Assessment and learning styles; mix and match or a mismatch?

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The quality of learning and teaching in the tertiary sector remains under scrutiny. A variety of learning styles (however these might be defined) are becoming more commonly accepted amongst teacher educators who are creatively adopting various teaching approaches to engage with these. Accordingly, if the formal lecture/tutorial approach utilising pedagogy of transmission is undergoing change, it is argued here that approaches to assessment should likewise be changed.

Through the adoption of various innovative teaching processes we have increasingly observed informally unexpected positive outcomes attained in various ways. However, to our disappointment there is a dilemma in that these learning outcomes have failed to be recognised when using traditional summative assessment approaches. Therefore an incomplete picture still exists, as our acceptance of learning styles and adoption of various teaching approaches are not being complemented by appropriate assessment strategies. This paper seeks to provoke thought by outlining some personal case studies and discussing the benefits and possible implications. It is argued that in addition to adopting various approaches to teaching, teacher educators need to promote greater equity by also adopting more appropriate methods.

Arguably, the focus of university culture is to encourage research and professional advancement primarily in specific content disciplines. Quite commonly academics may not have considered themselves as educators of adults but rather "experts in their field" who identify themselves 'with their subject area, their clientele, the type of organisation within which they work or even the medium they employ" (Cranton, 1996:5-7). However, some tertiary educators have moved on to become more concerned with teaching practices and learning, by independently attempting to seek the mythical "one best way" or approach that will maximize their students' learning (Osborn, 2001). Such a traditional, stereotyped mindset seems to have been reinforced by decades of quantitative experimentation, allowing researchers to assume that learning is a generic process and individual differences were to be "treated statistically, as an error of measurement" (Cranton, 1996:17). Disregarding individual differences in this way diminished the significance of personal and contextual histories that are critical to the learning process.

Fortunately, over an extensive period of time, more academics are now becoming aware that "the quality of student learning is ultimately influenced by lecturers' understanding of what it means to teach" (Ramsden, 1998:64) and have begun to formally and informally integrate this notion into their teaching. The seriousness of addressing the need to cater for differing learning practices is becoming more apparent. The UK Institute of Teaching and Learning for Higher Education aims to ensure that all academics by the year 2006 have a formal teaching qualification (Cook, 2003) and similarly some Australian tertiary institutions are implementing a formal compulsory graduate certificate in tertiary education in an attempt to assist the facilitation of independent learning for all students.

Therefore, given the notion that learning is an individual and personalised skill, a new argument arises as to how effective learning can be demonstrated for assessment. It appears that traditional assessment approaches involving essay or report writing and written examinations have featured predominantly in the assessment of education undergraduates. An examination of the education units (Table1) that form part of the Bachelor of Education primary and secondary at the Gippsland campus of Monash

University, indicates that only two out of the sixteen education units utilise forms of assessment that provide an avenue of personal choice for presentation to demonstrate learning.

Table 1: A selection of Education Units for the Bachelor of Education Primary* and Secondary #Streams

Unit Code	Unit Name	Methods of Assessment	
		Set Task	Personal Selection
EDF 1203 *	Curriculum Studies Primary English 1		
EDF 1204 *	Curriculum studies Primary Maths 1	Lesson plans & resource, essay	
EDF1301 * #	Perspectives on Learning	Two essays	A representation of how learners learn
EDF 1302* #	Perspectives on Teaching	Two essays, observation task.	
EDF 2001 #	Beyond the classroom	Essay, reflection	
EDF2002 #	The teacher's world		
EDF 2105 *	Teaching Studies A	Journal, essay	
EDF 2201 *	Child development 1	Class presentation	A representation of children's developmental milestones
EDF 2203 *	Curriculum studies primary SOSE	Essay, lesson plans, exam	
EDF 2204 *	Curriculum studies primary science	Essay, class presentation, portfolio	
EDF 3001#	Assessment of learning	Test, essay	Design 2 assessment tasks
EDF 3002 #	Curriculum and pedagogy	Lesson plans, two essays	
EDF 3003#	Adolescent development	Essay, exam	
EDF 3004 #	Language and literacy	Two essays, report	
EDF 3105 *	Teaching Studies B	Essay, journal	
EDF3201 *	Curriculum Studies Primary Music & Art	Portfolio, practical presentation	
EDF 3202 *	Curriculum studies Primary health and PE	Two essays, journal practical activity	
EDF 3203*	Curriculum studies Primary Technology	One essay	
EDF4104	Curriculum Studies primary mathematics 2	Essay, presentation, portfolio	
EDF 4105*	Teaching studies C	Portfolio, a project proposal	
EDF 4106*	Teaching Studies D	Portfolio, report	
EDF 5421#	Professional Issues 1	Journal, portfolio	
EDF 5424#	Professional Issues 2	Portfolio, short answer, essay	

The limited number of opportunities for personal choice is surprising given that after years of being relegated to a secondary role in the educational process, student assessment in the 1990s has emerged as a major issue in the primary and secondary sectors. This major issue is most evident in education journals and conferences that

include articles and workshops designed to assist all teachers to become more adept at assessment through 'alternative' or 'authentic' methods (Burke, 1996). From this, assessment now is seen more importantly as gauging true understanding rather than a simplified means to an end. Teachers have often introduced innovative teaching practices and curriculum "[signalling] a new order of change and challenge, but when they end the unit with a multiple choice test, their assessment signals a return to tradition" Burke (1996:x). Nevertheless it seems as though a sense of completion is emerging as assessment methods are being more effectively matched with teaching practices that accommodate individual learning styles within the primary and secondary schools. This notion is frequently reinforced within the education major stream for pre service teachers. Education undergraduates are introduced to and given ongoing opportunities to investigate contemporary theoretical perspectives underlying effective pedagogical practices.

Unfortunately, as with most pedagogical developments, a line appears to be drawn between pre and post secondary sectors. Generally the teaching practices implemented for the Bachelor of Education (primary & secondary) have failed to integrate assessment into the learning process. The assessment tasks associated with the Education degree tabled above provide limited opportunities for undergraduates to personally demonstrate their learning outside the narrow range of prescriptive written assessment tasks typically associated with tertiary education. Arguably all students are required to demonstrate their understanding both formally and informally and as the focus of assessment is traditionally placed upon the product, it has forced students to endure the pressure to pass and partake in the "Wad-Ja Get?" syndrome (Burke 1996:144). For some students there appears to be an obvious mismatch of approaches to learning and demonstrating understanding. Rather, assessment needs to represent an extension of the learning process whereby knowledge is personally constructed and provides students with the opportunity to demonstrate understanding using an approach which matches personal learning styles. It is this perspective that has been adopted by the authors to further improve the effectiveness of some unit assessment tasks, as demonstrated in the following case studies.

Case Study 1: EDF1301 Perspectives on learning.

Teaching experience in the primary and secondary sectors, and more recently in the tertiary sector in pre-service teacher education, has enabled me to recognise that a common goal to encourage personal learning is at the forefront of all these sectors. The common first year undergraduate unit EDF 1301 Perspectives on Learning is a foundation education unit undertaken by all those enrolled in a Bachelor of Education (primary & secondary) and Bachelor of Sport and Outdoor Recreation. For the first semester of their tertiary studies, this unit encourages undergraduates to celebrate individuality in learning and to recognise that learning is an intensely personal process. This is suggested by some of the unit's outcomes;
- Develop a clear and detailed description of learning for understanding
- Recognise ways by which social and cultural factors can influence learning

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- Recognise major representations of ability; psychometric, theory of multiple intelligences, level of operational thought, and cognitive strategies; and form their own view of ability
- Explain their use of cognitive strategies in learning contexts, and be able to make decisions about their selection and application.

As the focus of this unit is on how the individual learns, the first year undergraduate can simultaneously enhance effective learning for themselves and their future learners. It therefore important, that the learning process for this unit be considered comprehensively and holistically, with the inclusion of assessment which allows understanding to be demonstrated using personal choice of approach.

Traditionally assessment for education units appeared to be an adjunct task. Students often regard assessment activities as the final hurdle for completion rather than an important approach to demonstrate accumulative personal understanding. It is not surprising to find the development of such an attitude, as the purpose of assessment tasks and supporting explanations have often been considered vague, with little consideration of learning differences. Quite commonly students have been presented with one question and one approach to demonstrate the understanding that has been achieved to date. With this in mind alternative approaches for assessment have become a priority. The summative assessment for EDF 1301 Perspectives on Learning requires students to demonstrate and argue a personal developing perspective on learning by creating a short hypothetical presentation to clearly explain how learners learn. Students need to reflect on all aspects of the unit including course materials and field placement to demonstrate their understanding. Contextualising information on learning within a pamphlet, newspaper article, radio interview, digital resource or even a video for hypothetical parents enables the first year undergraduates to personally reconstruct new knowledge. These students also can select a preferred method of application to ensure that the best opportunity to demonstrate their knowledge is undertaken.

After only thirteen weeks of tertiary education the task was initially taken on with mixed feelings. Previous experiences had primarily persuaded many of the students to focus upon a structured written application, yet after tutorial discussions considering other possibilities a range of applications were submitted. Technology skills were used effectively to demonstrate how learners learn through PowerPoint presentations, brochures & newsletters (using PageMaker), radio interviews, demonstration videos and posters. An outstanding example of transference of knowledge was particularly evident with a CD written and produced to demonstrate the "Education of the Daleks". This student indicated the benefits of personal choice of application. "Since I've been making audio adventures since I was in Year 11 it seemed logical to write a radio documentary …And being a tremendous Dr Who fan, I picked that series to be the basis for how I could get across my message of how people learn" (Toman, 2001).

Ultimately the goal for effective teaching is to match the assessment tasks with learning styles throughout the Bachelor of Education (primary & secondary) course. EDF 1301 Perspectives on Learning is the obvious starting point, the irony of demonstrating the

understanding of personal learning approaches though a single avenue of assessment had to be addressed. The quality and range of submissions exemplified this. Undoubtedly change will be a lengthy process, as all those involved will need to question their pedagogical mindset. Most importantly unravelling the mismatch of learning and assessment requires effective listening. "I wish I could tell you what I know rather than write it down" suggested a second year undergraduate while discussing his concerns about demonstrating his understanding. Overall I can begin to feel confident that the approach used for the planning and implementation of EDF1301is a holistic one.

Case Study 2: EDF 2201Child Development and 4241 Gifted Education in the Classroom

As a student and later as a teacher I realised that my own learning preferences were heavily weighted in the logical sequential arena. I was certainly not a 'big picture' learner and I tended to teach in exactly the same manner as I learnt. During my time as a Year 12 teacher, I felt quite confident that my very organised, structured teaching method was meeting the needs of my students. It was only through an encounter with a very different and highly gifted Year 12 student, that I realised my teaching style would not suit everyone. This student very politely requested permission to complete my subject on her own, without attending my classes as she found my teaching style too restrictive for her autonomous style of learning. This memorable scenario has contributed to the shaping of my teaching practices today.

Although a hard lesson for a dedicated teacher, the situation engendered an interest in learning styles and giftedness in particular, two areas which have formed the basis of most of my postgraduate study. As I ventured into university tutoring and then lecturing, the need to engage a wider range of students through a variety of teaching methods and consequently assessment became more apparent. I have often, particularly in times of stress or illness, reverted back to my old comfort zones and provided too much structure and little room for manoeuvre. But it is always in the back of my mind that a concerted effort should be made to engage those learners who learn so differently from myself.

Here is my story of some alternative avenues of assessment I have developed for students, who unlike myself, did not feel comfortable demonstrating their knowledge by writing essays and completing examinations. Restrictions imposed by cross campus assessment requirements has prevented a completely alternative assessment package, as essay and examination requirements are still present, but there has been a small reprieve within certain assessment tasks.

Child Development, is a compulsory unit for second year primary education students. I have experimented with personal choice assessment processes over a number of years. The first time I taught the unit students were given an assessment task that involved a presentation of the Developmental Milestones of children in a format of their choice. The result was 50 posters which were all very colourful but basically the same. As expected, the female students tended to outshine the male student in terms of creative presentation. The following year less direction was given in relation to format but the result was again

mainly posters although a few students produced booklets and a number of male students submitted structured summaries. I actually understood the male students taking this option as being relatively uncreative myself; it is an option I would have also chosen.

This year I took a slightly different tack and explained the criteria in more detail prior to the task, slipping in an offhand remark about female students outshining males in creative tasks. An emphasis was also placed on the value of the product as a future teaching resource. Although only worth 15% of the total assessment, the amount of work students devoted to the task was impressive. I assume from this that a match with learning styles and assessment had been made.

Although there were still a number of posters and wall charts, these were now in the minority, and many other forms of presentation were utilised, including information brochures, booklets, board games, a large wooden construction of a caterpillar evolving into a butterfly, and an incredible set of hand-sewn illustrated booklets that fitted into a large wall hanging. Some of these students received their first high distinctions since beginning university studies, and commented that this had been the first opportunity they had been given to showcase their talents. Their delight was obvious when their work was displayed during our University Open day. This task had also provided me with an opportunity to see what my students, particularly some of the 'less academically inclined', could produce if given the opportunity to work outside the traditional assessment arena. Deciding on a marking criterion did however pose a number of problems – being what might be described as 'creatively challenged', I had to be careful not to be 'dazzled by fluff' as one colleague suggested.

The second opportunity for showcasing understanding in this unit involved presentation of 'personal perspectives on teaching' in a 5-minute slot during a tutorial. This was to be assessed by both myself and the other tutorial members on the basis of a number of criteria, including a solid theoretical basis, presentation and practicality. Students were informed they could use any medium to assist them in this task resulting in some memorable performances. One male student brought along a plastic chicken which squeaked when squeezed and managed to present his theoretical perspective with the squeaking chicken demonstrating a number of points along the way. Alternatively a female student in another tutorial group used three Barbie dolls (Alyce, Tiffany and Cliff) to demonstrate her viewpoints on teaching. It was innovative and yet quite surprising because of the introverted nature of this student. Consequently her performance surprised a number of her peers and because of this they scored her highly. Others used PowerPoint presentations, short video clips, music and songs to help illustrate their points of view. My reviews did not always coincide with the class reviews and the feedback sheet enabled students to see this. All the class assessments and comments, along with my scores and comments were transferred onto one feedback sheet. Assessing this 15% component was somewhat work intensive but the students definitely appreciated the chance to receive feedback from a number of sources.

The remainder of the assessment for this unit comprised of an examination and an essay – requirements that are cross campus and difficult to alter. Within this constraint I have

attempted to include essay topics that are practically oriented and focus on issues that are of particular value to developing teachers, but students are certainly able to negotiate if they have an interest that lies outside these topics. Formerly as a student I enjoyed examinations although like most I tended to cram with little pretext of trying to really understand the material. I think many students still prepare in this way because they view an examination as adjunct to their learning. I have attempted to create examinations which promote transference of knowledge and understanding in practical scenarios to enable the demonstration of learning.

Another unit which I have been fortunate enough to design entirely, including the assessment component, is a fourth year Distance Education (DE) unit dealing called "Gifted Education in the Classroom". Upgrading teachers, postgraduates and undergraduate students enrolled in this unit. The unit involves substantial reading, the major assessment component is a double entry reflective journal that includes summaries of the reading associated with the topics plus reflections on growth of understanding. This accounts for 60% of the assessment, so I felt it was appropriate to offer a personal choice for the remaining 40% of the assessment.

Students are asked to provide a practical application which reflects their understanding of any area relating to giftedness. Some students ask if a research essay on an area of interest is appropriate. This is also acceptable, particularly for undergraduates who do not have access to classrooms for their research, but generally this option is not popular. Separate assessment criteria sheets have been developed for research essays and practical applications of the theory, as they require different skills. Some examples of practical applications that have been assessed include: differentiated units of work, individual learning plans, special withdrawal or enrichment programs, professional development sessions for staff, development of school policies, evaluations of programs and case studies of gifted students. These have all been of practical value to the student, as well as providing avenues of authentic assessment, which enable measurement of their understanding. From this my ability to match assessment more effectively with learning styles continues to be a focus for effective teaching.

Consequently " there are ways to give more authentic grades that measure growth, development and performance on the thoughtful outcomes established at the beginning of the year" (Burke 1996:144). The case studies presented aim to highlight the intense level of engagement in the demonstration of learning for particular units. Most students welcomed the opportunity to independently match their assessment approach with their learning style. Understandably the traditional mindset for some students regarding assessment can be slow to shift.. "When I noticed that my final assignment for EDF 1301, and indeed for the year in general was something as open ended as this I did feel slightly daunted….Tricky? Well, it was to start with but then I got my head around the idea…" (Toman, 2001). Furthermore such a traditional mindset for some academics will also be slow to shift. However responsibility lies with the tertiary educator to facilitate a shift to mix and match assessment. "The final or summative grades in any course are probably the most difficult to assign because, despite a student's rate of learning, ability level, special needs, or learning styles, he or she still has to be judged" (Burke 1996:140). The

authors concede taking one unit at a time to match assessment with learning styles is a small but significant contribution towards equitable assessment.

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