TECHNOLOGY AS A TOOL FOR IMPROVING STUDENTS' WRITING

Brendan Bartlett & Margaret A Fletcher

ABSTRACT

Students' transition from high school to university often is more problematic than smooth and a major source of difficulty is writing assignments (Fletcher, 2002; Hunter-Carsch, 1990; Norton, 1990). Research reported here is based on a longitudinal study of university students' experiences as assignment writers. Our work confirms what is widely reported in the literature. What is not widely reported in the literature is how an intelligent use of technology will advance students' development as writers. In this paper, we describe how access to a website tutorial provided students with insights that proved critical for effective planning and completion of assignment writing. These insights allowed students to put together a contextual jigsaw that enhanced their knowledge of how to write along with knowledge of what to write. Specifically, it lead them to see their lecturers as writers, readers and markers of essay topics, to make informed decisions on what to research, on how much to write, and on how to write cohesively.

KEY WORDS

Writing, Technology, Tertiary literacy

INTRODUCTION

There is a significant relationship between tertiary literacy and student performance in essays (Norton, 1990), in examinations (Lawe-Davies,1997; Farrell, 1996) and in students' rate of graduation (Holder, Jones, Robinson & Krass, 1998). Factors that dominate this relationship are students' topic knowledge that is reflected in the number of references in an essay (Norton, 1990), and their ability to develop a coherent piece of writing (Bartlett, 1978; Bartlett & Fletcher, 2001; Lawe-Davies, 1997; Farrell, 1996; Holder, Jones, Robinson & Krass, 1998).

Our view is that students' experience of difficulty with such factors has three critical elements. In each case there is a likelihood dimension. First, there is likelihood that particular knowledge is associated with success. Uncertainties about this may pre-exist a student's transition to university or may result from anxieties associated with the transition. Our research (Fletcher, 2001) indicates that many are unsure about how acquire such knowledge. As indicated in the following, uncertainties will undermine confidence about preparing an assignment.

> *I've never been really very good. I sort of always feel a bit self-conscious and that not ( ) I never did at school write very well, but I don't know if it was because I couldn't or because I just wasn't motivated or something (LH, 95).*

Second, there is likelihood about knowing how to turn knowledge about successful writing into writing behaviour. Even when the "acquisition" required by the first element is in place, many students are uncertain about what writing practices to use to demonstrate such knowledge as they move from one writing context to another. The students' accounts that follow indicate dilemmas in this regard:

> *I've never written like this before. It's totally different, like I've finished ( ) I've finished school ( ) three years and I've come back here and all of a sudden I've got to, I've got to um, reference my material [yes] um. I've got to write a lot longer assignments then I ever had to do at school. [So that's ( ) making things a bit more difficult?] Yea. [ok].* (RS, 95)

> *It is not like something we did at school. It is a completely new subject. (BC, 95)*

And third, as teachers, many university academics provide little support for students in recognising and surmounting these difficulties (Burroughs-Lange, 1996; Norton, 1990; Ramsden, 1992)**.** The following lecturer's comments indicate problems associated with supporting students as writers:

> *I took it for granted that the high schools do this job. Students should get assistance from learning facilitators or other services, not from the academics who are heavily loaded anyway. However, I usually try to point out and discuss significant errors with the students. I also try to make them think how to rectify the problem, how to express the issue in question more appropriately.* (L4, 95)

Consequently, students unable to address constructively either of the first two deficiencies do not know to whom to turn for assistance (Bartlett & Fletcher, 2001). This involves students in a perceived likelihood that a lecturer will be willingly and/or skilfully attentive to issues about how to write an assignment. The following are illustrative:

> *He wanted us to see him if we had any further problems but I didn't go for that because I didn't understand the way he spoke….I understood the question but not I guess not enough to answer the question properly. But by going to him, like, I would have been even more confused . (DB, 95)*

> *Well normally I wouldn't have a problem with personalised writing but it was an academic assignment that needed to be written as a personalised account so that the two just didn't seem to gel. (KM, 95)*

We believe that a critical part of the third element is that some lecturers may themselves suffer from a crisis of confidence about how to back-up good intentions with good practice in giving tutorial advice on successful writing.

> *I find this one difficult - because students seem reluctant to take the responsibility or seem blissfully unaware of their writing deficiencies. I don't know where the line between so called academic writing and just plain writing falls - too many of my students have difficulty with basic grammar. Students also have problems identifying key sentences and general organisation of essays etc. (L.14, 95)*

We sought to address this situation by constructing a website and CDROM-delivered tutorial on best practice in writing. Our intention was that lecturers who genuinely wanted to help student writers would have a resource for doing so, and, that students who used the resource would increase the likelihood of knowing what to write, knowing how to write, and feeling confident that lecturers were truly supporting.

USING TECHNOLGY TO SCAFFOLD WRITING

The issue for teachers in both secondary and tertiary sectors is increasingly how to do more with less. Increasing demands on teacher time, knowledge and expertise requires teachers to find efficient methods that will facilitate learning using less intensive academic resources. Technology offers opportunities to do this. However, its effectiveness as a learning tool may change according to the learning context in which it is used and students' perceptions and related experiences. For example, Bryer & Fletcher (2000) reported student resistance due to engage in electronic forum discussion groups because they viewed participation as public and permanent records of their learning. Others (Andrewartha & Wilmot, 2001; McLoughlin, 1999) suggest the design of software and multimedia programs have a considerable effect on how students respond to learning opportunities.

In the light of our research findings, we designed a web-based tutorial to address key issues that emerged from the data. The framework underpinning the design focussed on cognitive

processing where decision-making was scaffolded through a strategic approach to writing assignments.

Modelling scaffolds
The writing program is divided into two modules, one for knowing what to write, the other for knowing how to write. There are several steps in each module, providing (a) a staged model for analysing and researching a topic, planning work and assigning space and effort, (b) a brief rationale and discussion on the model, (c) an opportunity to practise steps using the student's self-selected real assignment, and (d) a means of assessing the practice.

Top-level structuring techniques (Bartlett, 1978; Meyer, Young & Bartlett, 1993) underpinned the development of topic knowledge and analysis skills, and of setting a structural framework for cohesive writing. Students were shown how to use the topic analysis to determine where key words and relational elements signalled where they should concentrate effort in locating and gathering information and organising an appropriate genre for presentation. The website was trialled and evaluated by students in 1997. A viewing site is available at http://www4.gu.edu.au/arts/assignwri/home.html.

Over the next five years, the program was refined and produced in a CDROM format in 2002. Additional features included guidelines for writing a literature review that aimed to scaffold students' researching, planning and synthesising information from a range of source material. Detailed examples and descriptions of applying the American Psychological Association referencing style was added to give students an explicit model for citing information.

RESULTS AND DISCUSSION
Lecturers involved in the trials of the website within the Faculty of Education were positive in evaluations of the program. The Learning Assistance Unit used it with students across a range of courses. Student outcomes were also positive. From earliest use of the website, first year students in an English Education course identified critical features of successful assignment writing.

> *Well, I think there's two parts to an assignment. It's answering the question and it's also then your written expression, so I guess it would be a fluent, um, either of the assignment or an essay that reads smoothly and makes sense and also answers the question.   So it's also grammatically correct. (JK, 95)*

When combined with interactive components, the resource became increasingly powerful:
> *Thanks for replying to me. I thought maybe I was imagining things. Thanks for the tips, too. By the way, I really love the writing program. It's so helpful! (MA, 97)*

Students were able to guide us as we improved the technology. For example,
> *Question: This module is very helpful in writing, presenting and generally going about constructing a assignment. However, it is very long. Many students don't have the time to go thoroughly through all the details outlined in this module. Overall though, it is helpful.(JB, 97)*

Some remained pedantically aligned to the cost-benefits of conformity - even in the face of perceptions of a better strategy for writing.

> *Is it necessary for us to do the lightbulbs and hand them in, and will these be counted in our grade? I feel that doing my assignment in this way may negatively affect my result as I have been doing my assignments in similar yet different way for years and have always done quite well. I also feel that for me, this method will be a waste of time, which I don't have. I would greatly appreciate it if you could get back to me about this as soon as possible. Thanks.(A, 97)*

Collectively, these data indicate our positive intentions for students who used the resource have been realised. It is a simple means of accommodating their need for confidence in knowing what to write, and how to write it. And, it provides a concrete basis for their confidence that lecturers were striving to help. Consequently, these insights illustrate additionally, the benefits that technology provides those academic staff who as teachers are serious about enhancing what students do to communicate their learning.

REFERENCES

1. Andrewartha, K. and Wilmot, D.(2001) Can multimedia meet educational needs better that the conventional lecture? A case study. *Australian Journal of Educational Technology. 17: 1 1-20.*

2. Bartlett, B. J. (1978). Top-level structure as an organisational strategy for recall of classroom text (Doctoral Dissertation, Arizona State University, 1978). *Dissertation Abstracts International,* May 1979, 7911113, p. 6641A.

3. Bartlett, B.J. and Fletcher, M. (2001). Transforming Literacy from Secondary School to Tertiary Levels – Flexibility or Failure To Be Concerned. In F. Bevan, C. Kanes and D. Roebuck (Eds.) *Knowledge Demands for the New Economies* Volume 1.Brisbane: Academic Australian Press, pp. 56-63.

4. Bryer, F. and Fletcher, M.A.(2000). Practising what we preach. In *Effective teaching and learning at TEDI conference proceedings*. [On line] The Teaching and Learning Development Institute http://www.tedi.uq.edu.au/conferences/teach_conference00/papers/bryer-fletcher.html .

5. Burroughs-Lange, S. G. (1996). University lecturers' concept of their role. *Higher Education Research and Development*, 15(1), 29-49.

6. Farrell, L. (1996) Making grades. In *Australian Journal of Education,* 1996.

7. Fletcher, M. (2001). Discursive practices. Experiences and perceptions associated with academic writing in a university setting. *HERDSA NEWS (23)*2, 16-19.

8. Holder, G.M., Jones, J., Robinson, R.A.,and Krass I. (1998) Academic literacy skills and progression results amongst pharmacy students. In *Higher Education Research and Development, 18*(1), pp19-30.

9. Hunter-Carsch, C. M. (1990). Improving students' essay writing. *Reading, 24*(2), 76-91.

10. Lawe-Davies, R. (1997). Language characteristics of the examination essays by dental students. In Z. Golebiowski and H. Borland, (Eds.), *Selected proceedings of the first national conference on tertiary literacy: Research and practice*, 2, 179-197.

11. McLoughlin, C. (1999). The implications of the research literature on learning styles for the design of instructional material, *Australian Journal of Educational Technology, 15 (3), 222-241.*

12. Meyer, B. J. F., Middlemiss, W., Theodorou, E., Brezinski, K.L., McDougall, J., and Bartlett, B. J. (forthcoming). Older adults tutoring fifth-grade children in the Structure Strategy via the Internet. *Journal of Education Psychology*.

13. Meyer, B. J. F., Young, C. J and Bartlett, B. J. (1993). "Reading Comprehension and the Use of Text Structure across the Adult Lifespan." In S. R Yussen and M. C. Smith (Eds.). *Reading Across the Lifespan*. N. J.: Springer-Verlag.

14. Norton, L.S. (1990). Essay-writing: what really counts*? Higher Education, 20*, 411-442.

15. Ramsden, P. (1992). *Learning to Teach in Higher Education*. London: Routledge.