

BACKYARD WISDOM AND STUDENT INSIGHTS IN DEVELOPING EFFECTIVE WEB-SUPPORTED LEARNING

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Abstract

A critically reflective account by two teachers seeking evidence of learning and the influence of technology in a web-supported approach, this paper examines rationale, student feedback and outcomes. A case is also sought for employing a cohort-specific approach to web-supported learning through pre-surveying students to reveal their access levels and affective responses to the technology in order to inform the pedagogic framework. With other 'backyard' practitioners in mind, the paper concludes by reinforcing the value of sharing the wisdom developed through such localised, idiosyncratic applications of the web in teaching and learning.

Keywords

web-supported learning, student feedback, cohort-specific, affective responses

Introduction

Parallel to the expansion of an institution-wide online teaching system, it has been observed in the Faculty of Built Environment and Engineering at Queensland University of Technology (QUT) that many localised, individual approaches to web-supported teaching and learning remain and are even flourishing in some cases. Such cases are characteristically developed and managed by a single academic, utilising both rudimentary and increasingly sophisticated web applications. Some academics have been developing their approaches over several years, responding to formal and informal student feedback and the introduction of new applications and hardware capabilities. There is a belief held that significant 'backyard wisdom' is embodied in these solitary and idiosyncratic uses of the web to support learning, from which other practitioners might benefit.

The focus shifts then to one such backyard practitioner who has developed her own web-supported approaches with first year on campus architecture, interior design, and industrial design students. Armed with the conviction to gather evidence of student learning resulting from the web-supported approach and to re-examine the pedagogic rationale for integrating the technology, this paper is a collegial attempt to critically reflect upon a semester's action in order to more rigorously develop subsequent approaches. This motivation rests on an understanding that effective student learning with technology is influenced by a complex interplay of both contextual and technology factors (Gunn, 1999).

This localised study uses key issues and findings from an earlier study by the first author in the same setting to prompt critical reflection in our scrutiny of the current web-supported approach. The objectives are to:

- identify evidence of learning tied to the web-supported approach;

- re-examine the rationale for the approach and its targeted learning;
- establish if a case exists for a cohort-specific approach as advocated in the original study; and
- share the outcomes with other ‘backyarders’.

Background

The original study and inspiration for this critical reflection, was conducted with first year interior design students in 1999. It followed the technological literacy work of Rossiter and Bagdon (1999) at QUT and drew on the student experience focus of Gilbert (1999). The survey sought to establish levels of students’ computer access and technological literacy, preferred communication modes, and their affective responses to the role and use of computers and the web in their studies. The student survey component was designed to be used with students *before* the integration of web-supported learning; the intention being that any such implementation would be more grounded and responsive as a result of a thorough understanding of the cohort in the disciplinary context.

The major findings of the study were:

- Students possessed high levels of access to computers and the internet, but did not tend to utilise either uniformly;
- Face to face communication was the preferred mode with teaching staff closely followed by email, with similar being true of peer interaction;
- In using computers to assist their studies, students tended to have a utilitarian value for their ability to assist project preparation and presentation;
- Students held highly divergent views upon the role of the web and its value, while admission of poor search skills was quite common; and
- There was a common view of information or access to resources equating with learning, signalling the issue of critical literacy development.

The survey instrument was used again with first year interior design students in 2000 from which highly contrasting results emerged in all respects, with these students clearly living lives more socially mediated by information and communication technologies. This supported the original belief that each cohort had to be considered as both inherently diverse and qualitatively unique *prior to* the planning of web-supported approaches and their pedagogical frameworks. These year 2000 students formed a subset of Sheona’s second semester cohort in her account below and I sought to discover her individual rationale for introducing web-supported approaches.

Sheona: Up until the year 2000, I had made no use of online tools to aid my teaching. At the beginning of first semester, I decided to build my own website to augment the limited personal face to face time I had with students in the first year architecture units I was teaching. The units were studio-based design and drawing units, with supporting lectures. Students spend several hours a week with their studio tutors in one-to-one critiques and project reviews, but very little with me - the coordinator of their project work, and the ultimate arbiter. I felt myself to be at a distance from the group, and was searching for a way to support the students in their work beyond the limited viewpoint of the traditional lecture. Designing requires students to view a problem from multiple and often divergent perspectives, and I felt that the medium of the web could be employed to intervene, somewhere between lectures and the dialogue that students were having with their tutors. My simple aim was to create a means for students to have 24 hour access to any information I wanted to broadcast, such as additional visual content, strategies for thinking through difficult issues raised in a lecture and tips and tricks for design project work. Conceived as a web-based ‘study-guide-in-process’ it would be highly responsive to the unit dynamics as the semester progressed. Using the web space allocated to staff on the school server, I taught myself web-authoring, and started to build.

My ‘home-grown’ endeavour achieved good things, in so far as it met the aims of augmentation and intervention. It was well received by the students. They regularly accessed and worked through the content. Evidence of this could be clearly seen in their process work, journals, and drawings. Our collective confidence with, and enthusiasm for, the medium took root. In the second semester,

I had a unit in foundation design history to deliver to a large class of first year architecture, interior design and industrial design students. Buoyed by the first semester experience with the architecture students, I felt compelled to use online technology to support the teaching in the unit. This time however, I decided to take advantage of the centralized QUT OLT (OnLine Teaching) system. My thought was that the coordinated, controlled, restrained face of OLT would be a good foil to the first semester ‘seat of the pants’ approach, and more suited to dealing with a large group of students.

Methods and Musings

Realising our mutual interest in this student cohort after the fact, we were each keen to examine the other’s experience of the pre-survey and then the semester as it actually unfolded. We worked through the survey themes seeking correlation and variance between the initial student views and those expressed later in the online feedback. The themes included access; technological and critical literacy; preferred communication modes; the role of resources; and affective responses to using computers and the web.

Sheona: In entering the tightly organised, database-driven world of QUT OLT, my strategy was to use the most engaging functions of the system and augment it with material on my own school-based website. I incorporated OLT-based functions I wouldn’t otherwise have been able to set up with novice skills – in particular discussion forums, chat rooms, and quizzes. I set modest learning objectives to relate to these online functions (e.g. participate in discussions with others about the course content to advance your own learning; demonstrate ability to retrieve, evaluate and use relevant information to advance your own learning; be able to use current technologies to advance your own learning) and set ‘online participation’ as a course requirement that would see students lose 20% of their final mark if they had not made a minimum contribution by the close of the semester. I also took a big step to ‘force’ the uptake of online interactivity by not scheduling weekly tutorials for the unit. With tutorials out of the equation, the modes of delivery were lectures, video screenings and online support.

It should be noted that the foundation design history unit is fundamentally different from the first semester architecture studio units in which I had initiated a web-supported approach. Traditionally, foundation courses in design history are a race through time, with lots of designers’ names, dates, buildings, sculptures, artefacts, ‘isms’ and movements to digest and remember. In face to face tutorials, the struggle for tutors is to get students to speak up and discuss this mostly overwhelming area of study. In shifting discussions online into asynchronous forums, I was uncertain if this pattern would be repeated, or if the web medium would offer a new style of liberation. The web-supported approach also facilitated the accommodation of various points of view on course topics and in drawing on the vast network of resources developed for similar courses around the world.

As it turned out, by far the most successful element of the web-supported approach was the asynchronous discussion forum. A fresh forum was created at the conclusion of each week’s session of lectures and video. The modest minimum course requirement for participation (1 question, 2 responses) would have extrapolated into a total of approximately 450 student postings in all forums for the semester. The actual number of student postings was in the order of 1400. In addition, unit staff contributed approximately 160 postings. In noting the date and time of postings, it was shown that many students scrambled away from the lectures and into a lab to start the weekly discussion rolling.

Mostly the discussions were unregulated and spontaneously ignited by a student’s wondering. Unit staff (myself and other contributing lecturers) regularly posted responses to student questions, and participated more generally in the discussions. Tangentially, the contributing lecturers noted that it was useful for them to participate in the forums as a means to gauge understanding of the content of their lectures. In the forums that I set up to answer a specific set of questions, in relation to a video or reading, participation was limited. As soon as a few students attempted the question, the discussion halted. In forums where outrageous discussions erupted (e.g. the role of alien life forms in the construction of the pyramids) the number of postings skyrocketed, as students either revelled in the silliness or tried to ground their peers in some sort of rational, objective understanding. This observation about the interest in structured versus spontaneous discussion forums accords with that of Gilbert (1999).

At the end of the semester students were invited to respond to a five question online survey (five-point likert scale with opportunity to submit extra comment). The survey sought specific feedback about content and delivery. Thirty-nine percent of students responded. Of these 85% agreed (35%) or strongly agreed (50%) that the online teaching component was useful to them and should be continued. One student responded that “as the class sizes are so large, the online forum (using asynchronous discussion and synchronous chat functions) provided an excellent means in which to *learn from one another* throughout the entire semester”. Another, while strongly supporting the use of OLT in the unit, suggested that the web-based approach was more “advantageous” to students with good home access to the Internet, for whom participation *really was* flexible.

Delusions and Conclusions

In the ‘always-on’, networked world, it might be assumed that web-based approaches to teaching should succeed magnificently, with student feedback and evidence of learning supporting the notion on this occasion. We propose that for an academic considering web-supported learning, understanding your cohort is an important factor if only to tailor your method to include persuasion towards meaningful engagement with the approach. Even greater refinement is possible through application of different cognitive strategies and frameworks as detailed by Campbell (1999) which can more accurately target student demographics, learning styles and cultures. The web-based approach discussed here was founded on an ideal of responsiveness, reflection and faith with general assumptions being made about the student group prior to the commencement of the unit. On reflection, this assumption may well be better tempered with the findings of a cohort specific pre-survey in hand, particularly with regard to fundamental issues of access and computer skills. While most students engaged fully, we are sure that a few slipped through the cracks, making last minute postings to the forums and never really accessing other areas of the site.

But while a pre-survey has value, it is interesting to note how divergence from preference to experience may be modelled. The preference for face to face contact evinced in the pre-surveys of first year interior design students is interesting to note in light of the surprisingly enthusiastic use of the discussion forum in the history unit. One could miss an opportunity for exciting web-based engagement by following too closely the preferences of students. Equally, a student group could also be alienated through unresponsiveness to their particular collective dynamic. Through these experiments and explorations we begin to build wisdom, gradually advancing our understanding of the web-based approaches, in surprising directions, which is why a chat over the back fence is necessary at every opportunity.

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