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**This is the author-version of article published as:**

Carpenter, Belinda and Tait, Gordon (2000) Technology meets Student Centred Learning: "good practice" in university teaching. *Just Policy*(18):pp. 25-31.

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**Technology meets Student Centred Learning:  
“good practice” in university teaching.**

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## **Abstract**

In tertiary institutions across Australia, good teaching increasingly means student centred and technological. In this paper, this is demonstrated by a case study of Queensland University of Technology, where recent policy on teaching, promoted by management and supported by teaching and learning services, suggests two things. The first that it is impossible for QUT academics to educate their students without using inclusive and dialogical methods of instruction. The second, that at QUT, effective use of technology is paramount to the success of such student centred learning. This relationship, given legitimacy through the QUT focus on flexible delivery, raises larger questions about the dominant assumptions regarding ‘good practice’ within the university setting. In this context, the dominant assumption is the superiority of progressive education and this in itself assumes further a humanistic notion of the self. This paper will suggest three things. First that such assumptions should be challenged within tertiary teaching theory and practice, as they have been within the wider domain of social and cultural theory. Second that the new valorised practices of progressive education actually depend upon old derogated practices, but that this reliance is either downplayed or disregarded. Third, that the resulting unified policy on good teaching, needs rethinking.

## **Technology and student centred learning**

The development of the “smart” lecture theatre, with its vast array of gadgetry controlled from the one compact lectern is now commonplace in most western universities. To be able simultaneously to dim the lights, turn off the microphone and overhead projector, run the VCR, and set up video conferencing with the flick of a switch is often the result of a successful graduation from one of the many staff development programs on offer. As most of us are aware, the purpose of such technologically advanced lecture theatres and equipment is neither to bamboozle academic staff nor accumulate the latest software but rather to advance the state of teaching and learning in the academy. As Hart and Bagdon (1997, p1) state, ‘advances in educational technology offer the potential to create new learning experiences that cannot be accessed in any other way’. In this link between technology and new and better learning experiences, the academic is positioned as responsible for the improved quality of the learning experiences for students.

At Queensland University of Technology (QUT), monthly newsletters entitled *Teaching Technology: Technology issues in teaching and learning at QUT*, are sent to all academic staff, and cover news on developments in the use of educational technology for teaching and learning. These newsletters encourage staff to utilise (or learn - through the regular Educational Media Facility sessions advertised in each newsletter) a variety of technologies in order to improve the quality of their teaching. The subtext is that this will correlate with an improvement in student

learning. Similarly, the Academic Staff Development Unit (ASDU) at QUT encourages staff to participate in techno-mastery courses, and in Student Evaluation of Teaching Questionnaires (SETs) the mastery of technology are included as standard questions. Also, *QUT's Teaching and Learning Plan (1998-2000)* includes 'objectives which seek to provide learning opportunities for a diverse range of students, to provide courses of study which are flexible and consistent with best practice and which provide stimulating learning experiences'. All this is to be achieved, in large part, by 'making use of appropriate technology'.

This relationship between student centred learning, technology and flexibility is well demonstrated in the 1999 '*QUT Staff Teaching and Learning Development Program*'. Developed specifically to address the *QUT Teaching and Learning Plan*, student centred learning is its mandate. And, while it is realised that 'technology is one of a range of tools available for improving teaching', 'flexibility in teaching and learning', and 'using technology' account for two thirds of the programs offered in the course of the year (Winn 1999, pi). Of course, QUT is not an island in this regard. The University of South Australia combines 'student support in a learner centred environment' with 'effective learning materials' in its Flexible Learning Centre. (Joughin 1995, p6). At Griffith University, a 'commitment to innovatory, student centred teaching' through 'appropriate educational technologies to enhance learner independence and control' is at the core of its increasing focus on flexible learning (Joughin 1995, p7).

As *QUT's Teaching and Learning Plan (1998-2000)* maintains, this is because 'technological advances open up opportunities for adding newer and more innovative methods to the spoken

lecture and face-to-face seminar'. The outcome is that rote learning, a failure to use a variety of visually stimulating resources (anything from OHTs to advertisements) or simply reading lecture material is positioned as inappropriate for the student in the new millennium. As *QUT's Teaching and Learning Plan (1998-2000)* maintains 'students have increasingly high levels of expectation about the use of information technology in both delivery and their learning'. Of course the implications for teaching are clear. A good tertiary teacher is flexible, allows for student independence and learner control, encourages equitable participation, negotiates on all matters and offers an interesting and stimulating learning environment – all through the effective use of technology.

At QUT, not only is a good teacher an effective user of technology but that this is actually required for student centred learning to occur. Moreover, this relationship between good teaching, technology and student centred learning is predicated upon the need to treat the student as an active citizen. While this is, on the one hand, simply a technical issue (in that it involves using available technology to deliver more flexible programs to students who now expect to participate in an increasing diversity of learning contexts), there are also ethical considerations. By ethical considerations we mean how students come to regard themselves, including their rights and responsibilities, as participants within the university. Students are no longer expected to be passive learners. Consequently, they often anticipate being involved in ongoing negotiations over issues as diverse as assessment, course participation and teaching and learning methods, as well as involvement in open discussion in all forums.

## **Humanism and Progressive Education**

Student centred learning (and teaching) requires not only technological proficiency, flexible delivery and freedom of choice, but also a particular understanding of the student. Terms such as 'life-long learner', 'learner control and choice', 'student centred teaching', have a certain image of the student persona in mind. 'This is a conception of the person as a self developing subject, who learns through freedom, and for whom the school is thus only an instrument of the person's own self-realisation (Hunter 1994, p145-146).

This humanist understanding of the student is the foundation of the progressive education movement. While the impact of progressive education was most keenly felt in the preschool and primary school in the early post war period, the ideals of progressive education are now the mainstay of all forms of education, including tertiary education. Formed in opposition to more instrumental understandings of education which stressed utility and measurement, the progressive belief in process rather than content learning, and active and interest-centred learning, are based in the belief that 'learning occurs through encounters with self-knowledge related to the quest for personal meaning and identity' (Preston and Symes 1992, p62). In such a context, the learner 'is in control and the teacher performs a subsidiary role in the educational process ... helping individuals to grow and reach higher levels of self actualisation' (Preston and Symes 1992, p61). Such a way of understanding teaching and learning clearly resonates with tertiary teaching and learning plans in the 1990s.

In a series of publications produced by QUT, academics are given guidelines for ‘enhancing their teaching and learning’. In *Teaching for Learning*, academics are instructed to ‘provide an environment that encourages students to interact with you and with each other’ (Ballantyne, Borthwick and Packer 1997d, p2). Similarly, in *Interactive Teaching Strategies*, academics are informed that ‘all students participating in activities should be made to feel that their contributions are valued’ (Ballantyne, Borthwick and Packer 1997b, p1). Moreover, ‘variety in teaching is important for student interest ... and furniture arrangements are important in maximising student participation in interactive teaching and learning’ (Ballantyne, Borthwick and Packer 1997b, p5). This inevitably leads to the democratisation of the classroom where ‘teaching staff gradually relinquish control over what, when and how content is learned’ (Ballantyne, Borthwick and Packer: 1997a, p3) – a change *advocated* by the universities.

While tension exists between educational theorists as to the role of schooling and society – education versus training, liberal versus vocational principles, mental versus manual capacities – the ideals of progressive education are rarely questioned. This is due in large part to the widely held belief in humanist notions of the self. Examples of this humanist position are legion. In *Dialogue with Youth*, a series of conversation with university students, Mears (1973) adopts just such a model - one which betrays a familiar set of domain assumptions concerning the ‘self’. In a section entitled, ‘Do you ever wonder, what is the real me?’, Mears (1973, p262) looks at what he see as university students’ characteristic search for their inner identity. He argues that the variety of differing contexts within which young people find themselves, and the various social forces which impinge upon them, result in a clouding of the inner self - a distorting of reality. He maintains that although students often play a number of different social roles, unless



these roles emanate from the natural person within, they will be nothing more than falsehoods. As a consequence, he says, the "real me" [will be] quite submerged in a flood of psychological turmoil' (Mears, 1973, p286).

These familiar, humanist underpinnings of progressive education, such as a concern for the true, inner self and the development of the whole person, have been challenged by other contemporary, post-modern theories of identity formation. In such work, the 'self' is positioned as an historical contingency, an historically variable collection of attributes that human individuals may or may not exhibit in specific contexts. Mauss (1985) provides disparate examples in defence of this reasoning. The central focus of this work is upon those societies where personhood is 'externally' acquired, such as in societies structured around clan and fraternal loyalties (which principally means ancient Europe and non-European societies), as opposed to societies where it is internally organised.

Mauss argues that the contours of personhood are dependent at any given moment upon the social and historical contexts of their formation. Since these are subject to considerable variation, so too is the category of person. Thus, the 'person' neither has its genesis in some unrefined biological and psychological essence of the 'individual', nor is it the inevitable outcome of simply being human. Rather, personhood should be regarded as a set of statuses, rights and obligations which may be allocated under certain circumstances. It is a contingent mechanism for publicly organising the attributes and social relations available to members of a given society - such as, for example, those personages which make up a university - professor, student, parking warden.

In this vein, the use of technology in teaching is not simply the best and most effective way of assisting learners in realising their 'full potential', it is just a new component amidst the complex processes through which lecturers and students fashion their identities, relations and practices. After all, it must be remembered that progressive education emerged, not as an inevitable pedagogic advancement, but rather as an historical contingency, the result of specific educational ideas and experiments (Kendall, Tait and Carpenter, 1996). What is now taken for granted - the necessity for teaching to engage the attention of the student - required an historically located reorganisation of the ethical and technical character of the teaching situation. That is, towards the end of the 18<sup>th</sup> century, new ways of organising and understanding the status of citizen within western societies, had the contingent effect of producing new protocols for teaching and learning. These protocols, in continual tension with traditional forms of instruction, formed the basis for 'progressive' education. From this time, the lecture theatre and the seminar room became places of a new type of knowledge acquisition predicated not only upon discipline, as the learner was subjected to more and more thorough assessment and examination, but also upon dialogue, with the student becoming part of the principle of their own education (Hoskin 1993).

### **The links between traditional and progressive education.**

We have argued elsewhere (Tait, Kendall and Carpenter 1996) that during the past two hundred years there has been an ongoing dialogue between the progressive and the traditional positions. For example, the lecture is a form of teaching imbued with both progressive and traditional educational practices. As previously argued, the 'smart lecture theatre' is a technological

attempt to move this space toward progressive educational ideals by presenting material in a stimulating and challenging manner. However, the very organisation of the lecture theatre, the teacher/learner ratio (200-400:1 and growing), and the volume of material to be covered in 1-2 hours per week, encourages a style of presentation based on the active teacher and passive learner. Rote learning is the central learning style in many lectures, especially in large core courses, and especially in subjects which are compelled to cover a core syllabus. Even in university publications premised upon progressive education ideals, rote learning is implicit. For example 'the last 5-10 minutes of any lecture is an ideal time to question students on the main points that you covered in the lecture' (Ballantyne, Borthwick and Packer (1997b, p2). This is positioned as a component of an interactive teaching strategy to encourage student involvement in large groups. Nevertheless, it is also clearly dependent upon rote learning.

But, it is argued, if the lecture is underpinned by traditional practices, the tutorial and seminar are wholly progressive. It is in the tutorial and the seminar that students are able to explore ideas in a dialogical relationship with the tutor, develop a variety of skills and extend their knowledge in a personally meaningful way. However, it is not difficult to unpack such learning experiences as underpinned by traditional practices. Student presentations may well be based on rote learning. For example, in a presentation on human rights, students must be able to recite specific knowledge about the concept: central characteristics, its history, its international and national status, its legal protocols, its policy implications, and so on. While such aspects may only be a part of the seminar, the recitation of these facts are essential to a presentation that goes beyond these facts and demonstrates the necessary thought and reflection. Taking the argument one step further, however, adequately demonstrating 'thought and reflection' may itself be a set of rote-

learned protocols and answers. The sophisticated claim that human rights are culturally relative, may simply be the result of students reading, remembering and repeating the required course material. Interestingly, when the student takes over the role of teacher, similar sets of expectations vis-a-vis teaching, learning and technology come into play. Not only are they expected to 'engage' their peers in a dialogic learning experience, they are expected to bring all possible technological resources to bear in the process - overheads, tapes, videos, and powerpoint presentations. As with lecturers themselves, the use of technology in presentations now forms a component of the persona of the diligent student.

Finally, assessment, whether exam or essay, relies upon traditional methods of learning. While an exam is more straightforward (with almost all exam preparation either partly or wholly rote learning), a critical essay has as its bedrock a recitation of the facts about the issue. For example, within education faculties across Australia, students are tested upon their knowledge of 'progressive education' itself. This by no means simply requires the ability to apply the concept within pedagogic contexts, rather it is founded upon the acquisition and internalisation of facts which constitute a significant component of any exam answer: the history of progressive education, its dominant features, its leading advocates, and its relation to liberal, critical and instrumental educational philosophies. Whether it is admitted or not, such rote learning of the facts is necessary in order to demonstrate knowledge. Even in open essay topics, rarely do students construct a question without guidance from their tutor. In a QUT publication entitled 'Assessment', academics are informed that 'collaborative assessment allows learners to play an active role in self assessment and/or assessing fellow learners, although the teacher usually has the final decisive role in actual certification' (Ballantyne, Borthwick and Packer 1997c, p2). In

this way, students explore issues that are relevant or interesting to them, but in ways managed by the tutor. The point that emerges from this is that the objectives of progressivism actually require traditional practices working alongside them in order to function.

Importantly for this paper, technology cannot bypass this dynamic. While it maintains the importance of progressive education because it ‘opens opportunities for interactivity which are educationally imperative’ (Taylor, Lopez and Quadrelli 1996, p104) It must find itself in the same quandary as more ‘old-fashioned’ forms of information delivery. After all, even in the era of flexible delivery (as well as life-long learning, video-conferencing, and the virtual classroom), where students are encouraged to be active learners and co-designers of their own curricula, in the final analysis, they are still instructed and assessed by practices grounded in the most ancient of all learning philosophies: repeat after me.

### **Implications for Teaching and Teachers.**

The outcome of such an understanding has a clear impact upon both policy and practice.

Academics are under increasing pressure to demonstrate that they are good teachers.

Universities spend considerable time and money defining, implementing and rewarding good teaching practice. Nevertheless, uniform and unitary models of good teaching may not be as useful in the university setting as previously thought. Preliminary research in this area (Carpenter and Tait 1998) suggests that ‘good’ teaching practices (defined by QUT as flexible, student centred and technological) depend most upon the subject matter, age and

gender of the lecturer rather than university teaching and learning plan.

For example, at QUT the most traditional teachers often made more use of technology than did the more progressive educators. Thus, effective use of technology in teaching did not necessarily equate with student centred learning at QUT. The more progressive educators tended to be young and female irrespective of faculty but they tended to be low on their use of technology in teaching. Faculty was the most significant indicator of the likelihood of advocating progressive educational ideals with science academics the least likely and education academics the most likely. However, science academics were most likely to use technology in innovative ways in their teaching.

Such findings suggest a tenuous relationship at best between these three variables (student centred learning, technology and good teaching practices) and this raises questions about the dominant assumptions regarding good teaching practice within the university setting. At a practical level, it may indicate a need for a more flexible understanding of good teaching within the university, specifically when practices are compared across faculties, for example, when academics apply for promotion. Importantly, these policies, assumptions and beliefs about good teaching practice are to be found in many other tertiary institutions in Queensland and Australia (Joughin 1995, Taylor, Lopez and Quadrelli 1996).

## **Conclusion**

A whole series of assumptions about what is 'good practice' in university teaching environments inform the ways we set out to instruct. Within a tutorial, for example, just what is permissible and what is beyond the limits of good practice, is rarely made explicit - but most educators and students know the rules anyway. Reading something out for three hours is not permissible; neither is telling the students to learn three things off by heart. As we have argued, what counts as good teaching practice has been historically fashioned, and fashioned comparatively recently. A whole set of practices, and relationships between student and lecturer, which we have termed 'progressive', would have looked rather strange two hundred years or so ago. Likewise, the idea that material had to be meaningful to the student to be easily comprehended is also relatively recent.

This paper has argued that the use of technology has now been folded into this complex equation of 'progressivism'. Moreover, progressive education has expanded beyond the boundaries of the humanities (where it might once have been deemed to reside) to include all university teaching. A recent article in *Inside QUT*, in the context of university maths, demonstrates the support of progressive over traditional teaching methods throughout the university.

The kind of exercises we set the students do positively reinforce a surface learning approach - that means rote learning without much understanding ... Lecturers universally claim to be committed to teaching students to understand the subject matter, but the exercises that they give students to practice actually encourages them to rote learn ... What we are not doing - where we are letting our students down - is that we are not training them to understand (Hubbard 1996, p1).

Ruth Hubbard's polemic indicates clearly both the relationship and the perceived superiority of progressive over traditional teaching methods - no mean triumph in an area such as university maths. In contrast, this paper has suggested that arguments against traditional techniques like rote learning, as in the above example, come down to nothing more than assertions about moral superiority – 'it's simply *better*', 'it's more *meaningful* to the students', 'it's not *old-fashioned*'. This fact denies the existence of a long and complex dynamic between traditional and progressive education, as well as a continuing reliance upon it.

Finally, a common measure of an academic's commitment to progressive education is the deployment of all available forms of teaching technology. That is, the use of modern technology has an ethical dimension due to it being situated within notions of good practice. This conflation of the technical and the ethical is central to progressive education, specifically the notion that learning is an active process that requires freedom and autonomy on the part of the learner. 'Technological teaching', 'flexible delivery', and 'on-line education' with their emphasis on student learning through activity, are simply logical steps along this path.



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