

Applying adult education principles to university teaching



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***Abstract:** University undergraduate teaching is not usually regarded as, or approached as, "adult education". Most approaches to teaching university differ very little from their historic antecedents despite considerable research in recent decades about the needs of the learner and effective teaching practices to meet these needs. This paper explores some of the better known "learner needs", particularly those emphasised in adult education, and their trial application to a university undergraduate class. The specific approaches and techniques that were used are considered and their consequences and subsequent feedback are investigated. By examining the results of this trial application, the paper considers what approaches and techniques were and were not effective, and extends that consideration to possibilities of broader application to future undergraduate classes.*

***Keywords:** adult education; learning objectives & assessments; learner involvement.*

Introduction

In Adult Education teaching, it is axiomatic that University undergraduate teaching is not "adult education". Most University teaching reflects the historic "top-down" approach, in which the lecturer is the repository of all knowledge and has the duty of imparting that knowledge to the students - "empty vessels" into whom knowledge is funnelled, usually through a series of lectures to which the students listen, and from which they hopefully 'learn' (Freire 1986, Bligh 2000, Knowles 1978). This practice continues despite considerable research in recent decades about the needs of the learner and the effective teaching practices that are required to meet these learner needs (Knowles 1990, Kolb 1984, Boud 1981). Assessment of the students' abilities to acquire the given information in this manner has also remained principally unchanged, again despite considerable research on the ineffectiveness of examinations as a means of testing or measuring learning as opposed to rote "parroting" (Gardner 1991, Bligh 2000, Silberman 1996).

For Spring 2001, my class of 84 2nd/3rd years for Computer Mediated Communications was subjected to a different delivery approach than previously. The class outline was rewritten to comply with Adult Education Principles. First Learning Outcomes were formulated, then Assessment Activities, delivery format and method, to comply with the new primary outcomes for this subject. This was not a research trial, but simply an exercise in good teaching practice, so research methodology is a retroactive examination of "what happened" rather than a carefully planned experiment set in advance to record details and results in an orderly manner. This is not ideal, and this is therefore limited as a 'research' paper.

Nevertheless, the results were striking and demanded examination, so the details and 'proofs' have been sifted retroactively to examine what happened, how it happened and to analyse, as far as possible, which results pertained from which changes in mode and delivery. Most of the statements about student responses in this paper are derived from their learning journals, feedback sheets and direct conversations. This paper is too short to allow many direct quotations.

The particular "adult education" methodologies applied in the class and to be discussed in this paper include: the assumption that all members of the class are knowledgeable and have something to contribute; that the teacher is not the sole - or major - repository of knowledge; peer-help forum; involvement workshops in which students were given opportunities to develop relationships; opportunity for students to select their desired grades and select their team-members based on commonality of desired grade and work-load; replacement of lectures with seminars in which student participation and involvement is the primary focus; repeated application of learning objectives and assessment activities with formative feedback from peers and teachers before the summative assessment activities; reflective learning journals; and simulated 'real-life' projects which had a clear relationship to the goals of the class and the students' future careers and work-places, adding to marketable personal employment portfolios.

The results were successful in terms of positive and excited student attitudes & belief in their capacities, unusually heavy work-loads undertaken voluntarily, unusual harmony in team-work (with two noticeable exceptions), and exceptional quality of output in student projects, with the preponderance of students grading between Credits and High Distinctions in a class group historically sitting in the Fail and Pass categories. The fortunate/unfortunate repercussions of this degree of success is the need to rewrite the assessment grading to 'raise the bar' so that what was previously a Distinction-level standard will now become the Pass level, with extra work required to gain a higher grade. This raises new questions for the future, to see if the procedures used so successfully to motivate under-achieving students to exceed previous efforts, will still be effective when demotivatingly higher-than-normal standards are applied with the same procedures.

Background

Seminal works by Freire, Boal, Brookfield, Kolb, Foley and others too numerous to mention, (but some of whom will be considered in this paper) have made it eminently clear that, just as the old concept of "the teacher as the knower of all things imparting knowledge to students who know nothing" was inaccurate and unacceptable, so were many of the techniques and approaches used when addressing adults as students. A great deal of research has gone into the (in)effectiveness of lecturing as a means of learning. (Bligh 2000, Silberman 1996, Pollio 1984). This research has been recognised and acted upon effectively in various fields of adult education, particularly corporate training and government circles. This is clearly seen in the VETAB (Vocational and Educational Training Advisory Board) environment of competency-based training as seen in TAFE and other government teaching bodies governed by the Australian National Training Authority (ANTA, 1995).

The one place slow to recognise and act upon this vital research, is the university itself. Only in universities are students expected to learn by sitting for hours taking notes while listening to one person speak without interruption, and then prove their ability to learn or assimilate the knowledge thus imparted by sitting in an exam answering questions for two to three hours.

The Adult Learner & the University Student: a comparison

When first taught that University undergraduate teaching is not "adult education", I disagreed, if only because most university undergraduates are legally 'adults'. The axiom, however, is based on the Adult Educators' concept of "adult learners". These basic concepts include: self-motivated learning; experiential knowledge; ability to transfer knowledge; commitment to the requisite work for learning; pre-determined limits imposed by other serious commitments such as families, full-time jobs, etc; a need to link learning to meaningful life-application; and an awareness of political and life-changing ramifications of learning (Kolb 1984, Brookfield 1986 & 1996, Freire 1973 & 1992).

As an experienced adult educator in private, corporate and government spheres, and a university graduate who had only experienced university as a mature age student in courses predominantly filled with mature age students, I was unprepared for my first experiences in teaching undergraduate students who had mostly continued their tertiary education straight through from secondary schooling. Most of the precepts of the "adult learner" were violated by the established norms for teaching in the environment, and by the students themselves. Even students who partially fit the adult learner profile (carrying double workloads of employment and study), had to be "made" to attend classes, did not do preparatory reading or voluntary assignments, failed to meet deadlines and often failed to hand in required work without which they would fail the subject. There was little apparent motivation to work or study and some few students seemed completely indifferent to repeated Fail grades. Most students wanted to be 'spoon-fed' but didn't want to have to read or listen to the required 'feeding'. There was a reluctance to think, students preferring to be told what to 'know', and taking a shallow and/or strategic approach to learning (Marton & Sálj6 1976, Cotton 1995). There was a startling absence of transferability - students who had acquired learning in a specific area in one subject were unable to repeat the exercise in another subject, not recognising that they already knew how to accomplish it.

There was also a seeming inability to 'listen'. As well as genuine-need consultations, there was a constant stream of visits, phone calls, emails and interruptions to class, all by students asking for information (such as the deadline of an assignment) that had already been delivered to them in several media on numerous occasions. Essentially, my first experience teaching undergraduate university students impressed upon me that they wanted me to do their 'learning' for them. There were a few exceptions, and these were mostly mature age students or younger students with an 'adult learner' profile, carrying a job and supporting a family whilst undertaking university. My colleagues assured me that, in their experience, these were constant attitudes and behaviour patterns from the students of this school. Partly from convicted philosophy as an Adult Educator, and partly from self-defence and exhaustion, I determined to apply Adult Education principles to my decidedly Un-Adult Non-Learners in a determined attempt to turn them into Adult Learners. This required a judicious mix of Adult Education principles combined with their antithesis – rigid authoritarian controls such as mandatory attendance.

My goals included helping the students to attain as many as possible of the following: a balance of intrinsic & extrinsic motivation (Herzberg, 1966) a deep approach to learning (Marton & Saljo, 1976); Critical self-reflection (Kolb, 1984 & Boud 1995) through experiential learning (Boud & Pascoe, 1988); Self-Directed learning (SDL) (Stockdale et al, 2001); development of ability to transfer skills (between subjects and from school to 'real life' (Wagner & Childs 1995); personal responsibility for domain-specific knowledge (Craigie, 1996) as well as application of critical thinking skills (de Bono, 1994). My approach included

deliberately planning for and catering to different learning styles (Entwistle 1988, Kolb 1984) and multiple intelligences (Gardner, 1993), without specifically focusing on any one style or type. It was an ambitious leap, to aim for so much after so little, but I planned a coordinated and cohesive approach, based upon and integral to the subject matter and the core commonalities of the eight different degree programs represented by my students.

Method

I began with the Learning Objectives. The previous subject outline had been fragmented and the learning objectives, subject content, text book and assessment activities were neither in accord with each other or the subject. As I considered motivation a key issue, I deliberately chose to take a vocationally focused approach, with an emphasis on employability outcomes. By changing the focus in this way I was able to make academic achievement a necessary component of a 'more desirable outcome' from the students' point of view, as the majority of the students stated explicitly that they were "here to be able to get a job", and academic accomplishment, in and of itself, had little interest for them. Most of the learning outcomes therefore included phrases like "hands-on experience". Assessment Activities were carefully matched to the stated Learning Objectives, to the 'sidental' outcome of improved academic standards, and to my personal (but not hidden) agenda of stimulating student enjoyment and interest in the subject and in lifelong learning.

The principle assessment activity was a team-based project that combined specification-building, research, exploration and reporting. Each team had to build a specification list of essential and desirable qualities and capacities of Computer Mediated Communication tools for a specific business field, research the various tools that are available freely on the internet and, matching them against their specification criteria, evaluate and report on those researched. They then selected the best of their short list, downloaded and learned the program in detail, and wrote a User Manual, a Promotional Presentation and Teaching Session for that same program. They then had to present their Promo to their tutorial group as a whole, and teach the program to another team. The combination of teamwork, specification, evaluation, research, user manual, presentation and teaching session added up to 50% of the overall mark for the subject.

The next significantly weighted assessment activity was a Reflective Learning Journal. This had to be written and electronically posted every week, and was assessed against standards requiring reflection on learning style, growth, transference of learning, development of understanding, and writing skills. After the first four weeks the Learning Journal was anonymously submitted and peer reviewed then handed on to the teacher for formative feedback with both peer and teacher feedback returned to each author. The other two assessment activities were written, the first being an essay (academic style) comparing two designated articles about CMC, and the second a Business Report that echoed the major project. Independently each student specified a business of preference, then wrote a 'Purchasing Manager's Report to the CEO' specifying computing needs required to adequately meet and upgrade that business' CMC functions. Unlike the major project, this report was to include the underlying IT infrastructure that supports and runs the CMC applications.

Content and delivery of the subject were very specifically geared to meet the learning objectives and ready the students to excel in the assessment activities. These therefore necessitated an emphasis on those attributes high on my personal agenda - development of reflective learning, motivation to self-directed learning for research, with a tandem development of interdependent learning for teamwork, advancement of academic skills for

writing excellence, and some preliminary skills to aid basic learning. Many of the lessons were to be expected, including basic Data Communications training, hands-on use of Video-conferencing and the learning of certain software such as TWiki and GroupSystems. Other lessons might be regarded as somewhat unusual for the subject: team-building (and inhibition-breaking) workshops, mind-mapping, presentation skills workshops, essay-planning and writing; algorithms and logic; listening skills; verbal and non-verbal communication; and PowerPoint. There was a mandatory (pass/fail, resubmittable) library research quiz which demonstrated that almost none of the students knew how to use the library, but caused all of them to learn how, to enable them to pass the quiz. All lectures were replaced with interactive seminars (84 students at a time) and tutorials were replaced with practical workshops and labs. Several tutorial timeslots were deliberately left free and handed over to the students for their group project time, reducing necessity for finding compatible times outside class for group meetings. Extensive use was made of WebCT, particularly the electronic bulletin boards, the most important of which was the Peer Help Forum.

The first seminar of the semester I introduced the subject outline and clearly specified my own goals as well as the learning objectives. I stated clearly that the subject would be run on Adult Education principles and that I required certain behavioural norms and standards from the students to make this work. Both the Adult Education principles and the behavioural requirements desired were listed in the subject outlines distributed to all students and posted on the electronic notice board. It was made very clear that students were responsible for everything they were told even once, and for their own learning. This included the fact that I, as Lecturer, was 'last port-of-call' and that students were expected to research and find their own answers, then turn to friends if unable to do so, then refer to the Peer Help Forum, and if that failed, to approach their tutor. Only if they were still unsatisfied could they then turn to me for help.

Results

The Peer Review Forum was used regularly for everything from the most trivial to significant searching for help with research, team problems, personal assistance, etc. Students who were often quiet in class were frequently comfortable in contributing assertively to the Forum. On the feedback survey I used at the end of semester to evaluate the results of my innovations, all students rated me as "extremely approachable" and "friendly", yet I was almost never approached and had very few demands on my time by students outside of class. Those students who did request consultation had a genuine need that required a teacher's assistance. This was an enormous change from the frivolous demands on my time in previous semesters. Students had become much better at listening and assimilating information and at looking for alternative means of finding out what they needed to know than just demanding regurgitation from their teacher.

The peer review and formative feedback after the fourth week of the Learning Journal was an important element leading to eventual success. The first four weeks of the Journals were abysmally inadequate, but the same students who failed to meet the Journal criteria themselves wrote excellent peer reviews in a process that caused them to understand the requirements for their own efforts as they identified and evaluated them for others. The difference between the first four journal entries and those following was radical. As a consequence, the learning that occurred because it was being mandatorily (often unwillingly) documented not only surprised me, but also continually surprised the students themselves who frequently expressed amazement, not only at their learning, but also at their recognition of and enjoyment of their learning.

Journals and survey responses also recorded positive attitudinal and learning reactions to the active workshops. The initial workshops received amusing write-ups as the students struggled to come to terms with something they enjoyed but didn't (at first) understand, "we played silly games", but received positive comment as the students realised the many-faceted benefits received "Now I see why..." The presentation skills workshops, and the many opportunities to exercise those skills were all highly valued with almost every student commenting on how much they gained in confidence as well as skill. As an evaluator I was pleased with the growth and improvement in their skills and the quality of the end results.

The essays were the one area that brought many marks down to a Credit level. It was because of the poor essay-writing skills that I introduced a previously unplanned essay-writing lesson. Journals recorded that students felt they had a better chance of writing reasonable essays after this lesson, but by then the assessment activity had been graded. The Business Report, however, benefited from the essay-writing class, the personalised feedback to the essays, the library research quiz, and the various research skills acquired in classes and in the major project. The difference in quality between the essays submitted in week seven to the Business Reports of week twelve was a quantum leap accounted for by more than the difference between academic and business styles in the writing approach.

The major project was successful beyond expectation. Every User Manual submitted was of a higher standard than those usually received with \$500 software packages (in my experience). The Promotional Presentations were of a standard acceptable in the corporate environment of Client or CEO Presentations. Their teaching sessions unfailingly demonstrated comprehensive competence in their own subject and excellent communication skills in helping their 'students' understand and acquire the skills and software packages taught. Even international students for whom English is a problem were able to excel. With exceptions from two groups, individual journals recorded stunned gratitude for the most successful and harmonious teamwork projects they had experienced in their time at university. The two exceptions included one in which a student who was only willing to do Pass-level work lied and placed himself in the "want an HD" category to be with the only person he knew in the room, and another HD group who had some miscommunication difficulties about who was to contribute what and when, in consequence of difficulties and requirements from another subject. Apart from these two groups, the self-selection into pre-determined grades worked very successfully in matching groups who wanted to contribute the same degree of work for the same end-goal. There were two surprising by-products to this exercise. First, a majority of students aimed for a Credit rather than a Pass. Second, with so many students aiming for Credit, many 'accidentally' achieved Distinctions.

The results were positive, but the cost was high in terms of time and money. There was also the unexpected cost of disapproval from university authorities in having grade results that so outrageously defied the bell-curve, even though the subject is specifically stated as outcomes-based for grading. I have been told that on future occasions I will not be allowed such a high percentage of Distinctions and Credits for a single class. Nor will I be permitted such heavy costs in casual assistants for tutoring and marking, which is a concern, as even with tutors assisting me this time, and reduced student consultations, I found the demands on my time for formative and summative assessment were heavy. They were, however, extremely rewarding and well worth it.

Conclusions

Although one experience is not enough to make absolute claims, the results are encouraging enough that I will definitely repeat the experiment to the degree possible. Some changes and

variations must happen, although I do not necessarily have the answers for how to accomplish them. Despite time saved by peer forum and other strategies, time was an issue. The workshops and unusual classes should and can be continued, as they are conducted within usual class time. The library research quiz, which so proved its worth, can also be continued as it is done electronically without personal supervision or marking. The other forms of formative and summative assessment, however, that I believe to have contributed largely to the effective growth of the students' capacities and standards, are time-heavy and expensive. I am considering that next time the formative assessment of Learning Journals can be done exclusively by peer-review, considerably reducing marking time in giving formative feedback to the students who wrote the journals and to those who wrote the reviews of the journals. On the whole, the peer reviews were of high enough quality to meet the need without supervision. Other marking, however, still needs to be heavily reduced. This leaves the other problem of reducing the high grades to something that resembles a bell curve, without unfairly disadvantaging the students, while still honouring my commitment to competency-based and outcomes-based grading. More time and thought will have to go into this before running the subject again in 2002.

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