The studio in tertiary education

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Introduction

Why is studio teaching important for interior design? Can interior design and perhaps architecture really be taught without the use of a live studio? Why is there a need to ask this question at all?

Discussion within the academic discipline and in the practice of interior design is frequently concerned with the effects that rationalisation has on the way that space is used. In this setting 'rationalisation' is a loose term usually associated with 'economic rationalism', through a popular understanding of the measure of cost against expenditure. The consequence of rationalisation of this kind (the minimisation of the ratios of costs against resources) when applied to space is an issue that arises out of the growing concern with efficiency in management of all kinds. What is at stake with the rationalisation of space is the order of categories from which educational benefits are thought to derive. Rational management is a style that fails to recognise that there are more significant priorities that determine quality in education than the measurement of quantities, whether they be of space or any of the other aspects of educational institutions.

The financial state of universities

In universities in Australia, over the last 15 years, there has been a decrease in staff-student ratios, reduced operating grants and increasing student fees. There is little doubt that the financial state of universities in Australia is worsening. The political and economic orientation of research varies[1] but the basic premise remains the same; universities are experiencing economic problems in line with most economic conditions of the western style economies. The current financial state of tertiary education brings the question of cost into focus for the various tiers of university management. The tight relationship of resources to expenditure ('delivery' in university management language) could be called 'lean'.

The application of rationality to teaching space and its effect on teaching

Efficiency becomes the measure of space itself, among other resources available to universities, against the 'delivery'[2] of 'teaching and learning'[3]. In this sense, the rationalisation of space becomes an issue for teaching style in that it determines the use of space. The ratio of space versus delivery becomes the *underlying* concern in the preparation of teaching. Teaching style is forced to address space as a rational *quantity*. Other aspects of teaching

space, such as *identification*, *student propriety*, *access* and *community* become external issues to the centralised rational use of space. And so studio teaching that includes apparently non-rational aspects of space comes under pressure from management. Once again the argument, periodically made within teaching institutions, for studio teaching must be expressed and explained, otherwise there is a danger that it will disappear within a drive for rationalistic management.

The value of the studio is still recognized, as a way of teaching but the significance of the identification of students with the studio space itself is not generally acknowledged. It is this aspect of studio use that university managers find problematic.

Theoretical approaches to design education

Emanating from education faculties, educational theories founded on a range of abstract concepts have become popular within the broader university system. For example, the work of Paul Ramsden, *Learning to Teach in Higher Education*, is a text for the Graduate Certificate in Higher Education at University of Technology Sydney. Abstract concepts used by Ramsden include 'reflectivity'[4] and 'deep and surface learning'[5]. Ramsden's work uses these and other concepts to present a way of understanding education that places value on ways of teaching in which students can embrace their education rather than consume it.

Invented concepts, such as 'deep' and 'surface' learning, contribute to this approach and are there to give access to the overall purpose of his work. Ramsden's approach relies on the creation and development of terms for concepts that reflect abstract approaches to education but which claim their authority from experienced based research. His approach though is dependent on the unity of student and study; the complete commitment of the student to the discipline content of the course rather than the mark. This assumes that the student ought to be solely motivated by and within the course itself, as the following quote from Popper used by Ramsden to open chapter 3 conveys;

> *Instead of encouraging the student to devote himself to his studies for the sake of studying, instead of encouraging in him a real love for his subject and for inquiry, he is led to acquire only such knowledge as is serviceable in getting him over the hurdles which he must clear for the sake of his advancement.* (Karl Popper) [Unreferenced in the text] [6]

It is assumed in this statement attributed to the philosopher, Karl Popper by Ramsden, that the student has what might be called a 'bad' motive in wanting advancement. Students are expected to 'love' the content of their education and by extension, the means by which it is gained, the discipline. As indicated by the above quote and throughout Ramsden's

work, there is an assumption that to use one's education for a purpose other than *for the professional discipline itself* as it is found in the educational process itself, is bad. To want passes for subjects purely in order to go on to something else, perhaps unrelated to the discipline in the orthodoxy of that discipline, is a bad thing *in itself* in Ramsden's model.

The assumption is that *education for itself* is always a 'good' and a good for its own sake, and in Beaux Arts style, that the 'problem' to be solved in professional activity is one that requires a certain array or repertoire of educational elements assembled according to the special choices of the students according to strict 'needs' defined within the 'problem'[7]. The aim is the complete identification by the student with their discipline – according to an Essington Lewis[8] style assertion, 'I am my work', in which *being* is equated with *doing*.

There is however, no sure way of knowing the motivation of the student. This means that the assumption that the motivation for grades is a negative one is prejudicial. This prejudice is founded in the confusion between *actions*, which can be determined within the education process, and *motives*, which it could be assumed, are the personal business of the student.

It could be that a student wants a degree in order to do something other than what the content of that degree suggests (as indeed many of them do); that the student regards the degree as at least in part, a general education by which access is gained to other activities. As such, some of the content of the degree may quite correctly be, in the mind of the student, mundane or inconsequential for their goal. For example a student that aims at becoming a professional designer may be uninterested in written research. The student's pre-conceived notion of what it is to be a designer may or may not be founded on good ground. The question of by whom this can be determined is, in any case, problematic. For example an interior design student that intends to work for a major film company to design virtual interiors may or may not need to understand current building construction techniques. Perhaps it is the student's choice to limit their education in this way.

In this case they may or may not find the tasks set by the institution interesting, related to their goal or useful in their study. The academic institution however structures a course according to a sophisticated and efficient comprehension of what is important and necessary for education within the discipline in a broad but discipline specific sense. The difficulty here is whether the institution supports the academic discipline or tries to offer satisfaction for the individual desire of the student. Is it the institution or the student that is to determine the 'running' of the course? In handing over responsibility for the content of actual courses to the choice of students through flexible study paths, management has heightened this issue.

The student-as-customer is determining the content of the service that they are buying thus enhancing the servility of universities.

Popper's assertion, from Ramsden, that students should pursue knowledge for its own sake is idealistic and reminiscent of the concept; *ars gratia artis* of the 19th century in which art, via Immanuel Kant, was best placed where it made no claim to new *objective* truth about the physical world.[9]

It could be argued, by comparison to the promotion of art for arts sake *(ars gratia artis)* in the *Beaux Arts* tradition, that art asserted itself, as self-motivating and so became insular and dissociated from the society in which it was practiced. In Ramsden's model, education for its own sake is being proposed and the result is, when combined with education as a service industry, a deep conflict between the interests of students and those of universities.

This ideal can also be compared to Nietzsche's attack on science. Nietzsche offers the following three 'errors'[10] as a comment on scientists, apparently with disdain, which are summarised as follows;

> *... by means of science that one hoped to understand God's goodness and wisdom...*
>
> *... one believed in the absolute utility of knowledge and especially in the most intimate association of morality, knowledge, and happiness...*
>
> *... one thought that in science one possessed and loved something unselfish, harmless, self-sufficient, and truly innocent, in which man's evil impulses had no part whatever.*[11]

It is the last 'error' that is being urged as the proper approach to education by Popper and thence by Ramsden. It is the innocent neutrality of identification with the discipline, like a monk, that is being urged by Popper and Ramsden. One is not allowed to have a private motive for education. Instead one's motivation must be reflected in that of the institution. One must be motivated by altruistic adherence to an ethical stance due to commitment to the content of one's discipline. Nietzsche points out that the error here, is one in which one believes that one's actions have no ethical consequence; that one is a neutral and good-willed, dispassionate but curious observer. Ethics becomes in this context a matter of dis-interested curiosity. This version of curiosity though, disguises one's context and one's being within that context, postulating the individual self as a non-dimensional point, as in perspective. The result is that one is blind to one's own presence in the thing that one sees.

Nietzsche is a strident and assertive critic, prone to exaggeration and hyperbole, as can be readily found in *The Gay Science*, from which the above summary of the three 'errors' is taken. He uses the term 'error' in a rhetorical sense, as it is found in Greek philosophical style especially of the Sophists ('my friend is in error'), in which the 'error' of one's opponent becomes the target of one's analysis. And so it could be taken that the errors he talks about may indeed be, within the practice of science, *necessary* errors, at least in certain aspects of the scientific procedure. Errors can also be called the 'fictions', as the philosopher Michel Foucault might have named them in *The Order of Things*[12], upon which the culture within which action can take place rests. As such these fictions, despite their fictionality, and which is not necessarily a negativity, are necessary for a practice to take place. Concepts, such as those that Ramsden uses, when understood in this light, can have a double edge not explored in his work. Thus Ramsden's dualities become rigidly applied as if they are always 'good'. In this form they are clearly expressed and ready for use in educational institutions and their management strategies.

As the urge to teach more effectively is connected, by management, to the urge to improve economic performance, the pressure to measure the quality of teaching becomes greater than the actual understanding of it. When this happens, the concepts and perhaps especially the names of these concepts, become the catchwords used to argue for other things, by which education can be measured and marketed. Technology, especially electronic technology, for example, becomes a purpose in itself, argued for because it is supposed to enable other purposes such as contemporaneity ('the latest'), diversity ('other cultures', 'globalisation'), or flexibility. Technology for example, or at least the style of technology, uses the names of abstract concepts from educational theory as its administrative language. In the following from the Centre for Educational Development and Academic Methods (CEDAM), at the Australian National University, theoretical terms and terms that are conceptually loaded within theoretical discourse (underlined) are used to explain the 'Flexible Education Program' for academics,

> *The generation, development and evaluation of* ***innovative*** *projects using experimental approaches such as* ***prototyping, action learning,*** *and* ***classroom research****. A priority will be the adaptation of* ***flexible*** *and* ***IT-enriched*** *teaching* ***strategies*** *and course designs to meet the* ***evolving*** *learning needs of* ***diverse*** *student groups at the undergraduate and postgraduate level.*[13]

From Curtin University, Office of Teaching and Learning, a similar theme in regard to electronic technology and education;

The University's stated values constitute a general framework for OTL responsibilities. Accordingly these responsibilities include the pursuit of the following broad objectives:

1. To ensure that Curtin makes appropriate use of technology (especially information technology) to advance its major goals in teaching and learning as well as in research and development.

This means particularly –

- showing a commitment to apply IT in innovative ways that match Curtin's aspiration to be a world-class university of technology;
- involving staff and students comprehensively in that commitment, with adequate technical and scholarly support;
- having due regard for the most efficient and effective ways of deploying resources in a difficult financial environment;
- developing strategic IT alliances with industry, government and other educational providers[14]

Concepts such as 'efficiency', 'technology' and 'flexibility', become key words that have subtly different meanings to different groups. Like all concepts though, there is a strong dependence on the creativity with which concepts are expressed. The arguments in which these terms are used vary in orientation depending on a range of political and other values.

In the following abstract from a paper by Robyn Lines, published in 2001 in 'ultiBase' an online education journal, virtual space (information technologies) is connected to 'flexibility' and 'student centred teaching',

System wide structural change, resource reductions, increasing competition and requirements for accountability have accompanied a fourfold increase in the number of students in the Australian university system over the last fifteen years. Greater student numbers and diversity has been reflected in a stronger focus on the provision of high quality teaching and learning that is flexible and responsive to the needs of students. In their vision papers and strategic plans, many universities are looking towards the enabling power of advanced information technologies to provide such flexible, student centred teaching and learning environments. The passage from strategic vision to university wide teaching change is, however, a complex and largely uncharted one. This paper draws upon research in the Australian Technology Network universities to provide case studies of implementation issues that arise from changes in the higher education sector and approaches that have been developed to extend and embed the use of technologies for teaching.[15]

'Greater student numbers' and the related reduction in resources, have been asserted as having been 'reflected in the stronger focus on the provision of high quality teaching and learning that is flexible and responsive...'. In this passage, technology is being argued for as the answer to the increased student load, by rhetorically associating virtual technology with flexibility and responsiveness. 'Flexibility' is being used as a rhetorical device to argue for technology. It is this use of the term that assumes the view that flexibility is inherently good regardless of its context.

In a differing view in the same journal, the following from Carol Reid,

> *Teaching 'about' cultural diversity to teacher education students involves an unsettling of strongly held presuppositions about society. In the subject discussed in this paper, there was a shift in process to reflecting on the cultural constitution of the 'self' while attempting to integrate the use of technology into teaching and learning experiences. Drawing on a 'thread' from a Discussion Board the paper firstly analyses the ideological discourses that students reproduced in cyberspace. It then critiques pedagogical assumptions underlying discussion based learning or what has become known as 'the pedagogy of voice'. The paper concludes that the transferal of this type of pedagogy into cyberspace reveals the limited democratic nature of web-based discussion boards.*[16]

Democracy as the embodiment of diversity, whether it is of 'the voice' or of the many other gestures associated with action in education is not achievable in virtual space, according to this paper. Virtual space is suited to cultural universality and the measurement of that universality; an electronic empire of the mind. The flexibility of virtual space is only a form of flexibility within the parameters of e.universality defined by 'the web', a view opposed to the previous example. Flexibility though, remains a 'good'; a thing to be sought for itself and is evident in the naming and activities of many of the units concerned with improving academics' teaching in universities[17].

The fallacy of flexibility

It the world of rational management, the search for flexibility naturally takes the form of flexible administrative structures. It is those who work for management, which is to say the academics, who enact this flexibility. What is blurred over in this drive for the eminently marketable flexibility is paradoxically, its cost. Student choice drives structural flexibility in the belief that courses need to be as 'responsive' as possible to student needs. The student is taken as the *consumer of a service*, despite the university being primarily a government institution with the commonwealth as its 'customer'[18].

Educational success in design teaching does not emanate from 'flexible' enrolment structures but rather is found within the teaching process itself. In particular it is found, in design, in the relationship between teacher and student, an embodied educational relationship within the studio. The physical presence of the teacher and the student is required for the studio to effectively function. It is this combination that allows the flexible administrative structures to appear to be effective. The success of individual studios conceals the essential weakness of handing responsibility for academic direction to students.

The following from Donald A. Schön, in which he places the studio for architecture within the university system, which is assumed to be the place of studio teaching generally, including that of interior design;

> *Architecture crystallized as a profession before the rise of technical rationality [industrialisation?] and carries the seeds of an earlier view of professional knowledge. Perhaps for this reason, it occupies a marginal place in the contemporary university. Its bimodality [artistic and technical] and implicit reliance on another epistemology of practice make the university uneasy. Even when architects are tempted to put on the universities lineaments of applied science, they cannot escape the profession's core of artistry; for architects are self-recognized designers, and although such ancillary sciences as soil mechanics, climatology, and structural engineering may contribute to specialized design tasks, there is no general usable science of design. So architectural education still embraces its studio traditions.'*[19]

It is the embodied artistic core of the studio that involves a mystery about identity that eludes the rational manager. The studio offers what Schön calls, 'reflection in action'[20] in a communal setting. Critical action carried out as a physical act in a studio and thus the presence of the student constitutes an incarnate or embodied ethical commitment to their critical action. In crude terms everyone knows who did the work, when it is done in the studio. Flexibility in a critical sense, or the ability to re-orient one's point of view according to circumstances or an openness to other people, is essential for success in the studio, both as a teacher and as a student. Reflexivity in the studio is the ability to do this within a community of students (peers), which while noted by Schön to have design significance, also has an ethical meaning. The disengaged, virtual designer has no need to present themselves either physically or even metaphorically, by their own body; the design is a separated virtual 'object' of neutral moral and ethical value (and in many cases, æsthetic worth as well).

To allow flexibility to become a key word in the pursuit of 'quality assurance' through the implementation of electronic technology sidesteps the issue of quality in design education. Instead of providing a secure and ethical background for ideas to occur in the relationship between teacher and student, management has tried to take responsibility for them through the implementation of a structure that uses the rhetoric of the educational theories by which those ideas are thought to occur. 'Flexibility' in design education without the studio, is a fallacy of the use of terms, and not a valid management structural end in itself.

The studio and student community

Teaching and learning are inextricably bound within a single process: *education*. In this process, both teacher and student become part of a *community of education*, along the lines of the 'community of scholars' as a characterisation of 'university'. It is sometimes attacked as being old fashioned, especially by those that hold values of competitive self-interest associated with rationalism. The view taken here is opposed to the often implicitly expressed view, also associated with rationalism, that design education can be 'fed' or 'delivered' to a passive individual, from one place to another, as if it were a quantity of matter. While it is intellectually recognised in most institutions, that this is an inappropriate educational model, it persists in the language and structures of management rhetoric. Terms such as 'delivery' commonly used by universities, indicates this.

A community, a group of physically present people, in its fullest sense must be formed for education to take place, especially in design education. *Community*, in this sense can be explained as the recognition of the other as a group within oneself; the group by which one identifies oneself, the value of which can be understood as a common-wealth. One is at once separate and simultaneously constituted of the group; in a reversal. Identity is multi-valent and mutually constituted according to the cultural planes in which one is evident. Action too, is according to the mutually constituted multi-valent presence of the individual. It is this multi-valence that makes action possible. Indeed, design would not be possible without a culture; a society in which design is known as such. The role that the studio plays in this has largely become unfocused through the denial of the mutual constitution of self and other, in the apparently vain attempt in 20th century modernism, to establish a universal univocality, especially of space; the grid. For design it is this opaque, formal, univocal space that reflects the isolation of the individual creative genius, another primary trope of modernism in design.[21]

The studio as an alternative model

Education, as distinct from teaching, is the arrangement of circumstances in which the attractiveness[22] of educational opportunities is made clear to a group of individuals by another group of individuals. It is for the first group to take up (or not) the opportunity for themselves. Education must remain optional, the students exercising self-will in its pursuit. For this reason, 'Learning' and 'Teaching' can only be described in terms of 'education'. In the studio, it is the physical presence of the multi-valent self of both the teacher and the student that makes education possible. Education then is the means by which the multi-valent self is found, both for the student and the teacher. It is the open and generous means of achieving this most effectively in the studio that needs to be re-argued. There is a re-examination of the studio as the teaching method for all forms of design education.

Studio teaching can be inclusive of almost all other methods of teaching. This is a significant point that is usually overlooked by those that offer alternative 'paradigms' as they see it. The studio does not inherently exclude other forms of education such as the lecture or the tutorial. It is not an either-or case in which the studio is regarded as an exclusive and in some critical assessments, an elitist form of teaching.

Education can be understood as the flexible alignment[23] of understanding in individuals through the expression of ideas as artefacts (essays, drawings, models, presentations, performances, events, etc)[24]. It is through their material expression, that ideas can be examined and the orientation of individual's experience of the idea can be changed. Argument[25] is the process by which this occurs. The individual student comes to see what the teacher believes through an argument, whether the argument is rational, effective, and meaningful or otherwise[26], made as a form of visual presentation or event for those that are taking part, to 'read'. Thus the teacher and the student are within a single process in which they are attempting to form a common ground; an agreement perhaps about their topic. The complexities of approach to knowledge and understanding are far too extensive to be dealt with here, except to say that the use of 'reading' as a term to describe how understanding is formed, should not be taken to imply a strictly linguistic, textual or grammatical approach. Visual arguments , for example, are often used to find a common ground in design[27]. Drawings, models, 'conceptual' presentations and even more broadly, performance, events and demonstrations, take the form of artefacts (events in time) produced within a group context of some kind. These are then the subject of discursive processes to determine what agreement can be found. In its simplest form, this is a determination of whether or not they 'pass'.

Traditional approaches to this involve the rigour of rational analysis, logic, experiment, all of which draw on the systems of knowledge available in universities in their broadest sense. Lectures, tutorials, experiments, workshops, seminars, symposia and so on, are the universities' formats for the formation of 'Agreements' in education. These Agreements in turn can become the venue for control and competition for power, knowledge and authority. Thus the 'Library' is created in which the material manifestation of argument is tested in the academic process and kept as a collective cultural memory in the physical form of books and other objects.

The process of education tends to orthodoxy while at the same time overcoming that orthodoxy. It is a Phoenix-like process of destruction and rebirth in which the shape and quality of cultural space is formed and in which the academic, undergraduate student or other participant has access to the resources for cultural action. The process gives people the power of knowledge as cultural phenomena in all its forms, even those that are incompatible with human existence.

Undergraduate design education involves an inherent acceptance by the student (even those in professional education) that they are developing their ability to take part in this process through a series of educational experiences[28]. The science student must demonstrate an understanding of the generally accepted orthodoxy of their discipline in order to establish their own authority and thence to take part in work within their discipline. This is especially notable in professional education where the discipline presence given to the individual is the subject of professional fame. An example is the 'success' of architects. There must abide within this system, a sense that the student and the teacher are willingly, albeit perhaps warily, entering the conventions of a process while at the same time establishing their authority within that system and perhaps their own argument, which will in turn change that orthodoxy. This is one sense in which the student becomes teacher and the teacher a student.[29] Above this is mentioned as a central condition of the studio.

The creation of ideas is still a creative act and so it must be fostered outside of or above, beyond the processes that grant authority in order for that authority to maintain itself.[30] The process fails when creativity is attached to individuality at the expense of its context. Ideas do not drop out of thin air like fruity lumps of inspiration. Ideas are the recognition of the significance of relationships. Their originality depends on whether there is a memory, either an individual or cultural kind, of the same recognition-of-significance as having occurred before.[31] When it is thought that ideas form from nothing other than a 'divine inspiration' *given* to the individual, the pursuit of the conditions under which that can happen becomes

the most significant activity of the student and the practitioner, or even the teacher. Thence the 'artist-in-a-garret', effect where isolation is regarded as the key to finding an 'Idea'. The calm, within which one focuses one's thought, is mistaken for the field from which one's ideas emerge.

By removing the individual from their source of ideas, a culturally heated desperation is produced in which 'ideas' are politicised, even on the micro-level of the one -to-one relationship. Avant-gard analysts start to use terms such as '(class) envy' and 'establishment' as part of armory in the battle between the 'old' and the 'new', the 'central' and the 'outside'. It is when education has access to wealth[32] that this occurs because wealth always comes with the strings of orthodoxy firmly attached (in a type of Gordian knot), which by attempting to untie it one actually makes a newer, tighter knot.

The degree to which this process is heated (or overheated) determines its character. The heating alone does not change the system, only the degree to which an idea is in conflict with its context. Excessive individualism, the concept of the 'subject' as an isolated 'free' entity has allowed avant-gardism to become a norm by which design is measured. Avant-gardism is the revolutionary mode by which orthodoxy itself is renewed while repetition is the evolutionary means of rediscovery. To elevate avant-gardism is to increase the rate of revolution, causing an overheating of education. On the other hand, it is an easy position to regard rebellion as the central motive for education. It is possible that education can be regarded as a process of forgetting orthodoxy in order that a change of perception can take place. To mistake this for revolution is to allow the excitement of bourgeois enthusiasm to overtake the real experience of rebellion.[33]

Into the context of orthodoxy and its dual relationship with rebellion comes the practice of art, design and architecture. The problem of Art and Design Education in universities is that it is yet to establish an effective orthodoxy in the rational milieu of the university system, despite the attempts of past groups to do so, such as the Bauhaus. Art Theory, History and Criticism (with capitals) have established their authority through an attachment to literature and its logical-esque grammar (Postmodernism notwithstanding), but practice itself remains on the outer in terms of objective authority.

Design and architecture, as Schön has pointed out, have never been fully accepted within the university system, as have science, literature and philosophy. This is because the practices of art, design or architecture have never been fully or comfortably explained within the rational systems of grammatical argument accepted as the pre-condition for objective truth

within the conventional modern university. Understanding themselves within these practices, art, design and architecture retain the trade-like quality of demonstration in the flesh, as it were, within the visible, Drawings for example remain a central means of expression building design of all kinds.

The 'languages' of art, design and architecture are material-and-body and as such do not always necessarily align themselves with the abstract grammar of words. The exclusion of the poetic aspect of language itself from modern thought, in the belief that is 'illusion' ('the poets lie') has been largely dealt with in the postmodern re-evaluation of philosophy. This has yet to be extended to the visible expression of art and design. It is through the creative act, that this alignment takes place. Poetry, for example, can be perceptually aligned but not necessarily literally aligned with other art practices or grammars. It is the role of the tertiary academic in these disciplines, to form 'community'[34] in its philosophical sense through this alignment, so that access to the meaning of design can be found and offered. This is done most easily within the studio in which a common visual "grammar" is formed.

The studio

One of the great misconceptions about the studio is that it is the imposition of the will of one, the 'master', upon the mind of the many, 'students'; that it is a rigid single 'paradigm'[35] by which assertion is postulated as truth. This vision of the studio is based on the notion that to express an opinion is to impose it. That to argue *for* is to dominate *with*. But it is the very act; *argument*, that is being asked of the student. That is to say, the student is being asked to express an opinion. To present oneself as reluctant to have an opinion is to demonstrate an opposite view to the one that is expected from the student.

Indeed the very notion of the 'degree' is tantamount to the right to profess an opinion within one's discipline. In design, what is being asked of the students is that they make a visual argument in the form of an artefact (drawings, models) through the presentation of their 'design'. To regard this as the imposition of a personal self-expression skews the reason for designing in the first place, with the assumption by the teacher of competitive self interest in the motivation of the student. To adopt this one sided approach inevitably leads to disenchantment and cynicism among students. To postulate the conflict between competitive self interest and group need, as the primary paradigm for the studio in order to discredit the studio itself is profoundly misrepresenting the meaning of design and design education.

The studio is in fact the most inclusive and flexible form of education in that it allows all forms of relationship between teacher and student.[36] This is possible because the studio allows the introduction and argument for all formalities and informalities.

The proper constitution of the studio is in the *ambiguity* of educational relationships at the *point-of-making*; at the moment or moments that the work is done one must forget one's individuality. Thus the teacher becomes the student and the student becomes the teacher at the moment that education takes place. The studio provides the location for an intersection of purposes of the teacher and the student. This is done through the shared creation of artefact in which the teacher and the student bring a mutually recognised contribution to the studio, the making of the artefact and the work to be done (the 'brief' and the 'project'). The brief is as much a creative act, as the design project itself and should be recognized as such. The brief and the project form a unity by which the academic and the future professional form an alignment of understanding.

The studio then is the setting in which the body (presence) and material (work) are made manifest between teachers and students. Practice is made communal in the studio through argument, visual or otherwise. The languages of materials, forms and bodies are materialised as this argument within the studio. The teacher and the student engage in a form of dialogue within the language of their practices. Ideas in design are not tied to the rationality of causal grammar. Instead there is an exploration of ideas and the testing of *perceptual* relationships, in which the conceptual is manifest as perceptual. The broader cultural understanding of those relationships is made possible through engagement with critical and historical discourse. Design practice becomes the material means by which those relationships are discovered, explored and made visible.[37] The role of the teacher is to have regard for the range, effectiveness and quality of practice directions, to set the material basis (of the studio) of practice and to act as a catalyst in discourse (and marks awarded).[38]

This model is limited by what those taking part bring to the studio. A totally self-focused group will inevitably lead to isolation while a totally exteriorised group will be dispersed. The role of politics, for example, in design has always been destructive of groups and their work and yet the isolation of an 'Ars Gratia Artis' setting has contributed to a general inaccessibility of certain design practices and a lack of 'ideas'. While design is not politics, it is also not individual therapy (neither is art), but merely makes politics and other venues for action accessible. Through argument student and teacher must find their own balance between what is outside and what is inside the studio in terms of its influence and effectiveness for the purpose of locating their common ground.

Embodiment

For a studio to work effectively the teacher must embody the values and arguments placed before the studio. The demonstration of motivation remains one of the most effective educational techniques. For some (both students and teachers alike) this will simply mean

being able to demonstrate technique. For others; argument, observation, recognition. Through discourse of all kinds and in its broadest sense, the position of the teacher is examined and understood and thus that of the student is also examined and understood. For example, for history, this has meant that lectures/tutorials can be the proper presentation of argument because history is constructed of words in grammar, to form an argument.[39] Thus the student is also expected to write essays that present arguments with evidence according to the application of rationality in grammar.

For the design teacher though, the un-sayable or the un-writable must be made visible or material through other means, sometimes through the work of the student themselves, sometimes by example. In this sense design is acting as a gesture of naming, a naming in the visible, in that once a thing is named, it can be known.

In the studio there are also periods of isolation or reflection in which the students and staff can allow the changes in their orientation to brought into focus. Understanding comes with time and sometimes it is through repetition and rhythm that the full meaning of an idea is known. For this reason there must also be periods of separation and work in the studio where there is no 'feedback'. The strength of embodiment of practice by the student is tested in isolation. A student must not only work from self-direction when alone, but also use judgment from memory alone, without argument.

As a place of body/material, the studio must allow for occupation by the student. Space that is dedicated to an individual student's use is essential to the studio. It is ironic that many courses that teach design and architecture and use the studio fail to understand this. In many cases, it seems to have been forgotten that the practice of design requires the full presence of the individual for the group. It is essential that this be not undone by the abstraction of the physical and spatial arrangements for teaching. Each student is a real presence, not merely an occupier of space, not a human unit of university enrolment.

The fully present student brings with them the nature of self, divergent and individually motivated. From what sources an individual's sense of what is significant emerges is not neatly confined to the discipline divisions within educational institutions. Interdisciplinarity offers a general principle by which this is given space. The diversity of design relies on the openness to individuality in the studio. The studio is constituted by the willing commitment of the physical presence of individuals, not elements of university enrolment or customers. As such it will remain a vexing contradiction to the tendency in tertiary education towards viewing education as a student service for which the student pays.

Conclusion

To teach art or design in the studio is to share the understanding of ideas. The studio provides the setting that offers the opportunity for developing this from a range of approaches. From the visual to text, action and thought, rebellion and compliance, the studio is an educational space in which the presence of the student is known and so bound to their work. Thus the student becomes an active and knowing agent of their culture. Design is one of the means by which culture renews itself, an individual's need given-out, as a member of a community, 'expressed' to give form to a space in which culture exists. In Architecture and Interior Design this has a literal meaning. Design education is the development of a consciousness of that renewal bound to personal physical presence. To make fully available a venue for the responsible presence of the student, work must be carried out in a common setting with the teacher. The studio is therefore the most effective location for design education both metaphorically and literally. In conclusion, if society is going to have real people designing and taking responsibility for their work, these disciplines must be taught in a studio.

End notes

1. What might be called a 'rationalistic orientation' comes from Bruce Chapman, Director of the Centre for Economic Policy Research, Research School of Social Sciences, Australian National University, in his paper titled: *The Higher Education Debate: Returns to Educational Investments, Current Pressures and Some Suggestions for Reform*, that was delivered to the National Press Club in October 2001. This can be contrasted with the orientation of Professor Chubb's paper referred to in note 1. The contrast is in their conclusions, which stems from their understanding of the causes of the economic difficulties faced by universities.
2. Delivery is in quotation marks to indicate its use in management style language, as the delivery if teaching by the pedagogue, to the student.
3. Teaching and Learning are used separately within quotation marks to indicate the pedagogical model of separate teacher and student and a process of delivery. These terms, along with 'delivery' and 'pedagogue', can be found in most of the educational and management literature on the subject.
4. Ramsden, Paul, 1992, Learning to Teach in Higher Education, Routledge, London, p. 5 *A Reflective Approach to Improving Teaching*.
5. Ramsden, Paul, 1992, Learning to Teach in Higher Education, Routledge, London, p. 58 *Attitudes to Study*, mentions this concept by using it to differentiate between attitudes to study that are effective and ineffective.
6. Ramsden, Paul, 1992, *Learning to Teach in Higher Education*, Routledge, London, p. 17.
7. These terms are commonly used in 'Problem based Learning' a theoretical approach to education developed in England in the 1970's by among other authors and education researchers, Gaynor Sadlo, at Brunel University, UK.
8. Essington Lewis was the founder of the Broken Hill Proprietory Ltd (BHP) and the phrase 'I am work' is attributed to him as an expression of his Methodist origins.

[9] Kant, Immanuel, 1987 (first published 1790) (trans, Pluhar, Werner S), Critique of Judgement, Hackett Publishing Company, Indianapolis Cambridge.

[10] The term 'Errors' indicates the Classical Greek attack on those with which one is debating, as in Plato's Republic. It indicates a moral position, as one should see the error of one's ways, as well as being somewhat highhanded. It also suggests a certain appeal to authority (ad authoritum). See Deleuze, G, and Guattari, F, 1991 (Eng trans 1994), *What Is Philosophy?,* Columbia University Press, NY p. 52 for further explanation.

[11] Nietzsche, F (English trans, 1974, based on 1887 edition), *The Gay Science*, Vintage Books, USA, p. 105–106.

[12] Foucault, M, 1970 (first published in French 1966), *The Order of Things*, Routledge, London and New York.

[13] http://www.anu.edu.au/CEDAM/intro.html 14.6.2002.

[14] http://otl.curtin.edu.au/about.html 14.6.2002.

[15] http://ultibase.rmit.edu.au/Articles/online/lines1.htm .

[16] http://ultibase.rmit.edu.au/Articles/online/reid1.htm.

[17] Most of the middle range of universities (formerly technical institutes in the pre-Dawkins era) have 'flexible learning' somewhere in their staff support for teaching and learning programs. The older universities tend not to use the term, preferring instead 'quality assurance'.

[18] A brief reading of the university acts for each university shows that they are constituted as a quasi-autonomous non-government organization with the purpose of providing the commonwealth with a tertiary education and research venue.

[19] Schön, Donald A, 1987, Educating The Reflective Practitioner, *Towards a New Design for Teaching and Learning in The Professions*, Jossey-Bass Limited, Oxford, p. 43.

[20] Schön, Donald A, 1987, Educating The Reflective Practitioner, Towards a New Design for Teaching and Learning in The Professions, Jossey-Bass Limited, Oxford, ch3 *The Design Process as Reflection-in-Action*.

[21] This passage is a brief summary of on e of the concerns touched on in my masters dissertation, 'Abstract Pictorial Space' and which are currently being developed in a PhD, 'The Darkened Room'. The issues touched on here have been the subject of critical analysis of a number of theorists and philosophers such as Rosalind Krauss, in The Originality of the Avant-Garde and Other Modernist Myths.

[22] 'Desire' is the primary ingredient for movement towards self, as in Aristotle.

[23] Ideas are regarded as the recognition of the significance of events. Events occur at the intersection of lines of thought. A line of thought is formed by the recognition of the connection between events. Thus the recognition of what is a line and what is an event is due to the perceptual orientation of experience. Thus a flexible orientation for perceptual experience ensures the possibility of learning.

[24] It is through the making of material that significance is found. This is shown in the use of art as research. An idea is known by its material artifact. Whether or not the artifact is a sign of the idea or it is the idea itself is a matter of philosophical, semiotic or linguistic argument. The idea of 'communication' may seem to naturally emerge from this but it may be best not to blur the issue with the introduction of that direction for the moment.

[25] Argument is not necessarily grammatical. Argument can be constructed in mapping visual relationships as in visual argument. Mapping of all kinds can be but is not necessarily grammatical.

[26] The irrationality of assertion is usually masked by the use of authority, as if assertion were not enough.

[27] Hence the emphasis of sketching in the studio in discussing design.

[28] The development of the 'Right to have an opinion' in the liberal arts education.

[29] It is the great misunderstanding of students of science that this process, in and of itself, will generate ideas.

[30] The argument for interdisciplinarity is founded in this idea.

[31] An example of this is 'Deconstruction'. This can be said to be a re-invention of an idea from Classical Greek Philosophy in that it proposes the permanent suspension of determination of meaning, adopting a 'Free Play' of a form similar to the idea 'Aporia', meaning 'No way through'. The fact that this was not immediately recognised indicates that the memory of the idea has faded, its significance has reduced until 'Deconstruction' was re-invented. Whether the idea is called Deconstruction or Aporia depends on the setting. That the 'Trace' of the idea is un-nameable is also a Derridean recognition that can be found in Classical Philosophy and is perhaps a much more significant recognition.

[32] As in the 1960's. There is a common perception of a flowering or arts and education in the 1960's due to the availability of education, especially tertiary, due to wealth in western countries. It was also a time when orthodoxies firmly established themselves through the revolutionary process, as in Russia and China, but also especially in the west through the establishment of consumerist milieu and its consequent educational needs in, for example, the professions.

[33] One only has to ask an Eastern European from the Cold War era about revolution to discover the truth.

[34] Communitas as a practice.

[35] The use of the term 'Paradigm' is usually accidental in its Structuralist overtones. It is usually used to indicate an opposition by which a mechanism can be described, albeit a 'soft' cultural one.

[36] There is an inherent discipline needed from the teacher to maintain propriety. If students are to be addressed by the university as adults then some of the responsibility for propriety must rest with them as well.

[37] 'Visible' is used to indicate all forms of sensory experience, including hearing, taste, smell and so on. The divisions of the senses according to the traditions of language and culture is an area of interest for me, as yet unexplored.

[38] The problem of assessment is also for the teacher and indeed the institution.

[39] Notably, this view of history has been challenged at the same time that the methods of teaching history have also changed. This coincidence may not necessarily be linked directly but it could show a broadening of attitudes generally.

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Australian Universities can be found on: http://www.avcc.edu.au/australias_unis/individual_unis/

Australian Universities Teaching Committee website: http://www.autc.gov.au/index.htm

Australian Teaching and Learning Centres (from the Australian Universities Teaching Committee. An international list is also available at this site):

Australian Catholic University Mathematics Teaching and Learning Centre
http://www.acu.edu.au/mtlc/index.html

The Australian National University Centre for Educational Development and Academic Methods
http://www.anu.edu.au/CEDAM/cedamhome.html

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