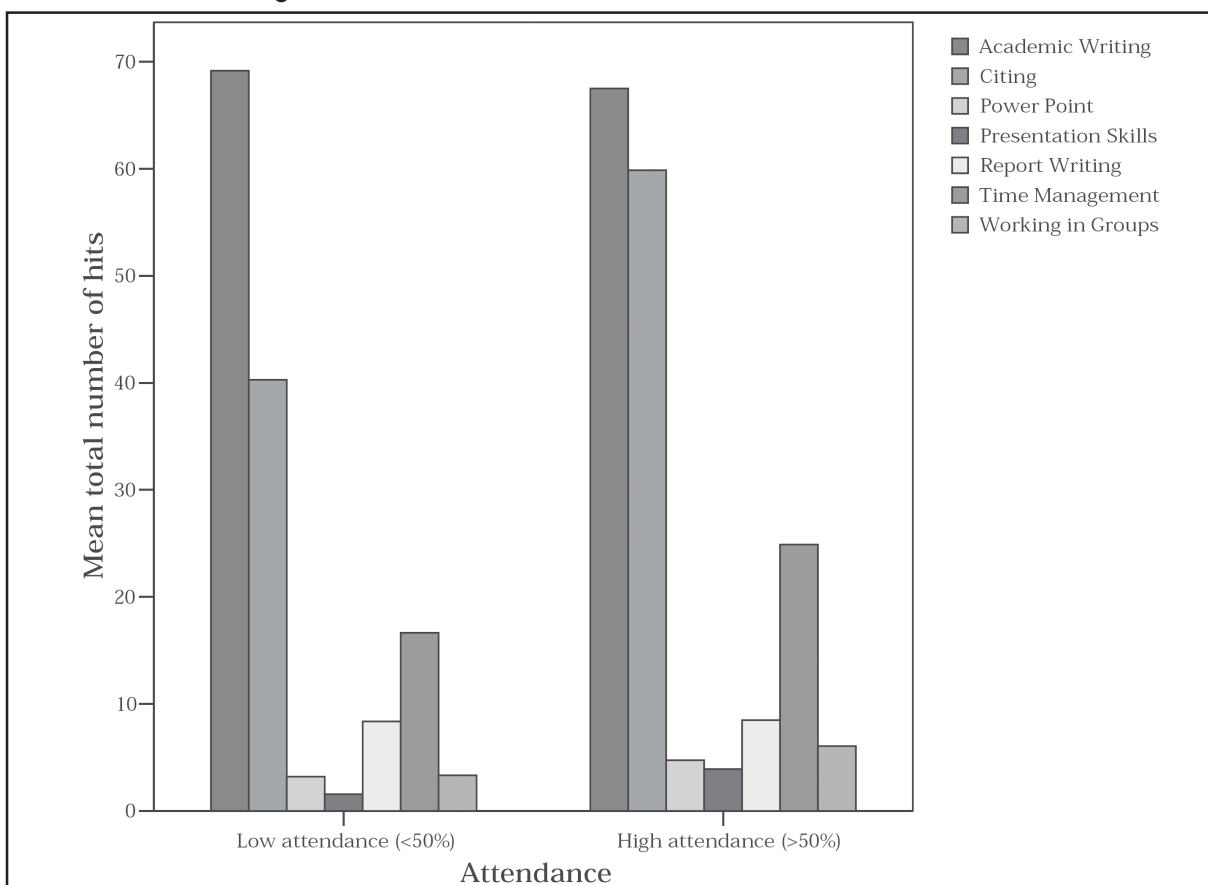


Figure 6 Mean usage (proportion of tutorial accessed) with attendance.

75/95 (78%) of the students attempted the quizzes and 22/95 (29%) obtained full marks, often making several attempts until they got the right answers. This "drill and practice" was reflected in an overall reduction in the most frequent type of errors made in references by the students in comparison with the previous year (Kendall, 2005).

3. Conclusions

Overall, the conclusion was that the innovation had enhanced student learning by providing an alternative method of delivery, facilities for students to test themselves through interactive quizzes and opportunities to go back over material in their own time which may have been particularly useful for some international students. However, some students chose not to attend either face-to-face or online. The number not submitting assignments remained similar to that of the previous year and is an enduring cause for concern.

Direct assessment of two of the tutorials encouraged use and there were strong correlations between those students doing well in assessment and use. Although the extent to which the students accessed all pages of the tutorials was lower for the other tutorials on topics assessed through portfolio assignments, in some cases online delivery may have enabled students to make appropriate decisions on their existing skill levels, e.g. in the use of Powerpoint. However, the need for further incentives for completing the group work tutorial was apparent.

4. Subsequent action

For 2004/5, the online tutorials remain a key feature of the unit, but on the basis of the study, adjustments to the blend of face to face and online learning were made:

- Some of the formal lecture slots were re-introduced in the autumn term
- Further incentives for attendance were introduced through four formal meetings with personal tutors over the year.
- A percentage of the assessment of the LCT unit is now based on submission of forms relating to their Personal Development Plans.

Further qualitative research into the online learning experiences of mature and international students is planned, to gain a deeper insight into their experiences to inform future developments.

At the beginning of the academic year 2004/5, copies of the tutorials were used to create a new WebCT Study Support area available to second year students for remedial support. Tracking showed that by mid-January 2005, only 11 had revisited pages from at least one of the tutorials, although considerable use of all the tutorials was made by a mature direct entrant into year 2.

The Study Support area was also made available to students on a taught conversion Masters

programme. This recruits students with first degrees in any discipline, some returning to academic study after a significant time in the workplace, and some international students studying in the UK for the first time. Tracking showed a higher level of self-referral than for the undergraduates, as all but two of the 48 postgraduates had visited the Study Support area, sixteen of whom had made more than 50 hits, and nine more than 100. The *Report writing* tutorial was the most heavily used'

WebCT's tracking facilities enabled an insight into student use of the online resources which would otherwise not have been possible. They helped to measure the impact of the tutorials and inform further responses to teaching and supporting learning for increasingly diverse groups of students.

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3 years of e-learning

the guinea-pigs bite back!

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One of the first questions I asked when I took up my post as a Criminologist in August 2002 was - What virtual learning platform is used at MMU? I was fortunate because my Head of Department actually knew the answer and also pointed me in the *virtual* direction of the 'Learning and Teaching in Action' publication which, that issue, was dedicated to Information Technology. This article, and others subsequently, provided a wealth of information on teaching in general and online delivery in particular and I will make reference to those I have found useful over the years. I had used BlackBoard in my previous post at John Moores University and so Rachel Forsyth's article on the history of WebCT at MMU was very informative¹. Her article also explained how I could get started with using the technology and so, with a basic introductory training package under my belt, I was able to launch a WebCT module for first year Criminology students that September.

This was my first step to developing e-learning within the Criminology curriculum and the first step towards that particular cohort of students becoming the guinea-pigs of every idea and innovation in e-learning during the intervening three years! By 2005 it seemed only fair to canvass these Guinea Pigs on their experience and it

resulted in some very insightful and informative feedback.

Background

the Guinea Piglets and I start our journey

September 2002 saw the launch of the first WebCT module within the Criminology curriculum. Humanities and Social Science has had a comparatively poor uptake of WebCT until fairly recently. Som Naidu's² research in 2003 on the use and perception of e-learning at MMU highlighted the poor level of uptake of training and the small number of WebCT developers within the Faculty.

I started by embedding WebCT into my first year 'Crime, Punishment and Penalty' unit and introduced it to students through a paragraph in the unit handbook and as part of their introductory lecture. The students in this cohort were my Guinea Pigs and they have had to put up with my numerous mistakes along the years! Because they were just starting their university career everything, not just WebCT, was new to them. They accepted WebCT as just another thing they would have to get used to about studying at university.

These students studying on the Criminology & Sociology and Criminology & Contemporary Culture degree routes have subsequently had units containing WebCT modules throughout their three years. As mentioned above, these Guinea Pigs were the *first* exiting Criminology cohort to have had the experience of on-line delivery for the whole three years of their degree. It has been argued that "in any learning endeavour, knowledge about learners and their preferences is precious".³ This is perhaps even more pertinent when those learners have worked alongside you for three years and are just about to leave university.

In the first year, students experienced WebCT blended with traditional delivery methods (lectures, seminars, tutorials, etc) and WebCT was used mainly to support the unit through online documentation storage and delivery:

- administrative materials including a syllabus, course handbook, etc
- class/lecture materials including handouts, overheads and reading lists