The purpose of this paper is to advance a framework for curriculum development in vocational education. The framework consists of three elements: appraisal of concerns, deliberating about practice and formulation of intent, all under the pervasive influence of values. We have synthesised this framework from concepts underlying existing models of curriculum development, but have assigned a central place to the values of those involved in the curriculum development process, and have conceptualised the formulation of educational intent as a process which unfolds as concerns are appraised and as attention is given to practice. We have used language which we feel is easy to apply to vocational curriculum development, but we believe that the framework is equally applicable in general education. We believe that the use of this framework would overcome the discontinuities which characterise the separation of curriculum design from implementation in contemporary vocational education curriculum development practice. We also believe that the attention given in the model to values would assist in reconciling the often implicit values which underpin curriculum development in both vocational and general education.

Introduction

In this paper we present a curriculum development framework for the design, implementation and evaluation of curricula in vocational education. We do this because, in our experience, curriculum developers in vocational education tend not to accept as relevant curriculum development models, used in general education, which they regard as predominantly school-related. In place of these models, vocational educators focus mainly on the development of syllabuses and base this development predominantly on the knowledge and skills needed in occupations (e.g. see ACTRAC 1992; The National Training Board 1992). This focus on a single source for curriculum content in vocational education has been common in Australia for more than a decade (Broderick & Kuhl 1981, TAFE Board of Victoria 1984). A simplified version of approaches to vocational education curriculum development would be as depicted in Figure 1.

Various reasons can be advanced for this rejection, by vocational educators, of models used in general education. For instance, it could be argued that their utility has not been recognised by vocational curriculum developers, the implication being that the problem lies with the curriculum developers themselves. Alternatively, it could be
argued that the problem lies with the existing models, in that they do not readily lend themselves to adoption by vocational curriculum developers in addressing the problems that they encounter in vocational education. We believe that, in all probability, both of these perspectives have currency.

Figure 1: Simplified approach to curriculum development in vocational education

Among the difficulties that vocational curriculum developers confront in applying models used in general education are the 'schoolish' language used to describe and explain models (e.g. language derived from a context rich with references to parents, children, pupils, disciplines of knowledge, and the need to nurture young people during their physical and psychological development); the focus on improving curricula, as though a curriculum is already in place, while the reality for many vocational curriculum developers is that they are creating a course which has never been offered before; and the view that many models de-emphasise the instrumental value (often a primary goal) which vocational educators place on the knowledge and skill needed in the workplace.

On the other hand, a focus on essential differences between vocational and general education could, conceivably, make it difficult for vocational curriculum developers to recognise the relevance of the underlying concepts on which existing curriculum development models are based. That is, it could be that, if vocational curriculum developers were to look deeply enough beneath the school-based discourse used to describe existing models, they would find concepts which could be applied in vocational education.
As indicated above, our view is that both of these positions have validity. We believe that the language which forms the discourse used in the school-related curriculum development literature impedes the application of those models in vocational education. We also believe that some of the concerns confronted by vocational curriculum developers, especially those relating to the vocational aspirations of students and those of industry are not fully addressed or accommodated in existing models. Nevertheless, we believe that the concepts underlying those models are directly applicable to vocational curriculum development.

In this paper, then, we synthesis a framework from the concepts underlying a number of existing curriculum development models. In doing so, we use language which we believe is directly applicable in both vocational education and general education, and we accommodate those idiosyncratic aspects of vocational curriculum development with which we are familiar.

Our thinking is based on the belief that vocational education is about preparing individuals to make a constructive contribution to society in general, and to employment in particular, a role which draws upon not only technical skills, but also more general attributes and qualities. This commonality between vocational and general education has been recognised in the core skills identified in the United Kingdom; the workplace know-how, in the United States of America; the essential skills, in New Zealand and the employment-related key competences, in Australia (see Mayer 1992, p. 5). We argue further that there are few, if any, differences between general and vocational curriculum development which would require distinctly different theoretical concepts. Rather, the differences lie primarily in the application of concepts in different contexts.

The framework which follows, then, is a proposal for how curriculum development in vocational education might be conducted so that appropriate recognition is given to the full range of knowledge, skills, attitudes and values, which individuals draw upon both in the performance of their work as employees and in their wider roles as citizens. It draws upon concepts presented by several writers in the field, from both the school and TAFE sectors which, we argue, contain common ideas. We have sought to identify these, appraise their utility, modify them as necessary and incorporate them. We have also placed a particular emphasis on the role of values, and the appraisal
of individuals' concerns, throughout the curriculum development process.

In the following paragraphs, we commence with a discussion of the role of values in curriculum decision-making and then discuss the framework which we propose and its elements. We argue that there are four essential elements in a curriculum development framework: values, appraisal of concerns, formulation of intent and deliberation about practice. The role of values in underpinning each of the other elements and the elements themselves, are discussed in turn, below.

**Values**

Curriculum development is essentially a process in which value judgements are made, typically about such matters as intent, content, teaching strategies, learning experiences, assessment and evaluation. Such decisions generally are made by individuals, working alone or in groups, and flow directly from personal assumptions about what constitutes educational worth in their context. Consequently, considerable variation in opinion might result on any specific issue.

An example of this might be the development of a syllabus for the implementation of a trade course in motor mechanics. Individuals developing this curriculum might have quite different views about the primary content which should be included in the curriculum. Some may argue for specific skills needed in the routine maintenance of motor vehicles, so that students would be immediately functional in a car maintenance service centre. Others may believe that conceptual understanding and higher order cognitive procedures needed for diagnosis, fault-finding and problem-solving are of primary importance so that the graduating mechanic can establish the causes of motor vehicle malfunction, cope with technological change and adapt to a changing work place. Still others may seek a primary emphasis on the ability to examine critically the social role of the motor mechanic in reproducing an activity which can contribute to pollution, the consumption of scarce resources and reduced quality of life, leading to the taking of 'right' action (Kemmis, Cole & Suggett 1983, p. 10).

It is important in curriculum development, then, that the educational value-orientations of the decision-makers be consciously the subject of
analysis and debate. As an aid to such analysis, many alternative ways of communicating the essential characteristics of competing value-orientations have been proposed (see for example Millar 1991; Blachford 1986; Bowen & Hobson 1987; and Kemmis, Cole & Suggett 1983). Although the value position of curriculum developers has long been regarded as problematic in education, the growing tendency in vocational education is to impose a particular value position in the establishing the educational intent of vocational courses. For instance the competency-based training movement (e.g. The National Training Board 1992) has managed to secure an exclusively scientistic or technocratic orientation to the determination of content (e.g. see Stevenson 1993). However, our purpose here is not to debate different values orientations or to advocate particular values in vocational education. Rather, it is to propose a framework in which the role of values is explicit and central. It is the responsibility of individual curriculum developers to declare and argue their own positions, as well as to identify and address the values of others with a legitimate stake in the curriculum in question.

Our proposal is further premised on the belief that the effect of values is not confined to any one stage or phase of curriculum development. Rather, curriculum development is essentially a set of iterative judgements, none of which is value-free. Further, the reality in some instances of curriculum development might be that implicit values become clearer as curriculum development proceeds, with the frequent need to reconsider initial development, accordingly. Even where syllabuses are centrally designed, the influence of teachers who actually teach in classrooms, workshops and industrial settings reflects their values. In writing about the role of values in curriculum development, we are considering not only the work of any central office staff remote from the teaching/learning situation, but also those whose work is to guide the learning process.

For example, consider a curriculum developer responding to a governmental initiative to provide courses for unemployed youth. From an appraisal of concerns, as they were initially interpreted from stated government guidelines, curriculum intent might initially be expressed in terms of employment-related skills for course participants. However, as development proceeds and teachers select learning experiences in response to student needs, the developer may question the appropriateness of such intent. The developer, for instance, may become more concerned with assisting students to deal
with their continuing unemployment and to change the social structures which have contributed to their situation. That is, the value position may move from an exclusive concern for technical content, to one concerned also with emancipatory interests (Grundy 1989).

The concern to place the influence of values on curriculum development uppermost in any framework has been a major strength of Walker's (1971) naturalistic model. His model comprises the elements of *platform*, *design* and *deliberation*. Of particular interest here is his notion of a curriculum platform, which he describes as

*The system of beliefs and values that the curriculum developer brings to his [sic] task and that guides the development of the curriculum ... [it] includes an idea of what is and a vision of what ought to be, and these guide the curriculum developer in determining what he [sic] should do to realise his [sic] vision.*  
(Walker 1971, p. 52)

We endorse Walker's idea of a platform of 'beliefs and values' as the basis upon which curriculum development proceeds, although we do not accept his view that clarification of educational intent, and the values which have given rise to it, always precede implementation. Rather, implementation can help also to clarify values, and may lead to further consideration of intent.

Thus, our view is that values underlie all curriculum decision-making. This influence of values needs to be recognised by curriculum developers, so that they can be addressed consciously. Further, the influence of values is an ongoing one throughout the curriculum development process.

**A framework**

A curriculum development framework is often portrayed in terms of a set of elements which are interrelated. That proposed by Walker is just one example, there being many others, some of which are listed below (Table 1). When juxtaposed in this way, such sets of elements appear to reflect a core of recurring ideas from which we have chosen the elements of our curriculum development framework. Stated briefly, our framework consists of four elements: *appraisal of concerns*, *formulation of intent*, and *deliberation about practice*, all of which are informed by the *values orientation* of the curriculum developer.
In the following paragraphs we discuss the interrelatedness of these elements, their nature, and the influence of values on them.

Table 1: Elements of curriculum development portrayed by several writers

<table>
<thead>
<tr>
<th>Tyler</th>
<th>Skilbeck</th>
<th>Walker</th>
<th>TAFE authorities*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Platform</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sources</td>
<td>Situation analysis</td>
<td></td>
<td>Analysis (occupational / needs / environmental)</td>
</tr>
<tr>
<td>Screens</td>
<td>Objectives</td>
<td></td>
<td>Objectives / competences / standards</td>
</tr>
<tr>
<td>Objectives</td>
<td>Design</td>
<td></td>
<td>Design</td>
</tr>
<tr>
<td>Selection of learning experiences</td>
<td>Design</td>
<td></td>
<td>Deliberation &amp; Design</td>
</tr>
<tr>
<td>Organisation of learning experiences</td>
<td>Interpret and implement</td>
<td></td>
<td>Implementation</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Assess and evaluate</td>
<td></td>
<td>Evaluation</td>
</tr>
</tbody>
</table>

Note: *See especially TAFE Board of Victoria (1984). Similar approaches have been used in other Australian States e.g. see Broderick and Kuhl (1981); Department of Education, Queensland (1980); South Australia Department of Further Education (1976); and for national curriculum development, see Jones (1983); and the National Training Board (1992).

A non-linear process

We do not think that there needs to be any particular order in which curriculum developers appraise their concerns, formulate their intentions and deliberate upon their practices. We are conscious that, despite Tyler's (1949, p. 128) explicit statements to the contrary, his
The model has been widely interpreted and reported as linear (see for example, Brady 1990, p. 58). We, on the other hand, accept the essence of Tyler’s assertion of mutual interaction among his four main elements, a principle which Skilbeck also asserted (Skilbeck 1984, pp. 231-240). Not only are the activities in each of the elements of our model mutually interactive in the ongoing development and refinement of the curriculum, but the process is also iterative as the curriculum is refined.

Figure 2: The centrality of values in curriculum decision-making

As an example, consider the development of a curriculum for the training of hardware salespersons. An initial formulation of intent may target the development of knowledge and skills required in that occupation as it is currently undertaken in known retail outlets. An initial appraisal of concerns, then, might include an occupational needs analysis where the knowledge and skills used in this occupation are brainstormed by persons already in such occupations. At the national level, the National Training Board may endorse competency standards for this occupation as determined by a competency standards body. In a linear process, the identification of these knowledge and skills may provide the major basis for documenting and accrediting a syllabus and a major basis for teachers in planning instruction and assessment. State policies for accreditation of vocational courses encourage such a linear process (e.g. see Accreditation Council 1992). However, at various stages in this process, considerations may lead curriculum developers back to earlier considerations. For instance, such considerations might include:
• challenges to assumptions that the occupation is impervious to
technological change, or that the occupation is independent of
related occupations like those involved with stock control,
purchasing and store management (requiring consideration of intent
and appraisal of concerns of additional parties);

• concerns that the initial brainstormed content did not focus
adequately on the full range and long-term needs of individuals in
the workplace and in wider life roles (requiring reappraisal of
values underpinning the course, further appraisal of concerns, and
reformulation of intent);

• a realisation, after experience in teaching the course, that some skills
were best learned on the job or that some content could not feasibly
be taught in assumed ways (requiring reappraisal of documented
intent), or that the nature of the students who would actually
undertake the course was quite different from that which guided
earlier considerations (requiring a reformulation of intent); and so
on.

In our view, then, rather than each activity being undertaken and
concluded sequentially, the more accurate model is of their being
refined in parallel. As a change is made in one element, its
consequences for the others are considered and, where judged
necessary, adjustments made in those also. This process of repeated,
mutual interaction among the elements continues until a satisfactory
and complementary conceptualisation of concerns, intent and practice
is reached.

Each of the elements of our framework is outlined and discussed, in
turn, in the following paragraphs.

Appraisal of concerns

We have chosen the phrase appraisal of concerns to describe evaluative
activities aimed at establishing the desired nature of the curriculum.
These activities would include gathering and evaluation of such
information as perceptions of the role and nature of knowledge and
education, societal needs and the learning setting. The nature of this
information would vary depending on whether a curriculum was
being designed for the first time or whether an existing curriculum
was being improved. For example, for an existing curriculum the concerns of present and past students and teachers involved with the course could be appraised, but, for a totally new curriculum, no such information would exist.

In vocational education, there is a particular focus on curriculum development which involves *de novo* development. Perhaps, this is because this sector is regarded as a responsive one, continually developing new courses to meet changing industrial and community needs, and because the sector, itself, seems to be always undergoing substantial change (for example the moves over the last few years to redesign and accredit all TAFE courses). Of course, at the same time, teachers are continually involved in interpreting syllabuses, developing learning materials and teaching and assessing students; and seeking to improve curricula through these activities.

The essential difference between *de novo* curriculum development, aimed at creating entirely new courses and *ongoing* curriculum improvement, is the lack of history which informs *de novo* curriculum development. That is, there may be no existing curricular materials to review and modify; no previous practice to reflect upon; and/or no consensus about the structure of subject matter to be incorporated. For example, consider the first development of an inservice course for word-processor operators in the 1960s. At that time there would not have been agreement about whether such a course should include detailed knowledge of computing science, and/or the logic of the software and/or the keyboard and other skills necessary to use the programs. There would have been also a lack of materials on which to draw. However, three decades later, considerable experience with such courses is available to inform not only teaching practices, but also the redesign and accreditation of such courses.

Distinctions of this kind are important when considering the nature and range of concerns which a curriculum developer may appraise when developing curricula. A curriculum developer undertaking *de novo* curriculum development may need to undertake a detailed analysis of vocations for which a course may prepare participants, whereas a developer reviewing a course with a substantial history may be concerned not only with any changes which have occurred in those vocations, but also with evaluating existing practices.
Appraisal of concerns may involve a wide range of activities and several attempts have been made to amplify what such an appraisal might entail, including Tyler’s discussion of sources of objectives (Tyler 1949, pp. 3–43) and Skilbeck’s situational analysis (Skilbeck 1984, pp. 232–234). Tyler emphasised the role of sources of information in generating a range of objectives, to be screened later by psychological and philosophical considerations. The sources of information which he identified are considerations of the learners themselves, the nature of contemporary society and subject specialists.

Skilbeck (1984, pp. 230–234) regarded this as inadequate and subsequently conceptualised a process called situational analysis which aggregates these sources of information into two broad categories: external and internal, and details five sub-categories for each. These sub-categories are more comprehensive than Tyler’s three sources of information. For instance, Skilbeck identifies the available internal and external resources, the climate and power structures within the institution, and educational system requirements (e.g. policy directives).

Even so, this more comprehensive list is still inadequate. The language used in its description and the elaboration of factors make it difficult to apply directly in vocational education. For example, it does not give explicit attention to distinctive philosophical, sociological, psychological, historical and economic factors which have shaped vocational educators’ perceptions of the nature and role of knowledge and education. Furthermore, occupational analyses, which are often undertaken in vocational educational curriculum development in order to canvass the needs of industry and business, are not accommodated readily, but need to be. The development of quite elaborate procedures for this purpose (see for example Hermann 1989) and specific techniques such as DACUM (Developing A Curriculum, see Anderson & Jones 1986) emphasise this need.

Consequently, we propose a framework which combines Tyler’s sources and screens with Skilbeck’s situational variables, and extend these to overcome such problems (Figure 3). Thus we have extended traditional foundations of education to include history and economics and recognised that these factors act not only as screens but also to generate educational intent and practice. We have also included industry and government as explicit elements of society contributing to the generation of intent and considerations of practice. We have
collected the remaining elements into clusters which we have called Learners and Learning setting.

**Figure 3: Role of concerns in curriculum development**

While we have derived these clusters of concerns from earlier work and our knowledge of vocational education, we do not claim that this set is comprehensive. Rather, we list them to illustrate the kinds of concerns that might influence any particular instance of curriculum development. We invite curriculum developers to modify this set of concerns for their own practice. To assist in this process, we have developed an initial clustering of our set of concerns under four illustrative headings (Table 2), which themselves may also need modification in practice. We believe that this framework for listing and grouping concerns is also applicable in general education.
Table 2: A tentative framework of concerns

<table>
<thead>
<tr>
<th></th>
<th>Traditional foundations of education:</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Considerations of philosophy, sociology, psychology, history, economics.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Society:</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Considerations of:</td>
</tr>
<tr>
<td>2</td>
<td>Community (e.g. justice, equity, culture, citizenship ...)</td>
</tr>
<tr>
<td></td>
<td>Industry (e.g. employment opportunities, industrial awards, occupations ...)</td>
</tr>
<tr>
<td></td>
<td>Governmental economic and social agendas (e.g. employment, social equity, economic development, statutes ...).</td>
</tr>
</tbody>
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<table>
<thead>
<tr>
<th></th>
<th>Learners:</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Considerations of maturity, previous experience, needs, abilities, motivation, learning styles, locations, ethnic origin, ...</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Learning setting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Considerations of:</td>
</tr>
<tr>
<td>4</td>
<td>Teachers (e.g. beliefs/values; preferred practices expertise ...)</td>
</tr>
<tr>
<td></td>
<td>Physical resources (e.g. equipment, materials, learning aids)</td>
</tr>
<tr>
<td></td>
<td>Social climate (e.g. institution, organisation, system, physical site ...)</td>
</tr>
</tbody>
</table>

While the appraisal of such concerns can provide information on which curriculum developers can act, it is also important to recognise that appraisal of concerns necessarily reflects the values of the curriculum developers involved. In particular, it involves interpretation of information and making judgments about what will be responded to, and in what way.

It is important also to note that concerns can both promote and constrain curriculum decisions. For example, economic concerns can generate intentions, like the need for certain competences or a core curriculum, while at the same time it can constrain the realisation of such intentions through the limited availability of such resources as staff, workshops, equipment and materials.
In summary, appraisal of concerns invokes the curriculum developer’s values in selecting and appraising information which can be used to guide the establishment of a curriculum. A wide range of concerns can be examined, and we have proposed a tentative list, which would be especially useful in vocational education. In the following sections, we discuss how formulation of intent and deliberation about practice relate to appraisal of concerns.

Formulation of intent

*Formulation of intent* is a phrase we have chosen, deliberately, in an attempt to avoid immediate comparisons with the role of objectives in the curriculum development process. Nonetheless, it serves much the same function, that is, to signal purpose, even intended outcomes, in terms of the effect of the curriculum upon the learning of students. We have also avoided the term *learning outcome* because of the particular meaning it has in competency-based training.

We have also avoided the term *objective* because of its common association with behaviourism, even though this connotation is not justifiable (Skilbeck 1984, pp. 212, 213). As Skilbeck observes, while criticism of behavioural objectives, such as that offered by Stenhouse (1975, pp. 70–83), has publicised some of the absurdities which their use has led to in curriculum design, it has not challenged the usefulness of a general objectives model for curriculum development.

On the contrary, a careful reading of Stenhouse’s discussion of curriculum planning and his description of the alternative, so-called ‘process model’ suggests that his own position is not so far from some kind of objectives-based analysis. The language is different, and that is not without significance, but the tendency of thought is towards that projective, intentional, action mode where conditions for learning are defined and steps taken to establish them - in short, towards the same general type of enterprise as objectives planning in the curriculum.

(Skilbeck 1984, p. 224)

It is precisely this notion of a ‘projective, intentional, action mode’, free from any association with behaviourism, that we mean to imply by the term *formulation of intent*. However, we do not accept Tyler’s (1949, p. 3) view that objectives form the criteria upon which all subsequent curriculum development activities proceed. We propose
that intentions, no matter how expressed, are more likely to be developed through iterative consideration of concerns and deliberation upon practice, as curriculum decision-making activities unfold. For example, as a consequence of designing particular learning experiences, the curriculum developer might encounter material which stimulates formerly unanticipated insights, and these may, in turn, encourage a restatement of intent.

Clearly then, in our framework, decision-making does not proceed exclusively from pre-stated intentions. Rather, the appraisal of concerns influences and informs all curriculum decisions, some of which focus on intent. Consequently, there is no discrete step in our framework called 'determination of objectives'. Rather, educational intent unfolds along with deliberation about practice and the appraisal of concerns. In addition, as stated already, the curriculum developer's values are a persistent and dominant influence upon this process (Figure 4).

We have used the term intent rather than learning outcome (e.g. see ACTRAC 1992) or competency (e.g. see the National Training Board 1992) to differentiate this process from one solely concerned with identifying the target exit abilities of learners. We believe that the National Training Board confidence that the setting of competency standards will lead in an unimpeded way to the development of matching competence in learners ignores the reality that concerns are continually reappraised throughout the curriculum development process and the actual education intent unfolds through this process.

**Figure 4: Unfolding nature of educational intent**
Thus far we have referred generally to curriculum intentions without considering explicitly the forms they might take. It has been implied already that one form which intention could take is some form of general objectives. However, commonly, these will be part of a more extensive statement of the curriculum design, such as a syllabus, which may also state plans for realisation of the curriculum and evaluative strategies for monitoring of the course. It would be naive to believe that planned intent remains unaltered in the process of implementation (Fullan 1981, 1982).

We believe that, in formulating intent, explicit attention needs to be given to decisions about implementation. In this respect Skilbeck's (1984) framework, the action research model (Kemmis & McTaggart 1988) and the TAFE Board of Victoria's (1984) systems model of curriculum development all reflect a similar concern. This is especially important because, in vocational education, as in many other settings, design decisions are often made in isolation from the teacher. A contemporary example is the work of the National Training Board which, in consultation with industry, establishes national competency standards (the National Training Board 1992) for vocational courses. The National Framework for the Recognition of Training binds TAFE and other providers of vocational education and training to adopt these standards if they wish to have their courses accredited or recognised.

A problem with such separation of planning from implementation is that it cannot be assumed that teachers will necessarily implement the syllabus as intended. As Fullan (1991) has argued, individuals perceive and interpret the plans of others quite subjectively, and, so, their teaching will almost certainly be at some variance with what was intended. Consequently, we argue that curriculum developers should consider their expectations with respect to curriculum implementation, during the process of formulating intent.

One way of defining such expectations is in terms of the extent to which pre-specified plans for classroom/workshop practice are to be adhered to (Fullan 1981). A programmed approach assumes that the curriculum design, including detailed plans for its implementation, will be faithfully adhered to in practice, there being no latitude for modification on the part of the implementing teacher. An adaptive approach is based on the expectation that the intentions of the curriculum design will be respected, but that variations in
Implementation will occur as the teacher(s) see fit. And an evolutionary approach accepts that the curriculum design is not presented as a completed plan, but with the expectation that aspects of the design, and local decisions about its translation into practice, will result in varied implementation strategies from one situation to another. We would argue that, particularly when the curriculum design includes innovative elements, or when programmed implementation is desired, there is a need to formulate the provision of adequate levels of support for teachers, such as through staff development programs. Only in this way can teachers' concerns about the philosophical implications of the curriculum, its implications for their practice, including the adequacy of resources, be addressed (Fullan 1982; Hall & Loucks 1978; Hall & Rutherford 1976). Similarly, it is only in this way, that chances can be maximised that curriculum intentions will be realised.

In essence, the formulation of intent is concerned with the iterative processes involved in planning a curriculum, including the planning needed to translate the plans, themselves, into practice. Accordingly, the final element of our framework shifts attention onto the interpretation and implementation of plans, that is, upon deliberation about practice.

Deliberation about practice

As stated already, we regard the appraisal of concerns, formulation of intent and deliberation about practices to be a mutually interactive, parallel set of elements which are refined iteratively until an acceptable conceptualisation of the curriculum is reached. Within this broader frame, we regard deliberation about practice as making decisions about teaching and learning, implementing and evaluating such decisions and making new decisions.

Further, deliberation about practice cannot be expected to follow a predictable path among the various decisions that will be made. For example, a teacher of motor mechanics, through an appraisal of concerns, might be alerted to governmental policies indicating that trade courses be modularised. One implication would be that the chosen content could be separated into discrete units, such as fuel systems, ignition systems and cooling systems of a motor. When taught as discrete modules, the selected learning experiences are likely
to be confined to the systems in isolation. Teachers then have limited opportunity to select learning experiences which stress the interrelationships among these systems (Stevenson & McKavanagh 1992). On the other hand, if teachers were to elect to treat the content of these modules more holistically, they could decide to organise their teaching in units of two or more modules. It would then be possible to devise learning experiences with, for instance, a problem-solving emphasis aimed at developing students' diagnostic skills involving several motor systems.

Thus, the aggregation of teaching time (an organisational variable) can increase flexibility in the assignment of time to particular learning experiences, which in turn can influence the nature and scope of learning experiences from which a teacher can choose (Tyler 1949, pp. 98–100).

Our view that deliberations about practice occur in concert is supported by views that any modelling of the process as a linear sequence, must be rejected (for a review of such approaches see Brady 1990; Print 1987, pp. 17–47). In addition, as argued already the mutually interactive nature of deliberation about practice and the formulation of intent further implies the inappropriateness of a linear model of curriculum development (see Figure 4).

We accept the conventional view (which appears to draw heavily upon Tyler's 1949 proposals) that deliberation about practice encompasses reflection upon such curricular elements as content (e.g. knowledge, attitudes, skills and values). Curriculum developers would consider the selection of content and its presentation through learning experiences. More detailed considerations such as continuity, sequence and integration are pertinent here also (Tyler 1949, pp. 84–86). We argue that it is deliberation about actual experiences with such elements of the curriculum that informs both the processes of analysing concerns and formulating intent.

The extent to which teachers' deliberations influence the curriculum in practice is, as suggested above, dependent upon the extent to which the curriculum is centrally devised and a programmed approach to implementation is adopted. However, whatever the degree of centralisation of curriculum planning, it is clear that all teachers do exercise influence, to some degree, over the curriculum which they teach. Even when the curriculum design is detailed and includes a
programmed implementation strategy, teachers must make decisions about adaptations which are forced by the particular setting in which they work. In such circumstances, a teacher's influence is at its lowest. On the other hand, when the curriculum design is less detailed, with an adaptive or evolutionary implementation strategy in use, a teacher's influence is greatest.

In short, then, whilst the extent to which teachers are able to influence the curriculum, in response to their deliberations about their own practice might be limited, it most certainly does exist. It is recognition of this reality which makes the planned provision of appropriate staff development, of a concerns-based type (Hall & Loucks 1978; Hall & Rutherford 1976) important to effective curriculum implementation. Unfortunately, in our experience such support is rarely provided.

**Conclusion**

Curriculum development, in any educational setting, is a complex process, requiring decisions to be made about many matters, which we have summarised here as: appraisal of concerns, formulation of intent, and deliberation about practice. We have argued that these decisions are constantly the subject of reflection and are informed by values. In our framework, the role of values throughout curriculum decision-making is explicitly recognised and emphasised. These relationships can be depicted as in Figure 5.

Like Tyler and Skilbeck, we have argued that the appropriate starting point for such deliberation is an appraisal of concerns. However, our belief is that these considerations are not restricted to an initial phase of curriculum development, and we have also argued that consideration of these concerns can both generate and constrain subsequent thinking about intent and practice. We suggest that such thinking stimulates propositions about intent, the nature and organisation of learning experiences, their implementation and evaluation. It is our contention that propositions concerning all curriculum decisions are tested iteratively for their mutual implications. That is, there is no foreclosure about intent or practice until a consistent compromise position is reached. Contrary to some models, intent is here regarded as an outcome of curriculum development rather than as a precursor for other decisions within the process.
Our framework is synthesised from concepts underlying existing curriculum development models. The major distinguishing conceptual features are the recognition of the pervasive influence of values, the conceptualisation of intent as unfolding throughout the processes of development, and the attention given to deliberation about practice. The special features of our discourse, that will assist vocational curriculum developers, are the adoption of language which is meaningful in a vocational educational context and the identification of and explicit attention to concerns wider than those normally found in curriculum development models.
We believe that the resulting framework will be more likely to be adopted and trialled in vocational education settings than those derived from non-vocational settings. At the same time, we believe that the framework can be used to assist curriculum development in general education. Such a framework, which is readily applied to both general and vocational educational contexts, has particular potential in curriculum development aimed at identifying and developing qualities applicable directly in work, further education and wider life pursuits (Finn 1991; Mayer 1992).

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