

The Online Classroom:

A self-actualising theme park or a trial by multimedia?

ABSTRACT:

This paper begins with three very 'public' examples of how education providers across Australia are attempting to assimilate new teaching and learning technologies into existing teaching and learning structures. The transition, as predicted, is not altogether smooth. The dual concepts of the online classroom as a 'self-actualising theme park' and/or 'a trial by multimedia' are used as contrastive metaphors to frame discussion of where and how the discourses of education and technology converge in the classroom. The paper presents a layered case study that brings together the 'practical discourse' of the teacher, the new discourses of teaching and learning confronting our students, and the challenge these provide to the 'management' discourse of school administrators. Is the online classroom a self-actualising theme park, or is it a trial by multimedia?

Using a convenience sample of year 8 SOSE (Studies of Society and Environment) students, the paper applies quantitative as well as qualitative methods to explore and document the educational, social and technological outcomes of students (and their teacher) in their first experience of online learning. The emerging 'community of practice' is the crucial node at which technology-in and technology-and education is aligned, and its members organised and merged. This situated account describes how this 'merging' is taking place within one classroom, and how allegiance to the practice of learning both re-engineers and re-orientates the very roles, relationships and distributed knowledge of the school community. In particular, the paper offers a gendered account of how students mediate online learning, how new learning technologies are appropriated for classroom delivery, and how online teaching challenged one teacher's classroom practice.

New learning technologies: A learning theme park or a trial by multimedia?

This paper is prompted by the unique and very public circumstances facing schools and school communities across Australia as they endeavour to 'get up to speed' with new learning technologies.

Scenario one:

In Victoria, the Federal Member for Murray, Dr Sharman Stone has publicly criticised the State Labor Government for its lack of action in addressing the rising Internet costs in the region. This happens against a backdrop where 50 state secondary schools across Victoria are awarded a \$5000 share of state grants to foster the further development of information and communication technology skills.

Scenario two:

The New South Wales State Government has been publicly applauded by parent groups for providing free email services to students across the state. The same political administration is

simultaneously lauded by local school administrators for providing a quota of only one ISDN line per school making widespread use of the email system impossible (Parker, 2002).

Scenario three:

In Queensland, education minister Anna Bligh is reacting to the knowledge that the 'targeted critical mass' of teachers with information technology skills has not emerged with the political velocity she would have liked. Teachers have been slow to embrace technology in the classroom, and the minister is examining the value of withholding funding for technology-based projects within 'recalcitrant' schools (Johnstone & Fynes-Clinton, 2002).

The contrastive metaphors of ICTs as a 'self-actualising theme park' or a 'trial by multimedia' provide this paper with a productive frame for examining the

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uptake of ICTs at the school level. In this light, much can be drawn from an examination of scenarios one, two and three, each of which polarises our educational fascination with ICTs, against the challenge of implementation. Perhaps these outcomes are symptomatic of an educational reformist discourse that has run to the edge of its limits. Perhaps still they are evidence of the emerging tip of a deschooling agenda, at the heart of which lays questions about the capacity of state educational providers and administrators to meet and greet the information age head on. Either way, we find elements of both agendas surfacing at the moment around the theme of technology and its social and educational roles. Is technology the self-actualising learner theme park of the future, or will it remain (for many of us) a trial by multimedia? At the heart of scenarios one, two and three lays a central and important question - how do we as an educational community transform classroom practice using new technologies? In doing so, how do we develop pedagogy and culture that engages the interests and (prior) experiences of the student, whilst opening access to future communication options to them?

As early as 1993, Seymour Papert urged the academic community to examine how the relationship between children and computers affects the traditional learning culture of schools. In some ways, the attempts of policy makers nationwide reflect this engagement, with technology now a designated key learning area in all state curricula. Computer competence amongst teachers is also articulated in policy; in Queensland, for example, the minister has assigned competency measures and incremental targets to include benchmarks around changing a printer cartridge, word processing operations and knowledge of email and the World Wide Web (Johnstone & Fynes-Clinton, 2002). Policy rhetoric, though at times inconsistent with current examples of practice, clearly underlies a reformist move towards integrated technology and education. New learning technologies should facilitate 'rich curriculum tasks' but stop short of umbrella status as pedagogy in their own right (Lankshear & Knobel, 1995).

Yet, the limits-to-technology-growth argument has an annotated list of critics, the foremost of whom being Lewis Perelman (1992:23), who's

notion of *hyperlearning* sees the "transformation of knowledge and behaviour through (technology enhanced) experience" rather than vis-a-vis teacher mediation (words). Perelman's (1992) key point is that schools are no longer the primary modellers of information processing and knowledge transmission. This position is elaborated somewhat by the Queensland Minister of Education, Anna Bligh, in her affirmation that schools will now have to 'prove their teachers can use IT equipment,' before they receive it (Johnstone & Fynes-Clinton, 2002).

At a very instrumental level, scenarios one, two and three offer a rough consensus to the technology/education problem. If school reform is stalling as these scenarios suggest, and if technology is not the umbrella answer to the social and educational functions of schools as the lack of teacher uptake reflects, then the question becomes one of convergence. At what point (if any) do the discourses of education and technology converge and reconcile? How does this intersection better align the practical discourse of the teacher and the management discourse of school administrators such that it opens space for navigating new educational, social and technological outcomes? The 'community of practice' that comes to occupy this emerging space is the crucial node at which technology-in and technology-and education will be aligned and its peoples (students, teachers, parents, administrators, and policy makers) implicated and merged. This paper is one account of how this merging is taking place within our schools. It begins with a quantitative analysis of student learning behaviours in their maiden online experience, and uses their teacher's qualitative account of the online classroom as a tool to help us reflect on changing practice.

If you go down to the woods... Rainforests online as a learning theme park

The essential impact of learner engagement with online learning environments is an emerging sense of learner control over the learning experience (Baskin, 2001). To the educational provider this represents substantive curriculum change, but not merely in terms of teaching and delivery. Resource-based learning and the shift from teacher-centred to learner-centred practice requires that teachers rethink their role. To effectively weave usage of new information resources into the curriculum and culture of a secondary classroom requires improved understanding of learning theory. What are the essential characteristics of the classroom environment in terms of stimulating learning? Can these be replicated online? Furthermore -

what is meant (for example) by a learner-centred approach to a year eight Study of Societies (SOSE) program?

The Blackboard Learning Management System (LMS) provides the social and pedagogical environment and gateway to the 'learning theme park'. The class selected was to complete a five-week unit of study on "Rainforests". This unit was chosen to be developed online as it already featured facilitated peer-to-peer learning activities, cross disciplinary collaborative interactions, situated problem solving and provided the stimulus for learners to engage with a variety of learning resources. One aim of the online environment was to extend the borders of the classroom to enable learners to have increased access to just-in-time information resources for simulations, group work and problem solving. A second focus was to enable interactions that promote a sense of belonging to a wider and *richer* learning environment than the traditional classroom.

One feature of our current educational practice is the codifying of knowledge into existing subject matter, for example the diversity of topics woven into a representative year eight SOSE textbook. The resultant package is an anthropological and theory-laden construct in the form of a text, what Callon (1986) calls 'obligatory' passage points of discourse around what 'counts as social education'. Its treatment of the 'Rainforest' attempts to enrol students in its understanding of rainforest problems, at the same time convincing them of the indispensability of existing (and at times ideological) solutions to rainforest problems. This kind of textual engagement at some level obviates the need for the student to participate in the search for active solutions, perhaps to the extent that, "knowledge is lifted out of practice" (Wenger, 1998:265). In this light, teaching does not necessarily cause learning; in fact much of what constitutes learning takes place without teaching, and indeed much teaching takes place without learning.

To the extent that teaching and learning are linked in practice, the linkage is not one of cause and effect but of one resource and negotiation. Unlike a traditional classroom where everyone is learning the same thing, participants in an online setting contribute in a variety of interdependent ways to the purpose of the community and to engage with others around that purpose. The online classroom becomes a way of organising learning, while providing the context in which learning can be demonstrated through active participation. The value of the online environment lies in its capacity to enable teaching and learning about rainforests to interact so that each becomes a structuring resource for the other.

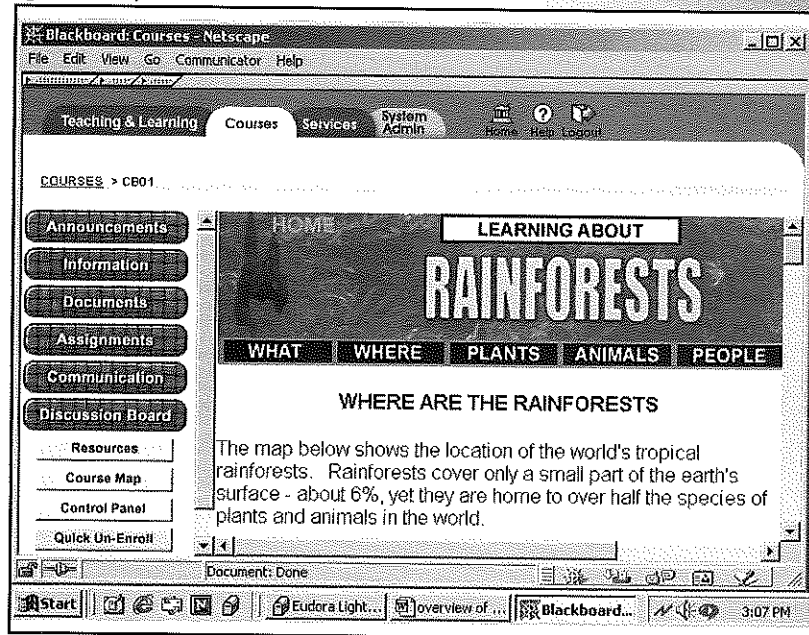
Time zones in a rainforest

To illustrate this point, data presented in this paper is a summary of the learning experiences of thirty-three (33) year eight students ($n=17$ female, $n=16$ males) and their teacher who were drawn together as a convenience sample, and surveyed after completing a five-week unit on "Rainforests" as part of their SOSE program. The first sign that something 'different' had happened in the classroom was that the five-week unit was much shorter than anticipated. In fact, the teacher completed it in two weeks, most of the student groups in three, and one group of boys failed to conclude it in five weeks. The class was both divided and together in its experience of learning about rainforests online. Not only did it separate student/teacher and student/student in 'learning time and space', but the online medium also pointed out that 'learning' time does not align with 'teaching' time, and that learner perceptions of both are a powerful influencer on learning experience and outcomes.

Learning design and architecture

The 'Rainforests' online subject site is heavily constructivist, the aim of its design to stimulate candidate membership by recruiting learners vis-a-vis Wenger's (1998:270) three component design infrastructure of 'engagement, imagination and alignment'.

Figure 1: Rainforests online



For many students, the option to work online was not just a curriculum delivery experience, but also an opportunity to connect, relate and have 'serious fun'

through an established learning resource. The learning architecture (LMS) supports Wenger's (1998) thesis by providing opportunities for:

- Communication suites/tools/places to promote and expand asynchronous engagement.
- Web-mounted materials and experiences (i.e. *Virtual Amazon tour*) with which to construct an image of themselves in their world that are not 'time-table-' nor teacher-centric.
- Simulations and interactions to 'practice' and 'form practices' about how to interact with the Rainforest. These include, but are not limited to embedded just-in-time learning resources and on-line threaded discussions. Peer-review and collaboration was also a feature of the 'Rainforests' learnscape.

Despite the attraction of the subject site, the degree to which students appropriated online learning behaviours varied incredibly. Some students identified strongly with the online methodology, others did not at first. Some reacted to the online environment with suspicion, and some saw their way through this. Some saw it an opportunity to participate, whilst others saw it as an opportunity to productively lurk. As with most theme parks, learners headed for different rides and experiences.

Teacher appropriation was similarly varied. The LMS offers a variety of features and tools that can enhance the delivery of subject content materials and activities. These include a conferencing system, online chat, student progress tracking, group work organisers, student self-evaluation, grade maintenance, access control, navigation tools, auto-marked quizzes, email, course calendar, student homepages, digital drop boxes and embedded search engines. The choice for uptake by staff is comprehensive, and the technologies broad. Initially the magnitude of the pedagogical divide confronted this teacher.

"...we used to spend a week on this or a week on that and now they (students) are all over the place...I worry that they don't spend enough time on the important bits, and I'm buggered if I know how to test them?(Teacher - November 11th, 2001)"

The teacher, like his students, reported that the traditional teaching pyramid had '*been inverted*', and felt at times '*buggered*' and at the '*bottom of the technological totem pole*'. Despite initial feelings of 'inadequacy', by the end of the Rainforest unit relations had significantly reformed as the teacher and his students began to engage with the learning resources and invest themselves in these. A new set of learning relations began to evolve.

"We learned a lot... even about Rainforests, but mostly about how to learn. I would like to say we met on a level playing field, but the kids were way ahead of me. But (we) swapped ideas and traded skills and before long I was in about 12 discussion groups, and was able to start pointing and linking these together. The silence in the classroom was deafening ...the noise in the discussion boards was huge. It was like unleashing a monster ...I wondered how these things stop but then remembered we still have the bell thank God! (Teacher - December 13th, 2001)"

A methodology for capturing student feedback

When a classroom teacher states that we '*learned a lot ... but mostly about how to learn*' I am intrigued to know more about the nature of this learning, how it is redistributed within this particular classroom, and what kind of pedagogical costs or benefits accrue. In keeping with the online setting, an authenticated web survey featuring 20 items (a CGI form) was generated and posted to the subject web site. Raw data from the survey was treated by placing the data (ranked 1-5 in nominal format) into a frequency distribution to view comparative differences of median scores across and between participating students. There were thirty-three (33) valid learner responses, valid in so far as they contained completed data sets. Additionally, factor and multiple regression analyses were conducted to locate and measure the learning behaviours students identify as the most 'relevant' to their learning in an online environment. The data collection process ensured anonymity for all participants. The data confirms that an online environment is not a panacea for better learning outcomes (Perelman, 1992), but is productive in mapping curriculum areas where technology both interacts with, and enhances student-learning opportunities. In this case study, the online setting established an authentic learning context for the study of rainforests by providing access to relevant forms of participation. The data shows as a consequence that the online environment was able to enrich student learning, and in doing so lead to a more informed teacher perspective about what counts as learning in a year eight SOSE classroom.

Learning-in and learning-through technology

A feature of the 'Rainforests' unit was the host course management (LMS) software, which provided opportunities for embedding and networking collaborative learning groups.

(See Table 1 at right)

Learning group activities conducted over (a planned) five weeks featured student collaborations in solving situated problems related to understanding 'Rainforests' and rainforest management issues. Online meetings consisted of sharing information, dissecting course materials, environmental site analyses, collecting project data, collating project data, interpreting data, as well as publishing results from virtual field trips and projects (eg: *virtual Amazon*). The summative assessment for the unit involved students designing, developing and testing their own board game simulation entitled "Rainforests". Formative assessment involved a range of progressive online quizzes that often directed students to the archived and published work of other students as a point of reference and debate.

The tabled results of the CGI form survey (Table 1 above) indicate that students endorse the online environment as an appropriate and fun (91%) forum for learning. The survey questions attempt to capture the 'what' (quantitative) as well as the 'why' (qualitative) factors underlying student feedback about online learning at the individual, collaborative as well as curriculum levels. Reported learning transfer is high (85%), as is the reported increase in computer (85%) and communication tool skills (88%) and application. Clearly, participation in the learning activities of the 'Rainforests' unit requires negotiation of learning resources. The table indicates a high level of acceptance of and for self-directed learning (82%), and self- (82%) as well as time-management (76%) opportunities. Some 90% of the survey cohort accessed the learning resources outside of schedule class time, indicating a readiness to extend (and in some ways challenge) the limitations of the timetabled classroom. This is strong evidence of engagement with, and acceptance of a new learning context, one that transcends learning beyond the pedagogical intentions of the setting.

A climate of active learning exchange (73%) was evident between students and the embedded learning resources. These resources in turn promoted opportunities for learning to learn through both global and local materials and activities (77%), for the modeling of learning behaviours (85%), self-reflection and feedback (54%). Students reported a sense of involvement

Table 1 Summary statistics - Student perspectives of online learning.

Individual perspective	Agree		Disagree		Unsure/DK	
	No.	(%)	No.	(%)	No.	(%)
Learnt a lot about rainforests	28	[85]	2	[6]	3	[9]
Made new friends & connections	24	[73]	2	[6]	7	[21]
Improved my computer skills	28	[85]	0	[0]	5	[15]
Felt at risk at first	15	[45]	7	[21]	11	[34]
Found it easier to speak online in a group	26	[79]	5	[15]	2	[6]
Learned a lot through the experiential exercises	28	[85]	0	[0]	5	[15]
Learnt to have confidence in other students	24	[73]	4	[12]	5	[15]
Learnt to use online communications	29	[88]	1	[3]	3	[9]
I took control of my own learning	27	[82]	3	[9]	3	[9]
I was able to relate materials to real world issues	25	[77]	5	[15]	3	[9]
I felt comfortable giving/receiving feedback	18	[54]	9	[28]	6	[18]
Group perspective						
Showed up immature students	16	[49]	10	[30]	7	[21]
Saw how my behaviour affects others	24	[73]	3	[9]	6	[18]
Fun	30	[91]	1	[3]	2	[6]
Learnt to include quiet people	24	[73]	3	[9]	6	[18]
The Rainforests Project						
Unorthodox/unusual way of learning	17	[52]	12	[36]	4	[12]
Learnt to manage learning	27	[82]	4	[12]	2	[6]
Learnt to manage myself	27	[82]	1	[3]	5	[15]
Learnt to manage others in group work	22	[67]	8	[24]	3	[9]
Forced me to manage my time	25	[76]	4	[12]	4	[12]

in realistic challenges that mediated their study of the environment, their interactions with peer group members, and the available ICT resources. Learning was not just confined to learning about technology, but encompassed learning in, and learning through technology. Feedback on aspects of member participation indicate an increased awareness of how 'my behaviour effected others' (73%), of the need to manage group processes (67%) and how to include and accommodate others (73%) in collaborative learning tasks. The online environment was clearly able to stimulate 'authentic' experiential and interpersonal challenges for students in a year eight SOSE course of study.

The 'identities of participation' that emerge through these classroom interactions point to a learning community that is closely connected by knowledge resources, whose membership is locally differentiated (by skill, exposure, preferences, proximity) yet one that remains locally connected through

learning. In terms of induction to online learning, students labeled online modes of engagement as somewhat 'unorthodox' (52%) at first, with nearly half the students declaring they initially felt 'at risk' (45%) in this unfamiliar environment. A virtual learning environment enlists the learner in a process of having to decide what matters, and of claiming and labeling territory. In this regard, the online environment is just as much a contested terrain as is the face-to-face classroom. This initial sense of online discomfort is a characteristic of a productive technology, rather than a 'reproductive' one, wherein new relations and forms of learner membership are negotiated, owned and enacted. The feedback from students about their maiden experience of online learning is indeed glowing, and assigns a significant role to resource-based learning in the SOSE classroom of the future.

What or who helped me to learn?

If, as the survey data suggests, online delivery can enhance teaching effort, questions of 'when, where and how' this value adding is made possible warrant examination. Teaching does not 'just' cause learning, yet an adequate epistemology on practice must begin with an examination of the factors that enhance effective learning exchange. In order to identify "what-or-who-helped-me-to-learn" a principal components factor analysis with *varimax* rotation was conducted to examine which (if any) structure of variables (see Table 1) students attribute to 'better learning experiences.' Six principle factors with *eigenvalues* greater than one were extracted using SPSS. In other words, a good online learning experience boils down to how a student participates (at a range of levels) within the learning community (Wenger, 1998). In particular, the emerging factors included (1 & 2) how learners manage themselves and their learning; (3) how they use communication tools and processes; (4) how they organise online collaborations; (5) the degree to which learners seek and incorporate teacher feedback and evaluation, and (6) the gender of the learner.

From these results, a multiple regression analysis was used to examine associations between the factors (eg: which, if any, factors in Table 1 can be used to explain or account

for student learning outcomes). The regression analysis showed a strong association ($r = .802$) between *learner attitude and approach, learner self-management, the learner's use of Blackboard communication tools, gender, and collaborative learning relationships with teacher feedback and evaluation* held constant as the dependent variable. In all 80% of all variance (that is what-or-who-helped-me-to-learn) has been accounted for by these five independent variables.

For the teaching practitioner, this is very good news indeed. What counts as effective teaching in the traditional classroom still counts as much (if not more) in the online setting. Teaching in an online environment still requires an ability to generate enough excitement, energy, relevance and value to attract and engage members (feedback and evaluation). What is needed to make the transition to online teaching successful is a translational pedagogy that is able to situate the teacher and their students within more contemporary (read ICT enhanced) learning systems. The first goal of the 'Rainforests' subject site is to articulate the internal direction, character and energy of the classroom. This *already* is in the classroom; hence the classroom is built on pre-existing personal networks and clear curriculum statements. A second goal of the subject site is to open a dialogue between insider and outsider perspectives, whilst making space for different levels of learner participation. Learning is not always direct and declarative. Lurking online is the virtual equivalent of what andragogy terms 'on-the-job' training or 'work-shadowing'. It is a legitimate (albeit peripheral) learning activity in an online setting, but tolerated less well in a traditional classroom.

The learner control afforded to users of the subject site is best evidenced in its space labeling properties. GroupWare enables easy transition between private and public spaces, shifting the learning focus from the macro (class) level to the micro (learning group) level with the selection of an icon. Email provides a conduit for one-on-one networking for the sharing of information with limited clusters of people, and 'back channel' group discussion pages help orchestrate the public space before students go public with their work and/or ideas. The online curriculum is therefore able to add value to the learning of each member by raising individual awareness, and in the longer term in developing a systematic body (memory or archive) of knowledge that can be easily accessed by each learner within the classroom. As the 'Rainforests' unit progressed students settled into a pattern of web-site use built around the functionalities of the site. The mix of idea sharing forums and tool

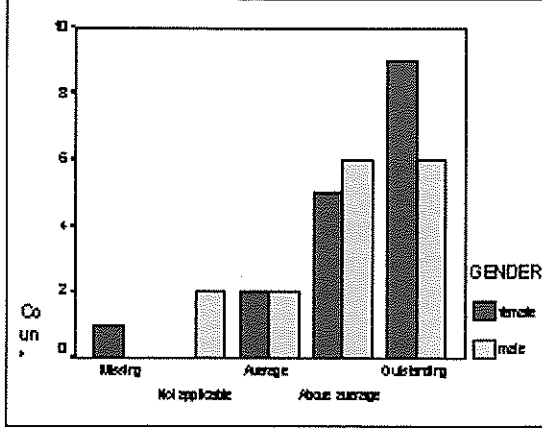
building projects fostered both casual classroom connections as well as facilitated learner outcomes. The combination of whole class, as well as small learner group gatherings created a balance between the familiarity of teacher-centred interactions, and the 'buzz' students describe from working and playing in a distributed learning environment.

"My cyber-dentity was baby spice, but all the kids christened me Mrs Doubtfire. I thought I could trick them and just merge into the group but it was not that easy ... they were on to me as much online as they were in the classroom. What was different was that they started a discussion thread called ask Mrs Doubtfire and I suddenly realised how ridiculous Baby Spice seemed." (Teacher - December 13th, 2001)

The relevance of gender

The very fact that we have a middle-aged male teacher adopting the *cyberdentity* of Baby Spice in a virtual learning environment is evidence that something different in learning is at work here.

Figure 2: Use of communication tools



Harding (1997) points to the fact that technology is 'gendered space' within the school curriculum. Although it is dominated by males, this dominance is not based on competency or learning outcomes (Kirkpatrick & Cuban, 1998; Durnell, Glissov & Siann, 1995; Cockburn & Arnold, 1985). Girls, and women are very pragmatic and confident users of computers. To some degree, this is represented in the higher relative weighting females assign to communication tools as a component of the Rainforests learning environment (see Figure 2).

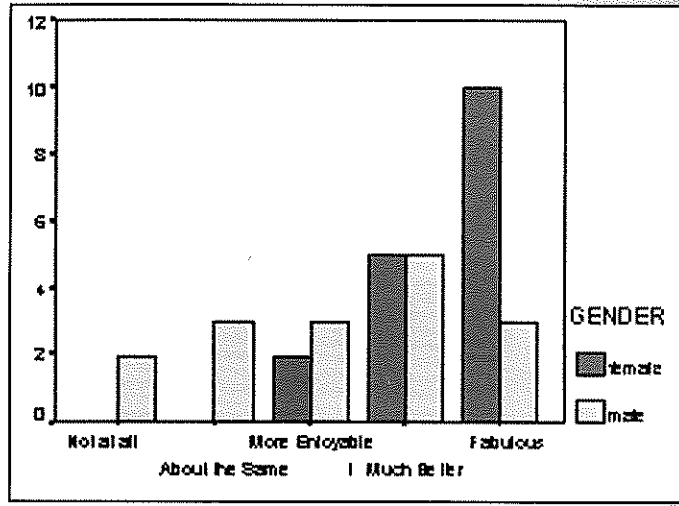


Figure 3: Enjoyed online learning

Given the results of Figure 2, it is no surprise that female respondents report a higher level of enjoyment of the online learning experience than their male counterparts (Figure 3). In fact, all female students reported enjoying the online learning experience more than they did their recent experience of the traditional SOSE classroom. The pragmatic adoption of online communication processes by female students also signalled a change in the nature of learning relationships within the online classroom.

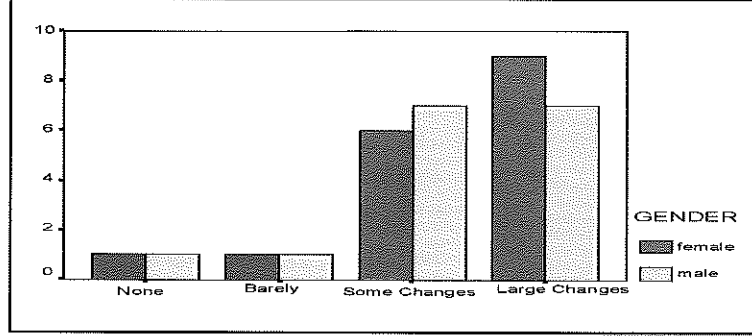


Figure 4: Changed teacher role

Most student responses identified that traditional teaching and learning relationships and roles had changed (Figure 4). Female students seemed more aware, and indicated a stronger desire for supported online learning than did male students – all female respondents deemed additional peer and teacher support as helpful, important or necessary (Figure 5) as a strategy for consolidating learning by balancing technical competence with the 'rhythm' of the online classroom.

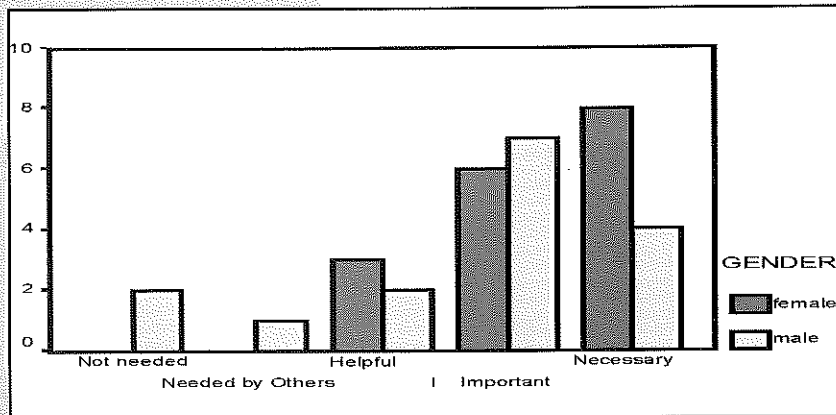


Figure 5: Need for learner support

For the female student, 'Rainforests' online defines itself as a clinical learning environment. Female students reported enjoying the opportunities for self-directed learning and used these opportunities to orchestrate and structure whole community and small community communications. The mix of idea sharing forums and tool building projects enabled informal (as well as formal) learning channels to develop in a way that supported interpersonal development. Its culture promotes an increased sense of responsibility for learning, for self- and time-management as a learner, and is able to successfully translate learning materials to the real world context of the learner. The data presented here suggests that the online classroom is less extreme in its representations of 'real world' classroom dysfunction, and also suggests that evidence of these behaviours is more transparent when online.

Teacher's IT skills – A trial by multimedia

As educators we are traditionally encouraged to focus on creating structures, systems and roles within our classrooms that achieve relatively fixed (sometimes banded, sometimes hierarchical) goals that enable our students to fit well into other school-based or systemic structures and processes. To most teachers this challenge presents itself in the form of strategies and techniques for classroom management. The interview data presented here brings to a focus the challenges facing teachers and students when interfacing between two delivery or classroom management contexts. The teacher in this study reports a range of challenges in a variety of areas: technology, logistics, organisation and delivery

(Dabbagh, 2001). What emerged from his observations was a sense of dissonance, a fragmentation of teaching practice across two conflicting platforms.

Two roles... on the one hand me, the constructivist, the facilitator moving in and around the knowledge construction processes of the student. They expect me to be their peer, their mentor ... I am supposed to contribute equally to the subjective and unstructured as well as the structured discussion within the class. On the other hand a different me ... the assignment marker ... bringing the lower end of the class closer to the top end ... the expert who will ultimately be expected to pass judgement on the rigor of student work in the most objective way possible. This conflict means the roles have to be performed independently – this results in a huge increase in my workload (Teacher – December 14th, 2001).

After analysing the 'activity' within the subject site discussion forum, over half the discussion threads were generated by the teacher, and more than 50% of the total responses were directly attributable to the teacher. Most of the teacher's discussion threads were attempts to set the collaborative agenda for the class, including setting up activities, assigning groups and indicating useful resources. As the Rainforests unit progressed, more and more of the teacher's online time was spent on 'weaving' the student discussions towards an outcome. In the words of the contributing teacher, this was 'heavy reflective work', the 'very stuff' of good teaching.

"One task had students using email to prepare and submit a summary report of their board game ... (you know) the final assessment piece for the unit. This created huge response pressures. Even the suggestion of 'email contact' raises the expectation that I am permanently on tap for feedback, and that feedback will be needed yesterday rather than today. Great! ... so one Monday I lose my spare period when I would normally send out emails and for the rest of the week I am apologising to kids for my tardiness. They got very clever ... "Hey Mr _____, I can't do this assignment until you have approved my concept".

The system had turned on me ... it was (like) trial by media ... make that multimedia (hah). And then ... yes there is a then ... you (interviewer) told me to use the technology to work for me, you remember ... to copy and paste responses in email rather than type it all. So the kids start to compare my feedback comments ... and what do you know ... they accuse me of sending out the same rotten email. I have never felt more under the microscope". (Teacher – December 14th, 2001).

The conflict between face-to-face and online processes was marked. In the words of this teacher, "it's bread and butter practice to close (a lesson) by pulling together the key themes of a lesson". The demands of new literacies and their synchronous and asynchronous properties shift the responsibility for mediating discussions (read learning) to the facilitator. As the same teacher concludes, "closing an online discussion helped me to demonstrate effective modeling and synthesising strategies, but it took me far too long (time) to achieve this".

At the administrative level, the organisational and logistical aspects of online learning seemed also to challenge both the response capacity as well as the mindset of school administrators. It was difficult to "get a computer lab", and even more difficult to "mediate the tribal practices of the IT and multimedia teachers" to secure server access and "some form of ongoing help". Assessment also appeared problematic in an online environment. The teacher felt compelled to be able to feedback to students and parents about the quality of each student's participation, but felt he lacked the repertoire (read time and means) to determine;

"which student contributions actually enhanced the debates; who was original and who was responsive in discussions; how to deal with lurkers' and non-participation, and how to educate about attribution of ideas and resources. In short ... I felt the collective was engaged seriously in learning but I found it hard to say the same for each individual. It was some kind of assessment meltdown".

As to the degree to which technology added value to the classroom practices of this particular teacher, we must borrow on the experiences of 'Tina' as a measure.

"Tina _____ just talks a lot. She is incessant. In class I would speak to her all day everyday if she had her way. I added up all the words I had typed to her over the last four weeks ... about 1800 words. Stay with me ... I have a point. Now, if I speak at ... say 160 to 170 words a minute this means that in four weeks I have spoken to Tina for the equivalent of about 10 -12 minutes. You tell me ... is that enough?"

The risk in over focusing on the experiences of one online teacher is that this may tend to over identify with a very singular and idiosyncratic episode of teaching, *vis-a-vis* a sample of one. Online teaching is a transformative practice, and just as one variable changes in our teaching regime so must we reflect on the applicability of all aspects of our teaching. The fact remains that

this online classroom has a 'learning-theme-park' quality that has led to questioning (both productive and less than productive) about the new dual modes of delivery. Despite the glowing response from students to the new form of learning, two enduring principles of the 'trial by multimedia' exist for our more circumspect teacher.

- Online teaching leads to an increase in teacher workload, and;
- It can also lead to dissatisfaction (at least ambiguity) with the quality of the teaching experience.

A false dichotomy... theme park or trial by ordeal?

Revitalised schools are something many of us strive for; staff, students, and communities alike. One problem facing the ICT in schools movement at the enterprise level is that staff, students and administrators in our schools experience technology differently. This is reflected in all three opening scenarios, and captured within the student and staff data presented in the body of this paper. Because experiences of new learning technologies are different, so too will be the range of outcomes. Technology transforms by inclusion: the transition to a better social and learning opportunity for the individual (and for groups) depends largely on where and how you are positioned in relation to technology access. If you are a mid-career teacher, a disenfranchised male high school student in a year eight SOSE class, or a teacher in a school that for social, cultural or economic reasons does not meet the IT benchmarks, then the 'social pact' of new education offers at best diminishing marginal returns.

The new theme park of technology-based education is, by student accounts, a compelling one. Cited in this paper are accounts by individuals and groups of exclusion (distance) from technology, assimilation (reengineering) to meet the demands of new technology, and the 'actualised' theme park players who have been 'transformed' through practice by and in the emerging new literacies and technologies. What we have is both a trial by multimedia, and the promise of a self-actualising theme park. The challenge now, is how we organise to deal with it.

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