Curriculum design in vocational education

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Abstract

The future of competency-based training may well contain surprises and the results of strategic planning can only be faintly seen through future misty proposals. Knowledge of the learning approaches by students, the benefits of communities of practice in the classroom and the quality of competency-based curriculum in Vocational Education and Training is the epistemological key to applied learning. This has to be combined with an ontological focus to ensure that curriculum encourages teaching, knowing and learning and becomes part of who we are rather than just something a teacher must follow. Curriculum designers are urged to limit the content so students can be led to investigate, explore and draw inferences from their own research. However, it also seems important that curricula retain links with the real world while at the same time retaining flexibility that allows ideas to be expanded and explored in a scholarly way. The curriculum design also needs to accommodate varied learning styles while stimulating the learner to evoke interest in the content. This paper examines curriculum as an essential and important element in the educational environment and analyses why the supporting assessments act as a driving force in capturing the objectives of the educator. If well designed and developed, then vocational curriculum will provide the basis for good learning and teaching.

Keywords: specific curriculum, taught curriculum, learned curriculum, assessed curriculum, vocational education, competencies.

Introduction

This paper focuses on a particular unit of curricula and how it is perceived by teachers and students. It is part of a major study that examined the experiences and perceptions of students and their teachers of the TAFE subject Internal Control Principles (see Appendix 1). Knowledge of the learning approaches by students, the benefits of communities of practice in the classroom and the quality of the competency-based curriculum in tertiary education is the epistemological key to vocational learning. This is combined with an ontological focus to ensure that curriculum encourages teaching, knowing and learning and is 'not simply something we possess but who we are' (Dall'Alba 2005, p363). With so many different aspects of curriculum that affect teaching and learning, there is an increasing need for amendments to curricula as designers frantically try to keep pace with innovative digital advances that often become crammed into an already overloaded unit syllabus. However, it is important that curricula retain links with the real world while at the same time retaining flexibility that allows ideas to be expanded and explored in a scholarly way.

Over the last two decades the educational literature has demonstrated a quantum leap in the recognition of the importance of perceptions and experiences in teaching and learning outcomes. It clearly advocates that curriculum and teaching take central roles in the educational experiences of students. It appears that despite the volumes of research focusing on the students' needs and their perceptions of teaching and learning, many teachers remain inadequately informed of the students' experiences and how these may impact on the quality of their learning outcomes. At the heart of teaching and learning is the curriculum with all its accompanying resources that are used in the learning situation. It is fitting then to begin this review with the curriculum to discover what the literature says about its design, development and implementation.

A glimpse into the literature

Curriculum per se can be broadly defined as the specific knowledge and skills that students learn (ASCD 2005). This is what Dall'Alba (2005) characterises as the plan to address epistemology, described as the theory of knowing. Curriculum helps teachers develop strategies, activities and techniques that kindle 'a desire to learn, promotion of learning in face-to-face and/or technology-mediated formats, assessment of student achievement and evaluation for improvement of educational practice' (p363). However, curriculum is also more than that. Encyclopaedia Britannica (2006) sets out the history of curriculum development and claims that it has undergone vast changes in the last century. They describe this as follows:

> … curriculum has responded to social issues by including such subjects as consumer education (or other applications of the economics of a free-enterprise society), ethnic or multicultural education, environmental education, sex and family-life education, and substance-abuse education. Recent interest in vocational-technical education has been directed toward establishing specialized vocational schools, improving career information resources, integrating school and work experience, utilizing community resources, and meeting the needs of the labour market. … Curriculum reforms have accentuated the academic basics, particularly mathematics, science, and language, as well as the "new basics," including computers. Computers have become increasingly important in education not only as a field of study but also as reference and teaching aids. (p 202)

According to this view of curriculum, it has changed as the world problems and other issues have changed. Reid and Loxton (2004) agree that internationalisation is a way of thinking about curriculum and quality. They 'suggest that the approach to internationalisation should expand to focus on teaching and research, including the provision of quality learning experiences for all students using the curriculum as the main vehicle' (p 90).

This seems to be consistent with the view of Hicks (2004) who believes that the place to begin is with global issues that are addressed in the curriculum so students can see the local issues in the wider global context. These could be selected from the array of topical issues expressed in the various media. 'These issues are present in our own countries and communities: they are both local and global in nature' (p 22). The four components of global education that Hicks states should be present in the curriculum are: *the issues dimension* – broad problems that need to be explored such as wealth, poverty, human rights, peace and conflict, *the spatial*

dimension – examining the interconnectedness between local and global issues, *the temporal dimension* – the connections between the past, present and future, and *the inner dimension* – relating to one's own personal growth and development (Pike and Selby 1996, 1999, cited in Hicks). To ensure curriculum has these characteristics it then would seem important that the curriculum is taken into the classroom and developed by the teacher in that context (Patrick 1998).

The curriculum process is putting together all those strategies and plans of the institution to achieve the stated learning outcomes (Neagley and Evans 1967 cited in Child 2004). This process is begun by deciding what is to be included in the curriculum, why it is needed and whether or not these processes will lead to the anticipated outcomes. Dall'Alba (2005) believes that such processes, while vitally important for the enacted curriculum, also need to be transformed with a concentration on ontology, or the theory of being. She suggests that: 'By focusing on epistemology, we fail to facilitate and support this transformation' (p 363). The curriculum design also needs to accommodate varied learning styles while stimulating the learner to evoke interest in the content (Nulty, Vegh and Young 2002). The curriculum process would therefore need to contain elements such as design of content, methods of exposure, objectives and evaluation. Then to assist teachers in achieving the ontological focus, additional resources that encourage formal and informal learning may provide tools that assist guided discovery. 'The study of knowledge for its own sake and without regard for its practical application' (Child 2004, p431) is an example of an uneven focus on the epistemology of curriculum.

For curriculum to be effective, however, it may be beneficial if designed and developed in a way that encourages students and teachers to engage in discussions of important issues that lead to both the acquisition of deep intellectual knowledge and the practical skills to apply that knowledge to solving problems in the real world (Child 2004). For curriculum to have lasting effects then perhaps student learning could be aimed at developing the 'Professional Entity' (Reid and Petocz 2003). Building on the initial work of Reid (1997; 1999), and examining a number of different professions, Reid and Petocz built a framework for the professional entity that is based on the relationship between students' perceptions and their expectations of professional work.

> The Professional Entity seems to be a unifying theory that can be used to develop appropriate curriculum for professional studies, make connections between work-integrated learning and work-based environments, and help students find an important focus for their learning in an institution. It can also be used as a basis for reflection on and critique of the professional values that are being passed on to the next generation. (p 3)

These authors found that there was definitely commonality in the perceptions of students about professional work across disciplines even though there was significant variation in these perceptions. Ramsden (2003) also supports the idea that students need to be more prepared for life in the real word. It is possible then that effectiveness of curriculum can only be measured when students become professional entities. Competent and confident graduates may be the result of epistemologically based curriculum integrated with an ontological focus.

The knowledge economy is increasing and coupled with the need for researchers to contribute to this expanding area is the impact this growth may have on curriculum development (Jenkins 2000). Significant trends in this area can already be seen in the global rise of tourism curriculum that has made considerable use of geography-based research.

> We should design courses to ensure that students experience the practice and process of research and develop their abilities as researchers (and perhaps develop their abilities to 'transfer' these skills into future employment). In many cases this will require fundamental curriculum re-thinking, for the focus has to include an emphasis on active learning methods and a radical re-thinking of how students are assessed. (p 345)

There are various aspects of curriculum that have been described in the literature and each source contributes to the broad definitions given above. As Reid and Loxton (2004) argue, 'what students encounter and grapple with whilst at university plays an important role in their orientation to life and work at the conclusion of their formal study' (p 100). This view can surely be extended to vocational students, and to delve even deeper into the meaning and use of curriculum it is helpful to examine all the areas that make up the whole process of developing and implementing curriculum that enhances students' quest for lifelong learning.

Curriculum defined

Some theorists argue that curriculum is made up of a number of parts, and that these in general fall under the broad headings of content, learning experiences, objectives and assessment (Child 2004). The segment on content can be further divided into

specific criteria and how to solve the perennial problem of the trade-off between breadth and depth. Where it does become difficult is in deciding just how much emphasis there should be on each of the parts and whether or not they exist in all curricula. Then there is the difference created by the separate tertiary sectors; university curriculum, which is categorised as higher education and vocational training curriculum, representing the more applied education. Vocational curricula in TAFE are planned, managed and controlled so that individual units are not ignored or abandoned by teachers. Curricula in university are developed by the teacher, and Salemi and Siegfried (1999) found that there have been times when academic freedom is taken to its extreme and teachers immerse themselves in their own vested interests without taking into consideration the whole program of study. However, it is argued by Furedi (2004) that curriculum objectives should be flexible enough to allow 'individual scholars to pursue their passionate interests' (p 2). Some authors suggest it is essential to build generic capabilities into the basic guidelines for good curriculum design (Frazer and Deane 2002; Nulty *et al.* 2002).

There are various elements that together make up the whole curriculum and these are defined by the Association for Supervision and Curriculum Development (ASCD 2005). They are: a. specific criteria curriculum; b. taught curriculum; c. learned curriculum, and d. assessed curriculum. Table 1 is a summary of these curriculum elements as seen through the lens of a number of different researchers. The specific criteria are the content-based material intended by the developers to ensure that processes are pedagogically sound and that the curriculum communicates the intent of the subject to the students. It is also the important area where objectives are set out so evaluation can provide feedback to the teacher on the depth of understanding attained by students. The taught curriculum can be thought of as the enacted curriculum where the specific content processes are followed and threshold concepts skilfully covered. This part of the curriculum can also be thought of as the informal learning contract where teachers and students enter into shared responsibility for the learning process. Students do this through student-centred delivery and an evaluation at the end of the unit's study period.

One more issue that is most commonly debated is just how much material should be in curriculum. This topic affects all those in the whole chain; from designers to learners.

Table 1 Summary of the curriculum elements

Cirriculum element	Issues	Authors
a. Specific criteria curriculum	Intended curriculum	Porter (2005)
	Content-based curriculum	Child (2004)
	Pedagogy	Hopkins (2003)
	Communication tool	Birdsall (1989) Altman and Cashin (1992) Johnson (1995) Wankat (2002)
	Objectives	Merriman (1995)
b. Taught curriculum	Enacted	Porter (2005)
	Process-based	Child (2004)
	Threshold concepts	Meyer and Land (2005) Davies and Brant (2006)
	Informal learning contract	Brodeur (1986) Lowther, Stark and Martens (1989)
	Delivery	Fisher, Alder and Avasalu (1998)
	Evaluation of delivery	Zhonqui (2000)
c. Learned curriculum	Actively engaged	Porter (2005) Child (2004)
	Unintended curriculum	Hirst (1968)
	Role of the learned curriculum	Brennan (2002)
	Reflection in action	Schon (1987)
	Task analysis	Gagné (1985)
	Teacher as mentor and coach	Reid (1997)
d. Assessed curriculum	Assessment to evaluate objectives	Porter (2004 Child (2004) Biggs (2003) Ramsden (2003)
	Competency assessment	McAllister (1999)
	Too much assessment	Laurillard (1984)
	Aligned to specific intent	Shreeve, Baldwin and Farraday (2003) Biggs (2003)
	Binding document for assessment	Altman (1989) Dixon (1991)
	Differences in students' definitions of their understanding and exam results	Entwistle and Entwistle (1997)
	Using technology to help design questions	Read, George, Masters and King (2004)
	Motivating, stimulating, engaging	Cleary and Skaines (2005)
	Assessing objectives	Biggs (1996) Ramsden (1992)

The breadth and depth of curriculum content

The Boyer Commission Report (1998) found that far too many curricula for first year units were so full of content that the coverage was very shallow. This proposition is supported by Biggs (2003) and Gardner (1993) who both state that the trade-off is always between breadth and depth with perhaps the teaching helping to improve or extend the deeper learning. Carter (2002) said that 'curriculum is like a cemetery, we keep putting things in but never take anything out!' (p 4) Munro (2003) puts forward the argument that curriculum will be judged by what it teaches, how it teaches and what it is. Curriculum that is linked with knowledge can foster a pedagogy that encourages emotive motivation in students (Laurillard 1979 and Elton 1988) and the building of long-term memory icons. 'Students should have opportunities to reflect and report on how they are experiencing … research-informed and research-based curriculum' (Jenkins 2000, p 345).

Method

The major research was focused on the unit 'Internal Control Principles' in the Advanced Diploma of Accounting in New South Wales TAFE. In-depth interviews with one Head of Business Programs, 11 teachers and 20 of their students documented these participants' experiences and perceptions as they went about their teaching and learning. Supporting the phenomenographical evidence was an analysis of the transcriptions, referred to by Phillips and Jorgensen (2002, p 96) as 'discursive psychology' and around which this paper is based. While phenomenography highlights the variation in teaching and the learning perceptions and experiences, discourse analysis seeks to analyse the commonalities through the particular ways teachers and students spoke of their situation and their understanding of that context. Discourse analysis is particularly relevant in this research because it is: 'based upon a view of semiosis as an irreducible element of all material social processes. … Discourse as part of social activity constitutes genres. Genres are diverse ways of acting, of producing social life, in the semiotic mode' (Fairclough 2000, p 164). The definition of *semiotic* from the Encyclopaedia Britannica (2006) is: 'a general philosophical theory of signs and symbols that deals especially with their function in both artificially constructed and natural languages and comprises syntactics, semantics, and pragmatics' (para 1). Fairclough states that discourse is embedded in

social practices, and he gives classroom teaching as a relatively stable example of this. Analysing the discourse of both teachers and students would then seem to provide another window through which we might view the social practice of student learning.

While the data were transcribed verbatim, it was then edited for flow and process, identifying commonalities, themes and concepts situated in the context of the classroom. The discursive psychology sought to find patterns of language about common incidents or events in that situation that either supported or contradicted the developing theory (Benner 1985; Taylor and Bogdan 1984). Further examination of the interview data clustered new information under the corresponding attributes and from these groups themes were derived such as 'conversation topics, vocabulary, recurring activities, meanings [and] feelings' (Taylor and Bogdan 1989, p 131). All of these were then pieced together to form the narrative that created a rounded and comprehensive picture of the context in which students learn. The analysis of the transcripts in this research enabled me to study the language used by participants, both listening to the voices and examining in detail the written text. It enabled me to question some of the ontological and epistemological assumptions behind the research study.

It is documented in the literature that phenomenographic interviews can be uncomfortable for students (Trigwell 1994; 2000; Marton and Booth 1997; Åkerlind 2005a) and it was for this reason that I tried to adopt the stance of an empathetic listener and ensure that the environment allowed opportunities for the participants to reveal their experiences of the phenomenon as openly and freely as possible. During the interviews the questions were not always asked in the same order. Sometimes the conversation took twists and turns and opened up new avenues to explore. The transcripts were between 20 and 30 pages in length, which resulted in over 500 pages from students and nearly 320 pages from the teachers. Added to these was the 27-page transcript from the Head of Programs at TAFE. This made a total of just over 850 pages of transcript for the main study.

University curriculum versus TAFE curriculum

The increasing cost of gaining a higher education has reinforced the importance of developing students' 'graduate employability'. Internationally, higher education is called to account for success in the employment of its graduates (Eraut, 1993). These changing demands have created an expectation that the tertiary education sector will respond in innovative ways to meet both the learning needs and the career goals of all its students. (p 76) At university the teaching, learning and assessing curriculum is generated by the lecturer and perhaps still further developed in the classroom. This process is similar to the ideas expressed by Patrick (1998) who stated: 'Teachers are positioned as cultural agents, making curriculum – not merely interpreting and more or less effectively putting into practice a curriculum that had been fixed outside the classroom' (p 282).

Teachers who see strengths in students teach positively and as cultural agents they can identify their students' strengths by watching and learning how the classroom culture evolves. Using these techniques teachers can unmask what is sometimes hidden by prescriptive approaches to curriculum and assessment. Patrick believes that the curriculum is much more than an exercise in translation and this is supportive of Dall'Alba's (2005) view that transformation is vital to positive learning outcomes. University curriculum has an extended process, going into the classroom with the teacher. It is then researched in that context, and assists in formulating and reconstituting the knowledge gained by the student.

As well as the propositions made by Chua (2004) that university curriculum requires an explicit framework; other recent research suggests a move away from traditional university curriculum should be made. It is argued by Boud (2003) that the term *curriculum* is not widely used by universities. Boud believes that the term *course development* provides a much stronger emphasis for the content of the curriculum and all the various aspects that create the educational environment. He presents the case for creating work as the curriculum:

> [T]here needs to be a focus on an educational approach to the curriculum, not a narrow operational competency-based approach suitable for pre-defined learning outcomes. Competency-based frameworks that delineate the universe of outcomes – such as those used in vocational education and training derived from industry-based occupational standards – are unlikely

> to be appropriate except for relatively low-level work-based programmes. (p 46)

Boud is clearly making a distinction between university and vocational curriculum. This leads us to examine the curriculum in the context of the Vocational Education and Training (VET) system. Here the teacher is an interpreter and facilitator in the learning process, supporting the proposition made by Patrick (1998) that teachers are cultural agents. These teachers are given much more than a two-page unit outline of their subject. They have to follow a more specific document. VET curriculum is prescriptive and imposed, fixed outside the classroom and this is the significant difference between vocational and university curriculum (Bowers and Reid 2005). The assessment is also different and is competency-based. Toohey (1999) suggests that the outcomes of a competency-structured curriculum help focus on performance of professional skills and transformation of established knowledge. This idea encompasses the two characteristics espoused by Dall'Alba (2005); linking epistemology and ontology.

The specific criteria of TAFE curriculum are set externally as articulated by Boud (2003), the learning outcomes precise, the assessments often mandatory and content closely controlled. An interesting comment was made by Millmow (1997) referring to the differences between university and vocational teaching and learning, when he stated that 'it is not necessarily a vocationally oriented course of study that bestows the student with a puzzle-solving bag of tricks' (p 90). This comment was made in light of the perception in the community that TAFE curriculum uses a very *hands-on approach* to teaching and learning. Although there is some teacher input into the development of the relevant VET subjects, they nevertheless have clearly defined sets of learning outcomes that have been pre-ordained (by the Australian National Training Authority (ANTA) when it was in operation). The Industry Advisory Boards within ANTA had set the learning objectives for each unit in the program around which the curriculum document was developed. These industry boards dictated competencies and skills that must be achieved in the vocational units in the program with the disciplinary expert or teacher attesting to the students' abilities and skills for a particular task or tasks.

Here in Australia, ANTA (2003) stated that the workplace was becoming an increasingly important part of vocational education and training and students would gain valuable and lasting knowledge through collaboration with fellow workers and the networks they foster. Ashton and Sung (2001) support this view and stated that the opportunities for learning on the job were enhanced in many organisations where employees worked in teams, fostered networks and participated in shared projects. Many programs however, are aimed at the popularity market, with little thought about the indicative content of the value added in terms of critical and analytical skills that are needed to stand a student in good stead in the real world (Mangan 1998). Lovat and Smith (1995) documented curriculum in the context of decision-making in vocational education and they state it:

> … can best be conceived as decision-making action that integrates both intention and the manner in which the intention becomes operationalised into classroom reality. This reality, however, must be negotiated and modified because of a range of contextual circumstances. (p 23)

These authors maintain that the key questions that influence the curriculum developer is exactly what knowledge will be most valuable to the learners, how the assessment tasks should be structured, what sequence the topics should follow and what resources are appropriate for the subject.

The literature highlights the significant areas of university curriculum; however, almost all the major contributions examined draw attention to differences between university and vocational curriculum by stating what university curriculum is not! There is a large body of literature pertaining to higher education curriculum and very little on the VET curriculum.

The enacted curriculum – the teachers' perspective

While the general feeling with TAFE teachers was that the curriculum shows what a teacher has to deliver, what the assessment requirements are and what students' learning outcomes are, there were some differences in how teachers used the curriculum documents. When I asked if the curriculum was useful this teacher was quite definite that he used all the resources. *"I get the full curriculum because I print it out, and I print it out before each lesson and of course that then gives me a bit of guidance, really gives me more detail on what to cover" (AT)*. The following extract is from the conversation with the HOP. I asked him: Is it your experience that teachers

make a lot of use of those resources? *"I believe they do. We've got an intranet site that's got a lot of assessment exemplars and teachers' guides on them and the feedback I get is that most teachers use them and find them pretty satisfactory."* However, very few of the teachers had examined the full curriculum document and even fewer had used the extra resources provided with the teachers' guide. One teacher, when asked if he knew about the guidance notes and exemplar said: *"There is but I find them not very useful … they are so broad and wishy washy. The main thing I have found useful is the learning outcomes" (BT)*. Another teacher said: *"No I haven't used them" (FT)*. Some researchers have claimed that curriculum is a tool for identifying intent and directions of study (Birdsall 1989; Altman and Cashin 1992; Johnson 1995; and Wankat 2002). The response from HT about the curriculum was that *"we have a number of topics to cover and it's basically a hands-on approach at TAFE"*. However he was unaware that there was an extensive teachers' guide available with worked exemplar.

There was criticism of the curriculum for not addressing more on corporate governance. *"There's not enough on corporate governance which, to me, is the essential element now that drives the internal control system" (KT)*. This point could well be valid when considering the extent of corporate failures and fraud that have been so well documented in these last four years. *"For me it is fine. For them [the students] they probably rely more on the timetable to find out what is coming up next week" (CT)*. This seemed to be a common response when talking about how curriculum is understood. Students do tend to have shorter-term objectives. I questioned CT further on why he thought that way. *"Because they don't know how important it is yet … They will happily skip an Internal Control Principles class to study for tax or company law."* One teacher was quite happy with the curriculum. *"Oh this is not too bad this one. Yes, this is pretty well set out" (GT)*. He had the full curriculum document with the worked exemplars and stated that it was helpful.

From the data gathered from the teachers it appears that delivery of the Internal Control Principles curriculum is anything but standard across the TAFE colleges. Some teachers have only 16 hours, others 24 hours while still others take the full semester to deliver the material. The teachers all had the short form syllabus (see Appendix 1) for the subject and were asked by TAFE to give students copies of the assessment guides and the learning outcomes. In some of the larger colleges where

there might be two or three classes of Internal Control Principles offered, a common assessment program was followed with small marking panels made up of the teachers from the subject.

These are some of the teachers' comments on curriculum and how they perceived the students' understand these documents. *"I think the students have a better knowledge to start off with. Some of them have specific knowledge on some of the areas we cover" (AT)*. *"They learn best by doing it. I'm a great believer in learning by doing" (BT)*. *"Reading a text on internal control for a lot of these students is gobbledegook – they really don't understand what is happening" (CT)*. These comments show that teachers acknowledged that students had little understanding of curriculum and relied heavily on the teacher for information.

Some teachers spoke directly about the curriculum and others added their thoughts on assessments. *"I have sort of stuck to just the curriculum and the way I teach it, and the things that I feel important" (KT)*. *"From a competency point of view I think they [assessments] play a good role but once again it is very difficult, to my way of thinking, to use competency-based testing in accounting" (KT)*. *"There is a feeling of competence ... they do display that in their responses, assignments and exam" (HT)*. *"It is a way to learn how to learn and how to behave and know yourself" (KT)*. This echoes Gonczi's (2000) claim that students should be able to transfer skills to different situations and display their ability to learn how to learn.

The students' view of curriculum

In most cases the students did not fully appreciate the curriculum document and indeed were generally given only the pages containing learning outcomes, topics and assessments. This teacher felt that: *"You basically have to break it down into real small bite size chunks" (BT)*. The majority of students responded that curriculum was a list of topics or 'things' they should learn. In most cases the handouts they were given were scanned briefly by them at the start of the class and then assigned to the back of their note books; I gather barely seeing the light of day. *"The contents that we were going to be doing ... I mean I just put it at the back of my book" (S16-HT)*. Only a few students had a reasonably accurate description of the curriculum: *"As far as I know I think curriculum is a sort of structure of your studies or what you must cover in order to achieve a standard of learning" (S11-IT)*.

There were two key questions designed to elicit information from the students about their understanding of curriculum and the learning outcomes it contained. Question 5 asked students how they would know when they had learnt something. One student responded as follows: *"What do you mean by learning outcomes?"* I persisted by asking when she reached the end of a subject how did she measure what had been learnt? *"All we do is like get the exam mark" (S14-ET)*. This seemed to indicate that there was no explanation of these learning outcomes when the class began. However the student then added:

> *"We don't know really, but all we are concerned about are the exam marks, that is the day-time students. We don't quite read even if we are given an outcome for learning, and we don't quite care. I just take the exam mark and if I get a distinction I know I have learnt something."*

The exam mark was the focus of this student's attention and the reply was quite clear that she had little regard for learning outcomes. It was noted that this student was attempting the subject for the second time having withdrawn during her first enrolment. Question 12 asked the students what they thought curriculum meant. When I suggested to this next student that she might have been given some learning outcomes from the curriculum document she was quite definite with her reply. *"No, the sheet that we were given out we just had a list of topics. I don't remember there being these, I just remember the topics" (S16-HT)*. The answer to the question about how do they know when they have learnt something brought this response from that same student: *"I don't know. I guess you just sort of ... thinking about it"*. These and similar responses indicated that many students were unaware of the role of curriculum in their learning environment and the fact that they were meant to be assessed according to the learning outcomes set by industry.

Table 1 sets out the positive and negative responses to the following two student questions:

- Question 5 - How will you know when you have learnt something?
- Question 12 - Can you summarise how you understand what curriculum is?

Table 1 Responses to Questions 5 and 12 from the student questions

Student	Question 5		Question 12	
	Yes	No	Yes	No
S10-BT	✓		✓	
S11-IT	✓		✓	
S12-IT		✓		✓
S13-GT		✓		✓
S14-ET		✓		✓
S15-ET		✓		✓
S16-HT		✓		✓
S17-KT		✓		✓
S18-KT		✓		✓
S19-CT		✓	✓	
S1-AT		✓	✓	
S20-DT		✓		✓
S2-AT		✓		✓
S3-FT		✓		✓
S4-BT		✓	✓	
S5-FT		✓		✓
S6-DT		✓		✓
S7-JT		✓		✓
S8-JT	✓			✓
S9-BT		✓	✓	
Totals	**3**	**17**	**6**	**14**

In analysing this data I recorded a positive response if the student clearly related gauging what they had learnt against the learning outcomes and a positive response if their description of the curriculum document was reasonably correct. Only three students linked how they measure their learning against the outcomes in the curriculum and only six had a reasonable idea of what was meant by curriculum.

Occasionally a student did have some idea about the curriculum, but was quick to distance himself or herself from any sort of ownership or obligation regarding its use. *"It is a guideline that **she** [meaning his teacher] has to follow" (S17-KT)*. When shown the document this student was quite interested in its contents and flicked through the pages stopping to examine the section on the six tools for evaluating internal controls. One student had not even heard the word curriculum, so I suggested syllabus. *"Syllabus is …I know that one [long pause] …it's like a criteria" (S2-AT)*. The students were generally quite surprised when shown the curriculum document containing the overall objectives and details of what each topic contained.

This result was to be expected considering many teachers had not been aware of the full curriculum containing the teachers' guidance notes and the worked exemplar for each learning outcome.

The fact remains that teachers generally were reluctant to give students any more than the bare minimum at the start of the semester. This teacher did not think students wanted curriculum documents. *"I think all they see is the timetable and to them that is what they are going to have to do in the next 18 weeks. They don't sort of necessarily see it as stepping stones" (CT)*. Another teacher commented that he was quite sure the students did not understand the curriculum documents and actually stated that students were: *"far too removed from them. … But ... all that – those curriculum documents I wouldn't dream of giving out to students. They get enough paper as it is" (BT)*. These were fairly representative comments from the teachers regarding how students understand the curriculum. However, the interest shown by the students in the curriculum document they saw at their interview contests this perception by teachers. The minimum documents were given to students at the start of the class and most teachers concentrated on gaining a signature from the students to ensure they had evidence that assessment procedures had been handed out as required by TAFE policy.

Some students knew that to learn meant more than just asking questions. Even though this next student expressed the view that the curriculum material was hard, she acknowledged that seeking answers themselves extended their ability to think. *"The teachers give us something that they haven't actually told us about and this makes us think and find out about it" (S14-ET)*. This sentiment was also echoed by another student who said that being given problems to solve *"actually those make you learn more things really" (S18-KT)*.

In general, the students were quite happy to engage with their teacher and ask questions on aspects of their curriculum assessments, resources and timetable of topics. By not having any further information from the curriculum document students could not question their teacher about the detail contained in topics included in the curriculum. Lugg and Saltmarsh (2003) put forward the following suggestion:

> It could be argued that in the current VET environment curriculum work, as context-specific decision making, becomes more complex when the

> intention is fundamentally influenced by the needs of industry and government over the needs of the learner (p 3).

These researchers go on to claim that choices in the classroom are dependent upon teachers, resources, time and other issues that impact on the learning environment and this appeared to be the case in the results obtained in the major study. Also affecting choice are the policies of the institution and influence from powerful stakeholders such as industry.

What can be done in the future?

The things that TAFE might investigate further would include the use of researchers to help design and develop curricula. Combined with the technical expertise of industry specialists (Dawe 2003) and the way theory is applied in the workplace, sound pedagogical methods could be explored and expanded resources developed for teachers. A survey instrument could be developed with which to capture a picture of exactly what parts of the curriculum teachers did not use and why. Feedback to the designers would then enable them to have a deeper understanding of the things that impact on the delivery of curriculum in the classroom. TAFE might also find out the way the curriculum interacts with the various TAFE bodies and how it fits in the timetabling plans of various colleges. More research is needed to investigate fully the constraints that shape the teachers' role, responsibilities, approaches to teaching and interactions. This may also add light on the reasons why students in this subject felt that they were not in control of their own learning.

Conclusions

Curriculum can be designed to facilitate an environment where students discover the power of their own minds to work. The curriculum is part of the presage and process that encompasses all the items that make up the context into which students will enter for their situated learning. Some researchers feel that the first year curriculum is vital in fostering student engagement and the literature points to university curriculum being very much more flexible than VET curriculum. University lecturers can develop the content in the classroom, and determine the way it is delivered and assessed. This would appear to give university lecturers much greater freedom over what they teach, however, designers are still struggling with the content of curriculum, trying to determine what to put in and what to take out!

The research is heavily weighted in favour of higher education and examination of vocational curriculum appears to be somewhat neglected. From my own knowledge and years of experience in TAFE teaching I can attest to the TAFE curriculum being generally very detailed with topics clearly stipulated that must be covered. It is prescriptive curriculum and often the assessments are mandated. The learning outcomes are structured and developed by industry advisory bodies with no input per se, from academics. The total document is formed outside the classroom with the weekly schedule already set for the lecturer to follow. One might expect that this type of curriculum would restrict the freedom of teachers.

While it is desirable that all stakeholders are involved in the formation of curriculum, it is nevertheless a specialised area of education and Table 1 documents the specific areas of curriculum content covered by researchers. It also provides an overview of all the specific elements that make up the whole curriculum. Institutional policies and procedures ensure that the requirements of educational audits are met and good strategies employed for curriculum development. The whole course management system is meant to encourage deeper understanding that leads to quality student outcomes. However, it appears important that curricula retain links with the real world while at the same time retaining flexibility that allows ideas to be expanded and explored in a scholarly way. The design and development of vocational curriculum could be enhanced with the consultation of both academic and industry experts as it is a vital aspect of the presage; that range of procedures and plans that form the context into which the students situate their learning.

The literature seems divided on whether or not university curriculum should be work-ready. Some strong arguments are presented in favour of higher education curriculum that is aimed at professional readiness. Those in favour focus on the professional entity and others refer to it as vocationalism. This counter argument is that this type of curriculum should properly be reserved for TAFE curriculum. This view clearly stated that there was a real divide between higher and vocational education. Other research is suggesting that first year curriculum is vital to establish an environment wherein students feel engaged and that curriculum may be a learning contract and/or the driver of assessment and evaluation. As such, the assessment acts as a driving force in capturing the objectives of the educator. These sentiments may apply to all tertiary curricula.

References

Åkerlind, G. S. (2005b) Variation and commonality in phenomenographic research methods. *Higher Education Research & Development,* Vol. 24, No. 4, November 2005, pp. 321–334

Altman, H. B. and Cashin, W. E. (1992) *Writing a syllabus*, Idea Paper (Manhattan, KS, Center for Faculty Education and Development) Eric Document Reproduction Service No. 395 539.

ASCD (2005) *For the success of each learner: 2004 Year in review,* Association for Supervision and Curriculum Development Annual Report, April.

Ashton, D. and Sung, J. 2001 *Lessons Learned from Overseas* (Final Report), Centre for Labour Market Studies, University of Leicester, Leicester, UK.

Australian National Training Authority, (2003) Shaping our Future: Australia's National Strategy for Vocational Education and Training (VET) 2004-2010. [On-line] Available at: http://www.anta.gov.au/. Accessed: 15 March 2005.

Benner, P. (1985) Quality of life: A phenomenological perspective on explanation, prediction, and understanding in nursing science. *Advances in Nursing Science,* 8(1), 1-14.

Biggs, J. (2003) *Teaching for Quality Learning at University,* 2nd edition, Suffolk UK, University Press.

Birdsall, M. (1989) *Writing, designing, and using a course syllabus* Boston, MA, Northeastern University Office for the Support of Effective Teaching.

Boud, D. (2003) Creating a work-based curriculum, in D. Boud and N. Solomon (Eds) *Work-based learning. A new higher education?* Buckingham, UK: SRHE and Open University Press.

Bowers, H. and Reid, A. (2005) Delivering higher and vocational education: Can an institution's course management system be constructively aligned with a foot in both camps? In Brew, A. and Asmar, C. (Eds) *Higher Education in a changing world: Research and Development in Higher Education,* Volume 28, pps.42-49.

Boyer Commission on Educating Undergraduates in the Research University, (1998) *Reinventing Undergraduate Education: A Blueprint for America's Research Universities*, Carnegie Foundation for the Advancement of Teaching, USA.

Carter, G. (2002) An International Perspective on Curriculum, *Curriculum Corporation Ninth National Conference*, Canberra, June.

Child, D. (2004) *Psychology and the Teacher*, 7th edition, Suffolk UK: Continuum.

Chua, C. (2004) Perception of Quality in Higher Education. Paper from the Proceedings of the Australian Universities Quality Forum 2004, AUQA Occasional Publication, Adelaide.In: Rob Carmichael (Ed) *Quality in a time of change.* Proceedings of the Australian Universities Quality Forum, Adelaide, 7th -9th July 2004, pp181 - 187.

Cohen, L., Manion, L. and Morrison, K. (2000) *Research methods in education.* London, Routledge-Falmer.

Dall'Alba, G. (2005) Improving teaching: Enhancing ways of being university teachers, *Higher Education Research & Development,* 24(4), 361-372.

education, history of. (2006) In *Encyclopædia Britannica.* [On-line] Available at: http://www.britannica.com/eb/article-47675 Accessed 1 October 2006.Elton, L. (1988) Student motivation and achievement, *Studies in Higher Education*, 13(2), 215–221.

Dawe, S. (2003) *Determinants of successful training practices in large Australian firms*, National Centre for Vocational Education Research.

Eraut, M. (1993) The characterisation and development of professional expertise in school management and in teaching, *Educational Management and Administration*, 21(4), 223–232.

Fairclough N. (2000) Discourse, social theory and social research: the discourse of welfare reform. *Journal of Sociolinguistics* 4, pp. 163-195

Frazer, S. and Deane, E. (2002) Getting bench scientists to the workbench, *UniServe Science Scholarly Inquiry Symposium Proceedings 2002 Conference,* pp.38-43.

Furedi, F. (2004) *Where Have all the Intellectuals Gone: Confronting 21st Century Philistinism*. UK. Continuum International Publishing.

Gardner, H. W. (1993) Education for understanding, *The American School Board Journal*, July: 20-4.

Gonczi, A. (2000) Review of international trends and developments in competency based education and training. In: Argüelles, A. and Gonczi, A. (Eds) (2000) *Competency Based Education and Training: A world perspective.* Mexico: Noriega Editores.

Hicks, D. (2004) The Global Dimension on the Curriculum, In: Stephen Ward (Ed) (2004) *Education Studies: a student's guide*. New York, USA: RoutledgeFalmer.

Jenkins, A. (2000) "The Relationship between Teaching and Research". *Journal of Geography in Higher Education.* Vol. 24, No. 3, 2000, pp. 325–351.

Johnson, G. R. (1995) *First steps to excellence in college teaching.* Madison, WI: Magna Publications.

Laurillard, D. (1979) The processes of student learning, *Higher Education*, 8, 395–410.

Lovat, T. and Smith, D. (1995) *Curriculum: action on reflection revisited*, 3rd edition. Wentworth Falls: Social Science Press.

Lugg, M. and Saltmarsh, D. (2003) Merging paradigms: teaching and learning in school-based vocational courses, *The sixth Australian VET Research Association Conference "The Changing Face of VET"* 9-11 April 2003.

Mangan, J. (1998) 'A Vision for the Department of Economics at the University of Newcastle', *Speaking Notes for a Seminar presented to the Faculty of Economics and Commerce,* Newcastle: University of Newcastle, 3 November.

Marton, F. and Booth, S. (1997) *Learning and awareness.* Hillsdale, N.J.: Lawrence Erlbaum Associates.

Millmow, A. (1997) "To Eke Out a Marginal Subsistence: Economics in Business Schools", *Economic Papers*, 16(3), 88-96.

Munro, John (2003) How people learn. What teachers need to know to be effective. *Curriculum Corporation 10th National Conference*, Perth, June.

Nulty, D., Vegh, V. and Young, J. (2002) Curriculum design innovation in flexible science teaching, In: *Proceedings of the Scholarly Inquiry in Flexible Science Teaching and Learning Symposium* pp30-51. [On-line] Available at: http://science.uniserve.edu.au/pubs/procs/wshop9/ Accessed 18 March 2005.

Patrick, K. (1998). *Teaching and learning: The construction of an object of study*. Unpublished doctoral thesis, University of Melbourne.

Phillips, L. and Jorgensen, M. (2002) *Discourse Analysis as Theory and Method.* London: Sage Publications.

Ramsden, P. (2003) *Learning to teach in higher education* 2nd edition. London: Routledge Falmer.

Reid, A. (1997) The meaning of music and the understanding of teaching and learning in the instrumental lesson, In Gabrielsson, A. (Ed) *Third Triennial ESCOM Conference Proceedings*, Uppsala, Sweden: Uppsala University, Uppsala, Sweden, pp 200-205

Reid, A. (1999) *Conceptions of Teaching and Learning Instrumental and Vocal Music*, PhD Thesis, University of Technology, Sydney.

Reid, A. and Loxton, J. (2004) Internationalisation as a Way of Thinking about Curriculum Development and Quality. In: Rob Carmichael (Ed) *Quality in a time of change.* Proceedings of the Australian Universities Quality Forum, Adelaide, 7th -9th July 2004, pp99 - 103.

Reid, A. and Petocz, P. (2003) *The Professional Entity: researching the relationship between students' conceptions of learning and their future profession.* Paper presented at the 11th Improving Student Learning Symposium, Hanover International Hotel, Hinckley, Leicestershire, 1st – 3rd September 2003.

Salemi, M. K. and Siegfried, J. J. (1999) "The State of Economic Education", *American Economic Association Papers and Proceedings*, 89(2), 355-361.

Taylor, S. J., and Bogdan, R. (1989) On accepting relationships between people with mental retardation and nondisabled people: Towards an understanding of acceptance. *Disability, Handicap & Society,* 4(1), 21-36.

Toohey, S. (1999) *Designing Courses for Universities,* Buckingham: Open University Press.

Wankat, P. C. (2002) *The effective, efficient professor: teaching, scholarship, and service* Boston, MA: Allyn & Bacon.

Appendix 1 – Internal Control Principles

Short form syllabus 9434P

Week	**Topic to be Addressed** (and relevant chapters of approved texts)
1	**1. Introduction, definitions of the internal control structure (AUS 402[.10]) and the relationship between accounting, auditing and internal control.** ***AGL ch.1 GCL&C ch.1&2***
2	Outline management's responsibility as per AUS 202[.14], to ensure the financial statements are drawn up in accordance with accounting standards. The need for internal control. Cases of fraud. *AGL ch.1 and W ch.4*
3	The three elements of internal control; *control environment, management information system and the control procedures. AUS 402[.15-24] AGL ch.1*
4	The limitations of internal control AUS 402[.25] and understanding the internal control structure, AUS 402[.26]. Designing a protective mechanism. *W ch.5 AGL ch.1 T ch.1*
5	**2. Identify the accounting transactions cycles and their objectives. Determine the nature of each cycle and the accounts affected by each transaction.** ***AGL ch.2 T chs.2-9***
6	The six techniques used to evaluate internal controls. Flow charting, checklists, walk-through. *W ch.6*
7	(Continued) The six techniques used to evaluate internal controls. Statistical sampling (AUS 514) and risk exposure worksheets. (AUS 402[.30-.38]) Computer auditing techniques, (AUS214.) *W ch.6*
8	**3. The impact of a CIS on the internal control system. Comparison of manual systems and computerised systems. (AUS 214[.03])** ***AGL ch.3 T ch.10***
9	Assessing the risks (AUS 214[.14]), the pervasive general controls and the specific application controls. The problems encountered with a CIS. *AGL ch.4 T ch.10*
10	Mid semester test
11	**4. Internal Auditing – these auditors are employed by management to provide 'audit comfort'. The objectives of internal auditing, its nature and benefits. The Standards for Professional Practice of Internal Auditing.** ***GCL&C ch.19 AGL ch.6 T ch.13***
12	**5. External Auditing – these auditors are independent contractors who report on management's stewardship. The differences between internal auditors and external auditors. The role of the Audit committee. Cases of negligence and third party liability.** ***AGL ch.7 GCL&C ch.4 T ch.11***
13	**6. Not-for-profit (NFP) entities. Types of non-business entities, why they are audited and who can audit. Special considerations by the auditor before accepting the audit. Regulations affecting different NFP entities.** ***W ch.18 AGL ch.8 T ch.12***
14	Issues in performing an audit on a NFP entity. Reconciling fund accounting with the transaction cycle approach. The three unique control problems for NFP entities. Consideration of fraud issues and using consolidated financial statements. *W ch.18 AGL ch.8*

Week	**Topic to be Addressed** (and relevant chapters of approved texts)
15	Performing a NFP audit. Using a real life example. *ASCPA examples*
16	**7. Performance audits. AUS 806. A comparison between financial audits and performance audits. The steps in planning a performance audit AUS 808. Special Purpose Reports on the Effectiveness of Control Procedures. AUS 810.** ***GCL&C ch.19 AGL ch.9 T ch. 13***
17	**8. Ethics and their increasing importance in control procedures. Code of Professional Conduct.** **General review.** ***GCL&C ch.3 AGL ch.10 T ch.14***
18	Final Exam