

**CURRICULUM DEVELOPMENT PRACTICES  
IN TASMANIAN TECHNICAL AND FURTHER  
EDUCATION**

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TO WHOM IT MAY CONCERN

This is to certify that this dissertation contains no material which has been accepted for the award of any other higher degree or graduate diploma in any tertiary institution and that to the best of my knowledge and belief, the dissertation contains no material previously published or written by another person, except when due reference is made in the text.

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## **ABSTRACT**

Vocational curriculum development as practised by the Division of Technical and Further Education in Tasmania is the focus of this study.

The specific nature of TAFE, its role in the community and its curriculum development requirements are identified.

These requirements are set against a background of the various methodologies of curriculum development available to the practitioner. An overview of the literature is used to produce a commonly accepted set of curriculum development processes and some orientations or models for considering these processes.

The predominant model used by TAFE in Tasmania, the Instructional Systems Model, is analysed in detail and evaluations made regarding its suitability.

Finally, the study reports on a survey of fifty teachers/curriculum developers who were questioned regarding their views on the Instructional Systems Model and curriculum development requirements generally.

The findings of the survey, along with conclusions drawn

from the preceeding chapters, suggest to the author the need to re-open the vocational curriculum development methodology debate in TAFE and some suggestions as to possible topics are made.

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## INTRODUCTION

Technical and Further Education (TAFE) is a major educational institution with a significant role to play in the social and economic well-being of Tasmania. TAFE has consisted of two major sections, vocational education and training and Adult Education. The philosophy and roles of the two components are quite different and this study will focus only on vocational education. In relation to vocational education, TAFE's function is to prepare people for employment and it does this by offering a wide variety of training programs.

These programs are planned, open to public scrutiny and frequently evaluated. Because the voluntary and varied nature of the student body makes that group difficult to predict and analyse, and the close links with industry require the development of industry specific courses, TAFE vocational decision makers concentrate attention on programs rather than students. Programs are designed and offered and students elect to study them or not.

The aim of this study is to describe and analyse the theories and procedures associated with the development of TAFE programs or courses. Because of the nature of TAFE, with its very wide offerings of courses, its special links

with industry and the large amounts of public money involved, the processes by which its programs are developed must be systematic, observable and open both to public involvement and scrutiny.

There has been relatively little written in this country about vocational curriculum development. Most texts on the subject deal with curriculum development in general, often with compulsory education in mind. There are numerous common features and requirements between vocational and general curriculum development, but there are also special features associated with the development of vocational programs. As a result, the texts consulted in this study fall into two categories: books on the development of general curricula, and books, papers and reports dealing with technical and further education.

The study presents the proposition that current TAFE curriculum development philosophies and practices are inadequate on two counts. First, they do not cater for the whole range of courses developed by such methods, and second, they do not take into account the wide range of possibilities available. It is suggested that current philosophies and practices were adopted with one group of courses in mind, namely the manual trades, and that these philosophies and practices were then imposed upon all courses with less than satisfactory results. It will also



be suggested that the methodologies adopted are unnecessarily narrow and prescriptive and that there are numerous alternative methodologies from which curriculum developers could choose.

The potential significance of the study lies in the possibility of identifying current unsatisfactory practices and pointing to possible improvements. It may be wasteful of human and financial resources to undertake procedures which are either unnecessary or unsuitable. It may also result in outcomes which do not match specified aims. There may be missed opportunities if the wealth and variety of possible options are not recognized.

To pursue the question of the suitability of current practices it is first necessary to attempt to define suitability. This has been approached by identifying the functions of TAFE programs and then assessing the current practices against those functions. For example, if one of TAFE's functions is to train people to be able to utilise the latest technology, the curriculum development procedures adopted have to have ways of, not only identifying current technology, but of accommodating short-term developments in that technology.

The question of the suitability of curriculum development procedures across the whole range of courses is analysed in

relation to the nature of the predominant methodology used and its commonly recognized shortcomings. The different requirements of trade and non-trade courses are considered and the appropriateness of the dominant curriculum development model.

This model is analysed both as a specific TAFE phenomenon, and as part of a wider school of educational philosophy and practices. Its advantages and limitations, as noted by numerous writers on the subject, are considered. The model is also discussed against a background of other possibilities and the suggestion is made that the full range of options was not taken into account when selecting appropriate procedures. Only against this background of curriculum development generally can one evaluate one particular model or methodology.

Once the suggestion has been made that current practices are unsatisfactory, the question of substantiating that claim arises. This was attempted by surveying those who implement the practices; in this case, teachers acting as curriculum developers. Teachers who had undertaken substantial curriculum development tasks were surveyed to ascertain their evaluation of the practices used.

The format of the report is to move from the general to the specific. Chapter one deals with the context of TAFE

curriculum development. It identifies the major functions of TAFE programs in the light of current social and economic demands. The second chapter presents a picture of the commonly accepted procedures for curriculum development. These, based on a survey of the literature, provide the framework for any specific method of curriculum development. From the commonly accepted stages or procedures of curriculum development, the next chapter looks at how these procedures may be organised. These organisations form models of curriculum development and again, there is a rich literature dealing with the topic.

Becoming more specific, chapter four looks at the predominant model used in TAFE curriculum development. This is seen as a version of a more general model with all its advantages and shortcomings, as considered in the previous chapter. The specific model, the Instructional Systems Model, is considered in detail and an attempt is made to evaluate it in the light of both the range of possibilities available and the specified functions of TAFE programs.

The final chapter is a report of the survey of TAFE teachers/curriculum developers. The survey consisted of a questionnaire requiring teachers as curriculum developers to identify and evaluate curriculum development procedures. The argument proposing the unsuitability of current methods

is based on literature, on descriptions of practice and on logic; the empirical survey was aimed at verifying that argument, not presenting a separate case. The findings of the survey, while certainly not conclusive, present both cause for concern and pointers to possible worthwhile future developments.

The format of the dissertation, moving from the general to the specific, from curriculum development in general to vocational curriculum development and current TAFE practices, in particular, is based on a philosophy that the practices of a particular organisation should be evaluated against a background of wider practices. If, as it has been suggested in the study, TAFE is using an unnecessarily restrictive group of practices, those practices need to be compared with the other available possibilities.

## CHAPTER 1

### TECHNICAL AND FURTHER EDUCATION

#### SOME MAJOR ISSUES

The purpose of this chapter is to consider the role and functions of technical education and to identify some of the significant issues with which it is faced at the moment. Only those which have a bearing on curriculum development will be considered.

Technical and Further Education as we now know it is a recent phenomenon in Australia. Modern day TAFE had its beginnings in the Mechanics Institutes of the last century, but it is only in the past twenty years that it has expanded very rapidly to become the biggest educational institution in this country. (Byrne and Kirby 1989).

TAFE's overall role is clear and undisputed. It is to provide vocational education. "The TAFE sector is responsible for vocational education and training". (Pattison, 1989, p35). "Vocational" is to do with work and vocational education is the preparation of students for work. There are three major aspects relating to this role: the economic, the social and the personal. The economic role relates to manpower training needs, the social to the culture and values of the society as a whole, and the

personal to the development of the individual.

There is some discussion about the relative importance of the three aspects, but the order in which they have been noted above is the order of pre-eminence usually given to them. In fact, the personal is often not seen as part of TAFE's role, other than in relation to the other two:

The TAFE system in Tasmania has an important role in the achievement of the economic and social objectives of State and Commonwealth governments.

The contribution of TAFE systems includes:

- . Comprehensive vocational preparation covering a range of occupations through semi-skilled, trade and other skills, technician and para-professional.
- . Access and retraining programs for those who have not had the benefit of a sound vocational preparation or who require new skills.

(Education Department of Tasmania, 1986 P3).

Vocational education, however, can be defined in terms of personal development. "Education activities designed to develop a person's capacity for some prospective career or occupation." (Lavender and Findlay, 1984, p 242).

There is considerable debate, however, regarding what it means to prepare people for work, and this debate is usually couched in terms of education versus training. Part of the reason there is continuing debate is because

TAFE lacks a clear statement of educational philosophy.

There appears to be very little written on the subject of the overall role of TAFE since the Kangan Committee's 1974 Report on TAFE in Australia. That committee, under the chairmanship of Mr Myer Kangan, described TAFE's role in terms of education; education which enriches the quality of life and which prepares people for employment opportunities. Even in the latter context, vocational education is seen to be broader than vocational training. Education includes aspects of personal development, preparation for a wide range of life experiences, abilities to make reasoned choices, to be prepared for a rich and rewarding working life, whereas training has a narrower connotation as being skills preparation for a particular employment situation.

The Kangan report does not deny the existence of these two rather conflicting views of vocational preparation. It says it is a matter of the emphasis given to the purposes of TAFE institutions. There is the industrial manpower view which sees the main aim of TAFE colleges as being to produce skilled manpower for the development of the economy, and an educational and social viewpoint, where the emphasis is on the individual's development of his or her potential. The committee opted for a general rather than a narrow definition of TAFE's role.

It is the view of the Committee that general and vocational education should not be artificially separated. Most forms of general education are vocational for at least some students. Again all vocational education affects the learner as a person and therefore has some general education effect. The implication for vocational education is that training in the narrow sense can be a serious disadvantage for the student, both in terms of personal development and in acquiring the basic understanding that is needed for continuing education, and for acquiring other vocational skills. (Kangan, 1974, p 7,8).

These two viewpoints of TAFE are still of major significance today, some fourteen years after Kangan, and the appropriate emphasis is far from being unanimously agreed upon. "It seems to be the curricular developer who is left to reconcile the often competing requirements of various stakeholders without a guiding philosophy." (Stevenson, 1989 p39). Like many other perspectives in education the emphasis is subject to swings of popularity. In the expansionist climate of the 70's, the emphasis shifted somewhat away from the traditional base of employment preparation to include also a large number of general education programs such as access and personal development programs, whereas today TAFE, like all



other sectors of public education, is being called upon to concentrate more on responding to the needs of the economy and manpower issues (Leo, 1988). The recent report by the Minister for Employment, Education and Training, "Skills for Australia" (1987) urged the TAFE system to place a higher priority on its economic, labour market and industry objectives. TAFE is urged to forge closer links with industry and produce the kind of workers this society is perceived as needing to improve its economic standing in the world economy. In this State TAFE decision makers have accepted this view of its role.

...the priorities of the Division for the triennium are designed to assist in the improvement of the economic base of Tasmania through raising the general level of vocational skills of the population." (Education Department of Tasmania, Triennial Submission, 1986).

TAFE then, has the function of developing a certain kind of relationship with industry. This relationship must allow industry input to the TAFE decision-making process in relation to courses. (Pattison 1987, Hall, 1988).

Many of the important issues facing TAFE today emanate from this question of its relationship with the economy. The most obvious question is what exactly is the nature of that relationship and how is it to be implemented? Associated with that is the question of how TAFE should best respond

to the needs of various pressure groups, and also related is the question of how it can respond to the changed economic, technological and social climate. All of these questions have a bearing on curriculum development, content and processes.

The link between the economy and education and training is being made at both national and state level and is directed at compulsory education in some instances and in particular, at vocational education. "More than any other sector of education, TAFE is uninhibited in expressing the direct relationship between the programmes and the demands of economic life". (Fricker, 1986, p 24). A report from the Minister of Employment, Education and Training (1987) Skills for Australia, identified specific problems with the economy and, while aware of the difficulties of establishing direct links between education, training and the economy, asserts that:

The primary question then is no longer whether education and training are factors in economic performance, but rather what needs to be done to improve their provision, by what means, and which directions and where responsibility for action lies. As a complement to broader macro-economic policy measures, these 'structural' issues will demand closer attention over the next few years if Australia is to successfully negotiate the major

adjustment tasks with which it is currently faced.

(Dawkins, J. 1987, p 4).

The Tasmanian Education Department's 1988 Strategy Plan opens with a description of the setting for education in this State by identifying major trends. The first of these it describes as a change in the nature of the relationship between education and the community.

It has become obvious to many people - educators, politicians and employees alike - that education can and must, make a direct contribution to the welfare and the prosperity of the nation. This means, in effect, that education has a role to play in helping to maintain stability and harmony in society, and in assisting with the re-generation growth of the economy. (Education Department of Tasmania, 1988, p 3)

This statement is reiterating the relationship between education and the society it serves. As part of that education system, TAFE has a function to further the perceived aims of social harmony and stability and to foster economic growth.

The Strategy Plan (1988) goes on to provide details of significant economic factors. The first feature of the current economy, which is usually noted in one form or another, is Australia's balance of trade problem. Australia imports more than it exports, and this has the effect of increasing the national debt. Australia cannot

continue to increase overseas borrowing without a resultant decline in living standards, so the argument goes. Hence Australia needs to produce more at home, both to limit imports and expand exports. This has various connotations for the workforce; it needs to be more skilled overall and more skilled in certain areas such as technology and applied science, particularly computing, and business or entrepreneurial skills. Thus, TAFE, as well as industry has the role of responding to identified manpower needs.

G.W. Ford, Associate Professor of Organisational Behaviour at the University of New South Wales, and author of several influential articles on technology and training, argues that Australia's decline in the international standard of living tables is directly attributable to our neglect of worker's training. Ford, whose views have influenced much of the thinking behind the ACTU's "Australia Reconstructed", believes education and training are at the heart of economic well-being. Ford talks about the 'balance of skills' in order to emphasise the link between a nation's skill-base and its international competitiveness. He says:

In the journey to the high technology of the industrial world of the future, I am convinced that it is the balance of skills that will be critical in determining a nation's comparative advantage, its terms of trade and thus its balance of trade, and finally its standard of living. (Ford, 1984).

The second feature of the economy, which is often noted and is related to the first, is the changing nature of the manufacturing base in this country. In the past, the majority of our export income has come from the production of raw materials. These raw materials are now in abundant supply world-wide. Hence, there is a need to shift from processing of the raw materials to the finished stage within this country. Meanwhile, within Australia, a noticeable decline in the number of workers employed in the manufacturing sector has been apparent for some time and we are now moving into what is being called the "post industrial age". (Ford, 1984). This age is a result of the historical process which has taken us from the pre-industrial economy which was concerned primarily with the extractive industries, to the industrial economy based on the production and selling of goods, to the post-industrial state based on the service or "tertiary" industries. In this latter stage, providing services to people, providing and processing information and manipulating information predominate. Such a shift has very real significance for TAFE and the training of future workers, and is reflected in recent emphasis being placed on the hospitality and information handling areas of training.

The next and related feature of the economy which attracts attention is the speed of technological change. Such rapid change affects much of the economy from the extraction of raw materials to the manufacturing and service industries. TAFE is frequently admonished to keep up with technological change, to retrain displaced workers, to prepare school leavers for the modern industrial scene. This function of training workers in the light of very rapid technological change is one of the most pressing demands made on the system and poses course designers with difficult questions such as how to prepare people for change, what generic knowledge to include, how to predict the future and what processes as distinct from products to include in a program. (Hall 1985).

The social role is given a greater or lesser emphasis according to the needs of the community as perceived by policy makers. Currently, the changing social structure is placing pressures on tertiary education. It is usual in discussions of tertiary education to open with comments about the employment situation. What is usually noted is the high rate of unemployment, particularly amongst young people. A very detailed description of the employment situation and the resultant requirements for education was provided in the Kirby (1985) report. The government's major response to youth unemployment has been to encourage young people to stay in the education system longer. In

Tasmania, this has had most effect on the Senior Secondary Colleges, but TAFE has also needed to respond. One such way has been the provision of places for traineeships. Another effect has been to raise the entry requirements of many courses to Year 12 so as not to compete for students with the secondary colleges. A further effect of the unemployment numbers has been the need to provide many more retraining programs for workers who have been displaced by economic and technological shifts. Hence, it is seen that TAFE has a role to play in alleviating the unemployment problem.

Apart from an increase in unemployment numbers, another social trend which affects tertiary education, is the call for equity. (Dawkins, 1987). The Government has urged institutions such as TAFE, to ensure an equitable representation of traditionally disadvantaged groups in enrolments. These groups are the handicapped, women, aborigines and ethnic minorities. In some instances, this has necessitated the offering of specifically designed courses.

A related issue is that TAFE should provide access to further education to all members of the population. Open access is an historical feature of TAFE harking back to its beginnings as the Mechanics Institutes of the last century, established by middle class liberal-minded businessmen to provide basic education and training to the young working

people of the industrial age. (Wheelright, 1965). This tradition of open access is now in conflict with the employment demands of credentialling, and TAFE courses are struggling to accommodate the two conflicting demands. This has resulted in a degree of uncertainty in that, on the one hand, TAFE is instructed to respond to the needs of industry and hence produce students who hold recognisable awards, and on the other, to provide access to those people considered disadvantaged in this society. For many of these people educational programs with strict assessment procedures which are necessary for the granting of awards, are not of primary importance.

This conflict between economic and social roles is apparent in such documents as TAFE's Triennial Submission 1988-1990 by the Tasmanian Division of Technical and Further Education, 1986, where it states:

In discharging its more recent responsibilities in providing access for the disadvantaged, the public profile of TAFE has often concentrated on these activities to the exclusion of core activities. This is especially true within the advertising of TAFE programs. It is contended that these new activities have clouded the public perception of the TAFE systems. This image was previously quite distinct, with a concentration on apprentice and technician training.



However, by concentrating on what it does best, that is, providing technologically current and appropriate vocational education, the TAFE system will be more able to assist those groups who are unable to gain access to skill training through normal channels. By clearly promoting its major role as providing technologically current vocational education for operative, trade and other skills, technician and para- professional occupations, TAFE will be more able to assist the disadvantaged. (Education Department of Tasmania 1986, p 6).

A further trend to which TAFE has to respond is the demographic one. (Fricker, 1986). With our ageing population there is going to be an increasing demand for the re-training of existing workers. This demand is strengthened by moves towards industry restructuring whereby all workers are demanding career paths and associated training which allows them to move from base grade employment through to management. Such demands will affect greatly the nature of programs to be offered by TAFE.

How all of these, at times competing, demands are to be met, combined with the lack of a clear statement of aims, produces a degree of uncertainty. (Brown and Macdonald, 1981). These ambiguities in TAFE's aims are often

reflected as curriculum issues. If there is a degree of uncertainty about aims, there will be uncertainty also about what content should be included in an educational program. If TAFE's role is vocational training in the narrow meaning of the term, a curriculum will include only specified job skills. If, however, that role is interpreted as preparation for all employment, the content of a program must include more general skills and knowledge. If vocational education is also aimed at providing an opportunity of further education for disadvantaged people its programs will reflect the needs of that particular client group.

The values and beliefs held by curricular developers designing TAFE courses seem to vary from one program to another....Different philosophies seem to underpin... varying categories of courses. For example the requirement to satisfy certain critically important skill needs of industry seems to be of a higher priority in some courses than improving students' problem-solving abilities. On the other hand, the need to contribute to the artistic and creative development of individual students seems to be more important in some course areas than the productive use of such skills for society as a whole. (Stevenson, 1989 P39).

So suggests John Stevenson, formerly Head of TAFE Curriculum Section, Queensland, now Head, Department of

Adult and Vocational Education, Brisbane College of Advanced Education. Stevenson goes on to say that these differences leave unanswered fundamental questions such as "Who is TAFE's primary client?" and "Which needs of society are paramount?" (p39).

In summary, TAFE's role can be divided into personal, economic and social responsibilities. Economically, TAFE has the major function of training/educating people for work. More specifically this requires TAFE to:

- develop a relationship with industry and commerce which allows the latter to have significant input to the curriculum decision-making process
- be responsive to the fast-changing training requirement of industry and commerce
- increase the general level of economic productivity of the community
- be responsive to identified manpower training needs.

TAFE's social role is also related to economic concerns. It is seen as:

- increasing the chances of employment for all members of the community
- reducing youth unemployment
- providing access to further education to disadvantaged groups

- providing access to basic vocational education to those considered unsuccessful in compulsory education (a second chance).

In relation to individuals TAFE may provide an opportunity for:

- the development of employment skills
- enhancing one's personal development in non-employment specific areas
- improving one's employability.

All of these considerations must be taken into account in the curriculum development policies and processes.

## CHAPTER 2

### CURRICULUM DEVELOPMENT PROCESSES

Whereas the previous chapter attempted to identify the functions of TAFE and the resulting requirements relating to programs, this section will identify the curriculum development processes which may be available to meet those needs. Although curriculum development as a subject of enquiry is relatively new, there is a body of literature which generally agrees as to what are the main elements and processes. (Taba, 1962; Wheeler, 1967; Lawton, 1978; Marsh and Stafford, 1984; McNeil, 1984). Before considering the practices which TAFE has adopted it is necessary to identify the range of options available.

By curriculum development is meant the processes and procedures by which teaching/learning programs are produced. Curriculum development is a purposive activity; it is forward looking and concerned with producing valued change; change in students and perhaps change in society. What that change might be depends on theories; theories of man, of society, of knowledge. The direction of the valued change can be classified as emanating from theories about the individual, about society and about knowledge.

Theories about the individual encompass a wide range of

views but all maintain that an understanding of the nature of man will provide direction to education. If man is seen as a rational being, the purpose of education is to produce a person with the capacity to think and act rationally. The emphasis would be on the development of cognition, of powers of thought. Such a curriculum usually involves language and concept development, problem solving skills and critical analysis. If man is seen as basically a feeling being, education is about developing one's self-concept and the ability to satisfy one's needs. However, if man's relations with his fellow man is the basis of his humanity, education must concern itself with enhancing those skills which enable him to relate effectively - understanding, co-operation, communication. Theories about the nature of man provide the most basic element of curriculum development, the aims.

Because of its highly practical nature, TAFE gives little attention to theories about the nature of man. While such philosophising may not be necessary, some considerations about the nature of man as a worker might be a useful starting point. Such theories might provide a unifying philosophy which TAFE currently lacks.

However, these aims may also arise from theories about society. The individual may not be the most significant factor in our lives, but the society in which we live. A

society has particular requirements and these may be the basis for the public education system. A society has certain economic requirements such as literate, politically conscious individuals; it has certain cultural requirements such as a populous with common stores of knowledge, values and problem solving repertoires. The aim of education may be perceived as being the furtherance of the particular society which it serves. As has been suggested in Chapter 1, it is largely theories about society, and in particular about the economy, that have produced TAFE's aims.

Finally, educational aims may arise from theories of knowledge. It may be considered that there is certain knowledge, certain ways of knowing the world that all people should come to know and value. These bodies of knowledge have distinct concepts and ways of knowing which, when grasped, allow an understanding of the world. The knowledge is intrinsically valuable and does not have to be justified by reference to the individual or society. The aims of education then would be expressed in terms of providing knowledge of the disciplines.

Whatever the aims of education, and the philosophy from which they arise, they are often interpreted in the light of psychological theories about the growth, needs, interests and learning attributes of individuals.

The psychology of education offers information on learning, motivation, the selection of learning experiences, teaching methods, personality and individual differences to name only some areas (Biggs and Telfer 1981). Psychological theories are like screens through which aims are sorted and enacted. These theories provide a means rather than an end. "To plan a curriculum, it is necessary to have some 'theory' of how learning takes place and which conditions make for the most efficient learning" (Ing in Lawton et.al. p 61). Little research has been done in TAFE with regard to the nature of learning in the field of vocational preparation. There is scant knowledge about skills acquisition, transferability of knowledge and skills, and any special qualities of adult learners. While the latter point does often receive mention, it is either to do with the sociological aspect of adults as learners or to make general claims which are often unsubstantiated by research. The reasons why vocational education institutions have not conducted major research are speculative, but it is not difficult to identify areas which would benefit from study.

Either before, or after, the establishment of aims, some study of the actual educational setting must be done. This is usually referred to as a situational analysis and may be a major undertaking. Nearly all discussion of education in general, or specific aspects of it, such as the



curriculum, open with some type of situational analysis. This may be on the macro-level of the nature of society as a whole such as in the Education Department of Tasmania's policy statement Secondary Education: The Future (1987) or at a more detailed school level such as in Goodlad's A Place Called School, (1983).

The situational analysis is usually divided into external and internal factors. Most writers present a list of external factors which are considered to have a bearing on educational goals and curriculum decisions. Brady (1983) quotes Skilbeck's (1976) list:

1. Cultural and social changes and expectations. It is this category that includes the current comments about the need for more skilled workers, for children to stay at school longer, for everything from driver education to sex education to be taught, for girls to study trade courses.
2. Educational system requirements and challenges. Here fit all the various policies produced by the educational authority; the various structures and power hierarchies which exist, the established practices such as examination requirements, attendance patterns, use of physical space and established and accepted theories on procedures such as the development of curricula.
3. The changing nature of the subject matter to be taught. There is on-going analysis and questioning of

the subject matter of education. On the one hand is the upgrading of specific subject content such as that which results in a new science program for primary schools, and on the other an attempt to re-think the whole foundation of the selection of subject material which may result in a cross-disciplinary approach to teaching about environmental matters, for example. As well, there is now an almost constant demand for schools to include new subject areas into the curriculum such as Japanese language, entrepreneurial skills, women's studies, and computer training.

4. The potential contribution of teacher support systems such as staff development, specialist support staff. These may be very significant, or almost non-existent.
5. Flow of resources into the school. This is very much a political issue of government priorities, but affects vocational education enormously because of the high cost of mounting programs with large equipment requirements.

All of these factors are of considerable importance to TAFE which is acutely aware of its role in relation to society generally, and the workforce in particular. There are additional external factors which affect TAFE's activities such as input from various groups which have a stake in vocational education such as unions, other tertiary institutions, professional associations, employer bodies and licensing agencies.

The first of the internal factors to be considered in a situation analysis, according to Skilbeck, (1976) is the aptitudes, abilities and defined educational needs of the students. As Brady (1983) says "Of all the factors - both external and internal - curriculum planners are most likely to consider the students first" (p 20). We must remember that Brady is talking about school-based curriculum development with teachers making the curriculum decisions. It is only to be expected that the classroom teacher is going to have the characteristics of pupils uppermost in his/her mind when planning educational programs. Primary teachers, possibly more than secondary and tertiary teachers, are likely to put student needs before all other considerations. As one progresses up the age scale other considerations such as subject matter tend to come to the fore.

Interestingly, in TAFE, very little time is given to a consideration of student characteristics. Some basic assumptions about the nature of adult learners are taken for granted, but little or no serious study is given to characteristics of the various diverse student groups undertaking TAFE study. One of the few groups which has been considered, and then not necessarily by curriculum developers, is apprentices. Many TAFE courses have very high attrition rates and a study of the needs, expectations, learning styles and abilities of enrolling students may prove useful in changing this.

The second internal factor to be considered in the situational analysis is teachers; their values, attitudes, skills, knowledge, experience, strengths, weaknesses and roles. The success of any curriculum development depends largely on the teachers who implement it. Teachers' skills and attitudes need to be considered in the planning stage of a curriculum, and their motivation and commitment in the implementation phase. The history of education is littered with grand curriculum schemes which somehow went wrong in the implementation.

Teaching styles also need to be taken into consideration in the planning phase. It is of little benefit in designing a primary school science syllabus based on the discovery method if teachers who are to implement the program are not capable and comfortable with the required method of teaching. Possible staff development requirements need to be identified in the planning phase of the development. As with the characteristics of students, those of the teaching staff are given scant regard in the TAFE curriculum development process. If they are considered it is as part of a secondary process, coming after program development, not before.

School ethos and political structure is Skilbeck's third internal factor. This is what Brady calls the "climate"

of an institution. The importance of this element is largely determined by the nature of the curriculum development. If it is school-based the ethos will be important, if it is centrally developed then individual school climate is less likely to be taken into consideration. Such is the case in TAFE where it is generally overlooked in planning or evaluation, and may be a significant factor in such occurrences as girls' low involvement and performance in non-traditional areas.

Material resources are one of the crucial factors in that most innovation requires additional resources, even if only for staff development. This is an area on which TAFE does place a great deal of importance. Various subject areas have either great or lesser demands on specific resources but the subject which requires no specified resources apart from a teacher and a classroom is rare, indeed. The resources currently available in terms of buildings, staff, books, technological equipment, and those likely to be supplied, must be taken into consideration when planning a curriculum innovation. Of course, in some instances a curriculum innovation can force an education authority to provide the equipment. The demand for computer literacy, in many cases, preceded the supply of the equipment to the school. The reverse of this situation is that a piece of equipment has become available and teaching programs have been developed to utilise it. A new school gymnasium or

music room could be the impetus for new learning programs.

The problem of resources is a major consideration in TAFE. (Hayton, 1988). It is not that TAFE is particularly under-resourced, simply that equipping its teaching program is so expensive. Six apprentices in metal fabrication may requires lathes worth hundreds of thousands of dollars. Industrial sewing machines, word processors, pottery kilns, tractors, glass houses, solar panels, hair dryers, metal presses, air compressors, computers and their software, printing presses, and so the list of basic equipment goes on.

Not only is there the problem of equipping TAFE colleges, but that of keeping up with changes in technology. The requirement to do so has a marked impact on curriculum development. If the modern equipment is not made available it may be that TAFE can only teach the theoretical components of a course and leave the application to on-the-job training. Other alternatives may be the sharing of equipment with industry or abandoning the proposal altogether.

The final factor to be taken into consideration is perceived and felt problems and shortcomings in existing curricula. Very few curriculum developments are totally new; most are seen as an improvement on what already exists. The shortcomings may be felt by the teachers, the

parents of students, the employers of students and possibly the students themselves (though how much notice is taken of their views is debatable). At any point in time there is probably going to be questioning of a particular aspect of an education system's teaching program. In the U.S.A. in the 1960's it was the science program, in Australia in the 70's it was the social sciences, at other times it is the language or the mathematics programs.

The situational analysis is very important in TAFE and many papers have been written about it. (Anderson and Jones, 1986; Clover and Goode, 1982; Dixon (undated); Guthrie, 1987; Khan, 1983). However, the usual TAFE analysis is an abbreviated version according to Skilbeck's categories. The feature which receives most attention is the nature of the job which the trainee will perform when he/she joins the workforce. In fact, TAFE does not talk about a situational analysis but an occupational, or job, analysis.

Throughout Australia a significant amount of energy, finance and time is being expended by TAFE authorities in the analysis of various occupational areas. The purpose of these projects basically is to establish the needs of industry for the training of its recruits in TAFE colleges. (McBeath, 1986, p 1).

The reason for this emphasis on occupational analysis is that from it the curriculum content is derived. Various lengthy procedures have been developed to conduct a job survey. Massive nationwide surveys are not as common now as a few years ago, but they do still take place. At the moment, the metal trades are going through such a process. Typically, major employers will be surveyed by questionnaire on a national basis and then small groups of people operating in the field will be brought together for "brainstorming" sessions. The result will be list of competencies for people currently working in the field. The other aspect of the situational analysis which receives considerable consideration is, as stated previously, equipment requirements. The shortcomings of such a limited context analysis which concentrates on current practices in the workplace are fairly obvious, but will be considered in detail later in the study.

The end result of a situational analysis should be some reasonably specific curriculum objectives or goals; something more specific than aims. They may be short term, long term or both. They may relate to a particular area of a school's program or to the overall one. They may refer to outcomes, or to processes or both. The competencies listed in the Tasmanian Education Department's document Secondary Education: the Future are fairly general goals or objectives.



Hunkins (1980) provides some distinctions between aims, goals and objectives.

An aim is a general statement which provides both shape and direction to more specific action designed to achieve some future product or behaviour.... Aims serve as starting points, as statements of ideals, as aspirations that express the views of educators, administrations, students and lay citizens.... (They) serve a visionary function.... (They) should be few in number and clearly stated.... (They) should deal with all dimensions of schooling: intellectual, social, personal and productive. (1980 p 195).

Typical examples of aims are: "developing self-realisation in individual learners; providing individuals with skills and understanding requisite for productive employment" (Tyler 1968 quoted in Hunkins, p 196).

Goals are statements of desired outcomes generated from the aims, according to Hunkins. Examples of goals would be 'to develop in persons critical thinking and decision-making skills'. More specific still than goals are objectives.

While goals deal generally with anticipated ends, objectives deal with tactical behaviours and intermediary end results that facilitate the attainment of anticipated ends. (Hunkins 1980, p 199).

An example of an objective would be "Students will, after reading a report on energy use, develop a plan for reducing our dependence on fossil fuels". (Hunkins 1980, p 200).

Somewhere in the process of curriculum development, content has to be selected. The objective guides the selection but does not specify it. An objective such as 'to identify the distinctive characteristics of drama' does not specify which dramas should be studied or, in fact, how the objective is to be achieved. Perhaps the aspect of curriculum development which usually receives most attention is the selection of content. Curriculum development often involves subject specialists and it is always more difficult to decide what to exclude than include. How then is a selection to be made? How is one to answer such questions as:

Why this content rather than another?

Is this content worthwhile?

What is relevant?

What is useful?

Which is more important - facts or concepts?

There have been many suggestions as to criteria by which to judge content. Hunkins (1980) suggests the following:

- significance or essentialness,
- durability,
- validity - authenticity, that is, it is not obsolete, it is in keeping with the aims and goals,

- interest - that it will generate and broaden student's interests,
- utility - for example, for effective functioning in the overall society,
- learnability,
- feasibility - can be taught in the time and resources allowed,
- appropriate to the developmental level. (pp 221, 222).

Brady's (1983) criteria are similar, but have some additions such as:

- consistent with social reality. This criteria, which emanates from Taba (1962), means that subject matter must attempt to provide students with means by which they can understand and interpret society.

Kevin Blachford (1986) has a slightly different orientation in that he talks about the selection of learning activities. However, in a process oriented curriculum the learning activities may well be the content. One teaching-learning activity is considered better than another says Blachford, if it:

utilises concrete experience abilities -

- involves course participants with 'real world' situations, objectives, materials,
- involves course participants in identifying problems or issues from various perspectives or points of view,

- involves access to ideas, processes, activities or situations not otherwise encountered by course participants,
- places course participants in active roles throughout,
- is relevant to the expressed purpose of course participants themselves.

utilises reflective observation abilities-

- involves a risk of success or failure,
- requires course participants to reflect on their own situation, choices, plans and actions and in terms of personal values, feelings, beliefs and experiences.

utilises abstract conceptualisation abilities -

- involves the integration of studies,
- permits course participants to make informed choices in planning and in carrying out these plans,
- involves the application and mastery of meaningful rules or standards,
- can be completed successfully in different ways.

utilises active experimentation abilities -

- explores the consequences of existing activities or proposed activities and encourages the making of technical and value judgements regarding plans, events and outcomes,
- involves course participants in reworking or improving their initial efforts,

- involves course participants in examining or applying in a new situation an idea, principle or skill which has been previously studied or developed,
  - contributes to a balanced overall course of study.
- (p 7).

Tyler (1949) provided a more succinct list of criteria. Learning experiences should:

- provide an opportunity for students to practise the kind of behaviour implied by objectives,
- lead to student satisfaction,
- be feasible as far as the students are concerned,
- contribute to a number of desired outcomes.

It is at this level of the selection of content and learning experiences that protracted debate often takes place. This is because participants in the decision making process may place emphasis on different criteria. One may consider relevance to be of the greatest importance, while another may consider interest to be of the most significance. Generally all the criteria are considered important by TAFE, with emphasis given to validity, utility, essentialness and feasibility, with less regard for interest and, perhaps, durability. TAFE also has some specific criteria of its own such as portability.

The development of teaching methodologies and learning resources is usually the next stage. The production of learning packages and resources is an activity which usually requires a large expenditure in time and money. The selection of appropriate teaching methods, while often considered of less importance than the selection or development of resources, is ignored in the curriculum development process with potentially disastrous results. What can happen is a mismatch between objectives, content and teaching method. For example, an objective in a Child Care syllabus may be to produce in students an attitude towards children which respects the latter's autonomy and encourages independence. If such an objective is taught by means of authoritarian teacher-directed instruction, results may well be other than what was desired. Brady again provides a comprehensive list of criteria for the selection of teaching/learning methods. His list of principles is based on that of Wheeler (1967).

- Learning is active rather than passive, and the student should be involved actively.
- Learning is more efficient if the student understands what he/she is learning.
- Learning is affected by individual differences which are not innate and socially acquired.
- Learning is strongly influenced by the motives and values of the student.
- The learner is more likely to generalise and discriminate if presented with a variety of learning experiences.

- Learnings are multiple and simultaneous, even if only one outcome is the focus.
- Learners react in different ways to the same learning situation.
- Learning is more effective when immediate reinforcement is provided.
- Learning is increased when responses to a class of situations are frequently repeated.
- Learning is transferred when the similarity of different learning situations, and the possibility of transfer are indicated. (p 118)

The situation in TAFE is interesting in that the curriculum development process is somewhat disjointed. A curriculum plan is produced by a team of teachers and curriculum specialists but this plan does not include implementation methodology or evaluation. At times suggestions are made as to appropriate teaching strategies but, on the whole, it is assumed that the methods of implementing a curriculum proposal are the prerogative of the individual teachers involved. Hence, there is a weak link in TAFE between curriculum planning and staff development. Many curriculum proposals entail whole new teaching methodologies and a curriculum document, one would have thought, should indicate appropriate methods.

The next decade will require from TAFE a greater integration of the developmental, implementational

and evaluative aspects of instructional. The currently used sequential processes of syllabus design, instructional design and evaluation will be inadequate (Stevenson, 1989 p48).

Mention was made above of evaluation. This is, in itself, an area of major study. All curriculum models emphasise the element of evaluation and most would stress that curriculum development is perceived as a self adjusting system. Many diagrammatic representations have directional arrows leading from evaluation back to planning and implementation. There are some basic issues which must be addressed in regard to curriculum evaluation. Firstly, the purposes of the evaluation must be made clear. Is the evaluation being done for the sake of accountability or to aid planning? Both are legitimate; one is backward looking, one forward. Aligned to this issue is the one of the audience for whom the evaluation is to be conducted. Next, might be the question of who is to conduct the evaluation. What methodology to use is a major question and libraries could be filled on instructions on how to design questionnaires, conduct interviews, analyse surveys, use video filming, etc. The format and style of the presentation of results needs to be considered and probably the most important question of all is what to do with the results. In fact, evaluation is a system within a system. Malcolm Bell (1982) speaks of evaluation as having a



planning phase, a doing phase, and certain outcomes. Interestingly, TAFE usually considers evaluation as a discrete activity not only carried out after planning and implementation but not part of the planning phase at all. Even though curriculum models usually incorporate evaluation as part of the development phase; that is, the system is circular, this does not tend to happen in TAFE. After a program has been running for several years a major evaluation may be undertaken. The result of this may well be a total re-think of the program. Evaluation is not built into a curriculum design.

In fact it may be true to say, that in TAFE, the attention in curriculum development is focussed on the elements of the systems, and only a selected few, rather than their inter-relationships. A lot of effort is put into a task analysis and also into writing objectives, but the link between the two is neglected and weak. As stated previously, the link between the planning and design phase and the implementation phase of curriculum development in TAFE is disjointed, largely because different people are involved in each stage. Evaluation, if conducted at all, tends to be a separate later-stage activity. The overall process of curriculum development is not relational. Identification and manipulation of the variables is seen as the major activity, not the understanding of the possible

relations between the variables. It may well be that this is how TAFE sees knowledge and teaching/learning, or it may be that the model of curriculum development adopted has imposed certain constraints on the process.

### CHAPTER 3

#### MODELS OF CURRICULUM DEVELOPMENT

The study of curriculum development has come to be dominated by arguments concerning the appropriateness of various theories or models (Bobbitt, 1918; Tyler, 1949; Eisner, 1974; Stenhouse, 1975; Lawton, 1978; Kelly, 1982; Marsh, 1986; Blachford, 1987). Zais (1976) describes a curriculum theory (or model) as:

a generalised set of logically interrelated definitions, concepts, propositions, and other constructs that represent a systematic view of curricula phenomena. The function of curriculum theory is to describe, predict and explain curricula phenomena and to serve as a policy for the guidance of curriculum activities, (quoted in Marsh, 1986; p 21).

A model is a theoretical construct used to describe and guide behaviour. To some extent it is a generalisation from what happens in reality described in terms of philosophical, social and psychological theories. It is drawn from behaviour, influenced by theories and then used to guide further behaviour. Amongst others, there are models of man, e.g. as a Rousseau primitive or a Hobbsian

brute and models of learning e.g. Skinnerian behaviourism. Models can be judged on various grounds; how ethical they are, how good they are at aiding prediction, how useful they are for guiding action. Black (1962), when talking mainly of scientific models says the making of models is guided by the "abstract aim of reproducing the structure of the original" (p 222). There will be correspondence between the structure or pattern of relationships the model embodies and those embodied in the original.

Black goes on to say that there are very real dangers with the use of such models.

The risks of fallacious inference from inevitable irrelevancies and distortions in the model are...present in aggravated measure. [Such models] furnish plausible hypotheses, not proofs.

(1962, p 223.)

Stoughton (1981) enumerates some of the possible disadvantages of the use of models.

1. Over-generalisation
2. Logical fallacies
3. The relationships between variables may be incorrect
4. The constants chosen may be wrong
5. That it is not validated against reality
6. The error in approximating reality may not be apparent
7. It may be diverting useful energy into non-productive activity.

8. It may become confused with reality. (p 29)

Such warnings are even more relevant when using models in the social context. In fact, says Black, the use of "models" in relation to social systems often means no more than "theory". However, such models or theories may be of use. "The 'model' is conceived to be simpler and more abstract than the original." (1962, p 223). This allows a distancing from reality, an analysis of an overview.

The types of models which are used to describe curriculum development are imprecise and it may be debatable whether it is correct to call them models at all. What they really are is a list of significant elements, a proposed relative emphasis of these elements and a proposed order of sequencing of the elements.

One common advantage of the use of models is that they can often be represented visually and this may aid analysis. On the other hand, their use is grossly prone to oversimplification. Black quotes Braithwaite (1953): "the price of the employment of models is eternal vigilance". (Black, 1962; p 235). This should be kept in mind when dealing with educational models. Part of the suggestion of this paper is that TAFE has fallen into the trap of neglecting the limitations of the use of models in that it has adopted one model of curriculum development and ignored

the richness of choice which is in fact available to it. This danger is obviously commonly recognised.

Model users often lack adequate critical awareness of the limits of the applications of their models....The misuse of models can produce a close-mindedness to the rich possibilities of effective and worthwhile practices within the education process. (Yaxley and McCann, 1989, p54).

Models of curriculum development are extrapolations of what happens in the real world, in some cases influenced by theories of education. They do not claim to reflect reality but to be interpretations of what does happen or could happen. Like models of the atom, they do identify elements and pose relationships, but they are dealing with different categories of existence. There can be numerous models of curriculum development and there is no sensible way that any single one can be proven correct or true. What each can claim is to be workable and to produce a valued outcome.

Certain models of procedure are closely associated with systems theory. Systems theory, which is more commonly referred to in the world of industry, has been widely applied to education. A system is viewed as a whole operating complex with various interacting parts. Systems theory looks at the inter-relationships between the

variables. Systems have inputs and outputs, are usually viewed as circular rather than linear and are an organised complex whole; an assemblage or combination of things or parts forming a complex or unitary whole. Systems theory is problem-oriented and concerned with efficiency.

Education is regarded as a 'soft' system in that all the outcomes cannot be predicted. In soft systems it is important to have participants involved; defining the problem, suggesting improvements. Also soft systems are value laden; options entail value judgements. (Education Department of Victoria, 1980).

What the various models of curriculum development identify, is not mainly differences in elements but in the details of the composition of the elements and the inter-relationships between them. A model does not provide answers to questions about what to teach, how and when, but will provide a methodology for arriving at answers.

Models of curriculum development can be categorised several ways with the more common methods being based on the processes or practices identified by the model or the ultimate aims inherent in the model (Marsh, 1986, p 86). These two often interrelate. Concentrating on practices, models are usually described as technological or interactionist. When looking at aims or underlying

philosophies various categories can be produced, such as behaviourist, social reconstructionist, humanist. This study is mainly concerned with functions and processes, hence will concentrate on examining the technological model and its alternatives.

Associated with curriculum as technology is the belief that education is an activity which can be clearly defined, analysed into its component parts, the relationship between these parts specified and a high degree of predictability achieved. This view is based on a systems view of the world, and at its extreme a factory analogy with inputs and outputs is used. The model emphasises predictability, accountability and efficiency. Technological models are based largely on the work of Bobbit (1918) and Ralph Tyler (1949) and are also known as objectives models because of their outcomes orientation. (Kelly, 1982).

An alternative approach is one which is based on the belief that education is one of those human experiences which cannot be analysed like a car production assembly line because humans do not act predictably and, anyway, there are too many factors interacting at any one time to be able to identify the elements, let alone the outcomes. Education is to do with relationships between interacting individuals in various contexts. No two individuals will react the same as any two others and no two contexts will



be identical. Not only are there elements in developing a curriculum such as selection and sequencing of content but also elements such as the expectations of the students, the ethos of the institution, the nature of the relationship between student and student and between student and teacher. These elements are crucial to the education of students but are difficult to identify and analyse. The curriculum is a result of the interactions of all the factors involved and cannot be "mapped" out beforehand.

One model which is perhaps furthest removed from a technological model is the negotiated or interactionist curriculum. Students and educators together decide what the aims and methods of the learning process will be, and the outcomes are an emergent result of these negotiations. An interactionist model is not a negation of a model, it identifies major significant factors and proposes ways in which they interrelate. These interrelationships may be very complex and diagrammatic representations usually consist of numerous multi-directional arrows indicating a complex network of relationships. There is often no set starting point and no pre-specified outcome.

Another model which could be placed somewhere along the spectrum is the process model (Bruner, 1966; Wheeler, 1967; Stenhouse, 1975; Marsh, 1980). Such models tend to emphasize the development of certain capacities in students

relating to general methods of coming-to-know and coping with the world. Wheeler (1967) talks of the development of recall and comprehension abilities, of feelings, sensitivities, beliefs, attitudes and values, and the development of intellectual, social and psychomotor skills (p 100). He emphasises the process of coming to know rather than the content of what is known. For example, processes of scientific enquiry may be more important than the study of a particular aspect of science. Scientific enquiry can be learned through the medium of many fields of science. The focus is on the development of the capacity, of the competence, of the behaviours which transcend particular subject boundaries. Curricula within this model often use terminology such as problem-solving, investigating, co-operating, sharing, communicating, examining, discovering, practising, as goals or objectives.

One exponent of such a model is Lawrence Stenhouse

...I have considered the process model of curriculum design and development, arguing that, largely on logical grounds, it is more appropriate than the objectives model. (Stenhouse, 1975; p 97).

Stenhouse's argument is that the appropriateness of Tyler's objectives model is limited. The objectives model may be satisfactory for areas of learning which emphasize

information and skill but is unsuitable in the areas of the curriculum which centre on knowledge and understanding. Stenhouse asks the question: If content is not selected according to fulfilling objectives are there any other grounds on which it can be selected? Paul Hirst (1965) suggests one way in his forms of knowledge argument where certain bodies of knowledge are claimed to be worth knowing for their own sake. But, says Stenhouse, content can be selected on bases other than objectives and the forms of knowledge or disciplines. A concept of Peters (1959), which Stenhouse finds useful is 'principles of procedure'. He admits that the phrase is difficult to define but suggests that it provides a basis for curriculum development.

If a curriculum which is a plan, a proposal, is not to be expressed in terms of expected student outcomes, how might it be expressed? Stenhouse goes back to Tyler's work and suggests that he was mistaken in abandoning statements of teacher activity and content selected. It is quite legitimate to use these two descriptors. To provide an example he quotes the curriculum, Man: A Course of Study, which was an American social science program closely associated with Jerome Bruner. The goals of this program are expressed in varying terms; some associated with what the teacher should do: "to initiate and develop in youngsters a process of question-posing" (the inquiry

method)" (Stenhouse, 1975; p 97). The goals centre around the process of learning rather than the product. These principles of procedure or processes of learning, along with some specification of content and basic concepts constitute the curriculum for Man: A Course of Study. There is no need or desirability to attempt to pre-specify student outcomes, though of course, students will undergo change as they learn, suggests Stenhouse. Many of these valued changes are not be to be anticipated in detail.

The power and the possibilities of the curriculum cannot be contained within objectives because it is founded on the idea that knowledge must be speculative and thus indeterminate as to student outcomes if it is to be worthwhile (1975, p 92).

Process models concentrate on 'principles of procedure' such as research, discussion, reflection, opinion formation, questioning, problem-solving, clarification.

The role of the teacher in the process model is critical. This is interesting because to some extent there exists a contradiction. The teacher on the one hand is seen as a researcher, another learner along with the student rather than as an authority; while on the other, Stenhouse says that the greatest strength and weakness of the model is its reliance on the teacher. This reliance comes about largely

because of the role the teacher plays in student assessment. Unlike the objectives model where there are external criteria for assessment, the process model relies on the teacher as a critic. The teacher must be able to judge the worth of a student's understanding and performance. To achieve the required degree of teacher capability in both selecting processes and content and appraising students, Stenhouse advocates a continuing process of teacher development. If teachers are crucial to this curriculum model then they must be nurtured. The process model is committed to the professional development of teachers.

A final point about the process model, or more particularly about Stenhouse's views on education, is that the curriculum is seen not as an ultimate blue-print but a negotiable proposal. The whole field of educational theory, he suggests, is highly speculative and while such theories are useful, one must be wary of adopting them as a basis for policy. We must remember that theories such as the objectives model are not things, but are conceptual schemes. The process model, with its less clearly specified goals and stated reliance on the teacher is less likely to be raised above its status as a proposal and emanated to that of policy. Education, says Stenhouse, is such a complex process that we cannot hope to come up with the right solution. What we can do is focus on problems

and try out responses to them. The curriculum is constantly undergoing research, evaluation and amendment.

Because of its pre-eminence in TAFE this study must eventually come to a closer look at what is known as the objectives model of curriculum development. Tyler's (1949) approach to curriculum development has had a profound effect on the subject and many later discussions are either support for, or antagonism to, his objectives model. Curriculum development theories and processes used in TAFE in Tasmania and all other states are based on the work of Tyler and the subsequent exponents of an objectives model. For this reason the bulk of this chapter deals with an analysis of this approach.

Tyler says that there are four fundamental questions which must be answered in developing any curriculum. These are:

1. What educational purposes should the school seek to attain?
2. What educational experiences can be provided that are likely to attain these purposes?
3. How can these educational experiences be effectively organised?
4. How can we determine whether these purposes are being attained? (Tyler, 1949; p 1)

Education, above all else, he says, must be purposive.

While few would argue with this claim, the nature of those purposes is a fundamental question of debate and it may prove useful to digress somewhat at this stage and pursue the issue of purposes more fully.

Education is expensive, time consuming, in this country compulsory, and seen by the community to be an activity of extreme worth. The only two possible justifications for such an activity would be its intrinsic value or its valued outcomes; it is either an end in itself or a means to an end. To argue that educating (not education) is a valued end in itself one would have to concentrate on the activity itself. One would need to maintain that those activities necessarily associated with educating are valuable in their own right. This would include activities such as co-operating, reading, analysing, problem-solving, sharing, understanding, coming to know, in short all those activities we call learning.

R.S. Peters and John Dewey express the opinion that education is not about ends. Peters (1966) suggests that the aims of education must be embedded in what is valuable in education itself, not imposed upon it from outside. If education is worthwhile it is because of its intrinsic nature, not because of the production of results relating to something extrinsic, such as getting a job. Kieran Egan (1988) suggests that education lies in the qualities of the

engagement with knowledge, rather than knowledge itself.

How is one to select content for these worthwhile activities? According to Peters (1966) it is possible to select content for a curriculum without any reference to student outcomes or ends of any kind other than that of representing the forms of knowledge; that is their structure, key concepts and procedures. The study of science, history, literary appreciation are worthwhile because of intrinsic qualities such as they illuminate other areas of life and contribute to the quality of living (p 159). It is worth noting here though, that Paul Hirst (1975), while espousing forms of knowledge, insists on the necessity of objectives. The structure of the knowledge is the means to an end, not an end in itself. Hirst goes on to say that in attempting to justify which processes and activities are educational we are forced back onto an assessment of what they bring about and are in fact back to a set of objectives once more.

If these activities are primarily ends in themselves one may ask why education is undertaken in a concentrated form for a particular period in a person's life. Other activities which we regard as intrinsically worthwhile such as listening to music, helping those in need, or rearing children, we undertake whenever the situation allows. If an activity is worthwhile, it should be worthwhile at any



stage in one's life.

Despite the fact that continuing education is becoming more widespread, it remains that compulsory education is limited to the early years of a person's life. It would be difficult to argue that those activities associated with educating are only worthwhile to the young. What, in fact, is usually argued is that those activities are imposed on the young as a preparation for the rest of their lives. Certain individuals, usually adults, will undertake an education program because of its intrinsic worth, but the public expense allocated to compulsory education is done so on the basis of results to the individuals so educated and in benefits to the community as a whole. Public education is a means to an end. This is illustrated by the use of terminology such as the 'aims' of education. We do not usually speak of the aims of listening to music, to eating a meal, to helping an old person across the road, to going for a ride on a horse. We do these activities because they are good, worthwhile in themselves. Aims are futuristic, looking towards outcomes.

Anxiety could arise concerning education being considered as a means to an end in that that conjures up images of education being the handmaiden of industry or the government of the day. This need not be the case at all. The aims of education are usually linked to philosophies

about the good life, the good person. We have ideals of personal development and human excellence. This ideal of human excellence can consist of developing rational capacities to the full, including critical thought, autonomy of choice, creativity and integrity. From this ideal can arise a concept of the educated person and this provides some aims of education. As well, the society can have legitimate claims to make of the educational systems so aims may relate to these outcomes. To say that education is a means to an end does not exclude educational activities from having intrinsic worth.

If education is purposive, has aims, can we legitimately talk of outcomes? If one considers human conditions such as enjoying oneself, being fulfilled, being contented, being knowledgeable, as outcomes then probably purposes do always point forward to some outcome. Whether such outcomes can be specified as objectives is another matter. In fact this is the crux of the debate concerning objectives. The jump from purposes to objectives is too great say critics of the move. Purposes or aims, they maintain, cannot always be specified in the form of clear, objective statements about student outcomes. (Eisner, 1979; Blachford, 1986; Gillespie, 1986 ).

Ralph Tyler considers the move to objectives possible and crucial to education.

If an educational program is to be planned...it is very necessary to have some conception of the goals that are being aimed at. . These educational objectives become the criteria by which materials are selected, content is outlined, instructional procedures are developed and tests and examinations are prepared. (1949, p 3).

As with general aims, objectives have their sources in several areas, says Tyler. It is not a matter of the needs of the child (progressives) or the cultural heritage (essentialists) or contemporary society (sociology) but of all three; all are legitimate sources of objective and each has something to offer.

Each of these sources has certain values to commend it. Each source should be given some consideration in planning any comprehensive curriculum program. (Tyler, 1949; p 5).

The first source of objectives, studies of the learners, will produce evidence of deficiencies which can be remedied by changes in behaviour.

Education is a process of changing the behaviour patterns of people...educational objectives, then, represent the kinds of changes in behaviour that an education institution seeks to bring about in its students. (p 30)

The second source of objectives says Tyler, is studies of contemporary life outside the school. This would include analysis of areas such as employment, religion, economic issues, politics and the law. It is very risky, suggests Tyler, to rely on these studies solely. The issues may not be relevant to the students and an analysis of contemporary society does not question whether the activities are worthwhile or not. Also such a study deals with the here and now without attempting to cater for future needs. Such criticisms are particularly relevant to the TAFE situation where a study of contemporary life is often the sole source of objectives. This issue will be pursued more fully later.

The third source of objectives is the subject specialists. These people have traditionally had a major input into curriculum decisions and the results are usually expressed in terms of subject disciplines with their related language, concepts and structure.

The list of educational objectives which result from these three sources needs to be culled, says Tyler, by screening them through a philosophy of education and a psychology of learning.

The original list of objectives can be culled by identifying those that stand high in terms of values stated or implied in the school's

philosophy (p 37).

After this culling stage one should be left with a relatively small number of major objectives. Tyler then tackles the question of what form these objectives should take. He strongly argues against expressing them in terms of what the instructor should do. These he says

... are not really statements of education's ends, since the real purpose of education is not to have the instructor perform certain activities but to bring about significant changes in the student's patterns of behaviour, it becomes important to recognise that any statement of the objectives of the school should be statement of changes to take place in students. (p 44).

This last phrase is fundamental to the objectives curriculum.

Equally, says Tyler, listing topics, concepts and generalisations which are to be studied is not satisfactory as they do not specify what the students are to do with these topics. Are the students intended to memorise lists or perhaps identify trends?

A certain degree of detail and specificity in objectives is necessary. To express objectives in terms of generalised patterns of behaviour such as to develop critical thinking,

to act co-operatively, to develop moral values are only useful as starting points, says Tyler, and are too highly generalised to guide instruction. So how should they be written?

The most useful form of stating objectives is to express them in terms which identify both the kind of behaviour to be developed in the student and the content or area of life in which this behaviour is to operate (p 47).

He gives as an example, "To write clear and well-organised reports of social studies projects." (p 47). Objectives must cover all types of behaviour: an understanding of facts and principles, familiarity with sources of information, ability to interpret data, to draw reasonable generalisations from scientific data, problem solving, creative expression, aesthetic appreciation.

The next stage in Tyler's model of curriculum development is the selection of learning experiences. There are criteria to assist with this selection such as they should be in keeping with the objectives and they must be satisfying to the student. Likewise, there are criteria for the organisation of learning experiences.

The final stage of the curriculum development process is evaluation. Tyler's definition of evaluation is a fairly

narrow testing of students to ascertain the changes which have taken place. This would require a pre- and post testing of performance.

One of the most influential writers to build on the work of Tyler is Hilda Taba. Taba (1962) identified the elements of curriculum development as:

- diagnosis of needs
- formulation of objectives
- selection of content
- selection of learning experiences
- determination of what to evaluate
- determination of the ways and means of evaluation.

Objectives are central to Taba's process.

An education program, like any activity, is directed by the expectations of certain outcomes. The chief activity of education is to change individuals in some way, to add to the knowledge they possess, to enable them to perform skills which otherwise they would not perform, to develop certain understandings, insights and appreciations. The statements of these expected or desired outcomes are usually called either educational aims or educational objectives. (1962, p 194).

The most important function of objectives, said Taba, is to guide the making of curriculum decisions on what to cover, what to emphasise, what content to select and what learning experiences to stress. As with Tyler, Taba noted the two necessary features of objectives as behaviour and context. For objectives to be specific enough to guide selection, complex desired behaviours need to be analysed into their particular components. For example, part of the behaviour of clear thinking may be to make inferences. This means that an activity such as reading must be analysed into its component parts and objectives written for each. Thus, being able to read might be considered a terminal objective, but intermediate ones might be:

- to recognise the letters of the alphabet
- to recognise the sound which the various letters and combinations make
- to recognise and be able to say various words
- to be able to extract meaning from the text.

Any one of these intermediate objectives could be further analysed and more specific objectives produced.

The appropriate level of generality of objectives is a point of much debate, particularly in TAFE at the moment. Some of those practitioners who oppose the use of objectives, really oppose the use of very specific performance objectives and would be quite happy with more general objective.



If one attempted to put the parts of the objectives model of curriculum development together the whole might look something like the following:

- education is concerned with producing changes in students,
- objectives should reflect the hoped-for changes in students rather than the performance of the instructor or the content to be studied,
- student performance objectives should state what the performance is to be and what the context is,
- objectives should be stated so that the desired behaviour can be recognised when it occurs,
- performance objective should cover the whole range of human activities ranging from an understanding of facts and principles, through manual skills to aesthetic appreciation and the making of value judgements,
- the sources of objectives are the current community, the needs and interests of the students and the nature of the subject matter,
- learning experiences should be selected on the basis of the objectives,
- evaluation consists of ascertaining how many of the objectives have been achieved.

Criticism of the objectives approach to curriculum development are many and vocal. Several have already been mentioned. One is that of Peters that educating is an end

in itself and not a means. A second is that of Stenhouse already mentioned, that processes may be equally, if not more important than product. It is worth considering Stenhouse in more detail as he provides a very thorough critique of the objectives approach.

There is no doubt, says Tyler, that the objectives model is a powerful organising tool. The multifarious factors which need to be taken into consideration can be brought into orderly analysis using this model. It is a means of integrating the contributions of philosophy, sociology, psychology. In the language and methodology of the systems theorists it allows the treatment of education along similar lines to that of a business or the economy as a whole. Systems theory is concerned with efficiency, with output and requires that a system has objectives. It is only by comparison with objectives that problems can be identified and performance evaluated.

Interestingly, says Stenhouse, systems theory, while demanding objectives, does not assist in determining those objectives. The selection of objectives is outside the system analysis which regards them as given. The fact that the objectives model is a powerful organising tool can be a disadvantage. The human mind, with its desire for tidiness and comprehensiveness tends to grasp at theories and elevate them into prescriptions for action. In our desire

for coherence, says Stenhouse, we can forget that theories in fields such as education are highly speculative and lack firm grounding. One must not make the mistaken assumption that the more systematic a theory, the more likely it is to be correct. In fact, says Stenhouse, the reverse is likely to be the case. We must not forget that the objectives model, like all such theories, is a conceptual scheme, not a thing. Objectives do not exist, we choose to conceptualise our behaviour in terms of objectives.

Stenhouse's detailed critique of the objectives model is based largely on a paper by Popham (1968) "Probing the Validity of Arguments against Behavioural Goals". The first criticism is that behavioural objectives tend to trivialise the curriculum because only those behaviours which can easily be expressed in such terms tend to be emphasised and the more complex learning behaviours ignored. As Blachford (unpublished papers) suggests:

Just because an objective is behavioural does not mean that it is valuable, especially as trivial objectives are easiest to state behaviourally and what is measurable and measured becomes important in the minds of many.

This criticism is particularly relevant when one considers the question of assessment. If assessment is based on objectives, teachers may tend to concentrate on those

objectives which are easily assessable and pay less attention to incidental learning or long-term complex behaviours. Tying objectives to measurability causes many critics a good deal of anxiety. If every objective has to at least be assessable, if not assessed, then only those behaviours which can be easily quantifiably measured will be stated. As well, research apparently suggests that criterion-reference tests given at short intervals do not measure retention and hence are not good prediction instruments. If terminal or yearly tests are administered then the question of selection enters into the question and the possibility of teaching to the test.

It can be argued that pre-specifying objectives is not really the way teachers work and a curriculum model should be grounded in the study of what actual teachers do in actual classrooms. Teachers may possess an accumulation of knowledge about best ways to proceed and such knowledge should not be ignored. Teachers are the agents through which curriculum either succeeds or fails and should be considered at every stage of the development. Also it appears that there may be no correlation between clearly specifying objectives and improved student learning. (Stenhouse, 1975, p75).

There is a feeling, suggests Stenhouse, that the advocates of objectives do not trust teachers but are suspicious that

they are probably lazy and at times vague and ineffective. Clearly stated objectives are supposed to remove much of the opportunity for teachers to be less than satisfactory. Thus objectives are seen as part of the need for accountability. Teachers are predictably offended by such a use of objectives and suggest that they should be free to make decisions about what learning is desirable and when to deviate from plan. Attempts to produce 'teacher-proof' syllabuses are an insult to teachers and a waste of their professional expertise. Giroux (1986), says that the emergence of 'technocratic rationality' in education has produced a separation of conception from execution. He talks about the disempowerment of teachers, of their relegation to instrumental tasks, of their being reduced to the dictates of experts who devise the curriculum (p 33).

The neglect of the value of incidental learning is a further criticism. If all teaching is to pre-specified outcomes the chance of taking advantage of valuable unexpected learning opportunities is reduced. Attempting to pre-specify all desirable outcomes is also unrealistic suggest the critics of the approach. Unanticipated results may prove to be crucial to the success of a program and a curriculum development model should include some way of incorporating such results. Even better, it should include the methodology for anticipating them.

Eisner (1969), who was concerned with the visual arts, attempts to add a dimension to objectives which will allow for the unpredictable. He introduced 'expressive objectives' where the learning outcome is unknown or unknowable. An expressive objective describes an encounter, an experience, without saying what the nature of the resultant student behaviour will be.

Outcomes are essentially what one ends up with, intended or not, after some form of engagement...Expressive outcomes are the consequences of curriculum acts (1969, p 103).

With such an objective the desired outcome is diversity rather than homogeneity. Expressive objectives are similar to lists of topics but couched in terms of what the student is to experience.

The basic problem with objectives, says Stenhouse, is that they are not applicable to the whole range of knowledge. Education, he suggests, necessarily comprises at least four different processes: training, instruction, initiation and induction.

Training is concerned with the acquisition of skills. Examples are making a canoe, speaking a foreign language....Instruction is concerned with the learning of information....Examples are retention of the table of chemical

elements....Initiation is concerned with familiarisation with social values and norms and successful initiation leads to a capacity to interpret the social environment and to anticipate the reaction to one's own actions. Induction stands for introduction into the thought systems - the knowledge - of the culture and successful induction results in understanding as evidenced by the capacity to grasp and to make for oneself relationships and judgements. (1975, p 80).

Induction is the process for which objectives are quite irrelevant, though their appropriateness is even questionable for instruction and training if it is considered that skills and information are best learned in a context of knowledge. Induction into the knowledge of a culture frees the individual to create new ideas. Hence the outcomes of such creativity are by their very nature unpredictable.

One may well argue, that if the learning outcomes are unpredictable, how is the teacher to know if anything has been learned. The answer says Stenhouse, is to regard the teacher as a critic who judges the value of student performance by making judgements of quality guided by an understanding of the nature of the subject.

Stenhouse's list of criticisms of the objectives approach to curriculum development is fairly comprehensive and most other writers tend to choose similar arguments. Brady (1983) comments on the fact that in reality the sequencing of the objectives model may not follow that stipulated in the Tyler/Taba model. Objectives he says, may not precede selection and organisation of learning experiences. It is certainly not unheard of for a curriculum component to be developed around the acquisition of a new piece of equipment, a teacher's specialised talents, or perhaps the need to satisfy a non-educational demand.

The criticism that not all learning can be reduced to small units is of significance. (Sparks and Bradley, 1989). The unitised approach is based on the work of Bobbit (1918, 1924) who set out to study the activities undertaken by adults in normal life and reduce those activities to component, teachable, parts. This is an industry or factory model and is widely used in TAFE today. It could well be that in studying an aspect of contemporary life, especially if one steps outside the realm of occupations, that firstly, not all that goes on is observable, and secondly that not all activities can be unitised. The traditional example for the holistic argument is the riding of a bike. This activity cannot be broken into component parts which can then be studied and practised separately. In fact, much learning is of wholes. Learning to understand how a car works is not best done by the study of each separate piece without some prior



conception of a whole car.

A further criticism of the objectives approach is that many educational aims relate to long term outcomes and cannot be described as short-term objectives; for example to respect knowledge, to be flexible. Somehow, in developing objectives these longer term aims need to be kept in mind and in fact incorporated in the objectives. (Macdonald-Ross, 1975).

Pre-specification denies students the opportunity to make choices based on personal decisions. In a rapidly changing society one of the most valuable qualities an education may be able to promote in students is the ability to make decisions.

To some extent criticism of the use of objectives is criticism of a narrow interpretation of the model. It is often not the use of objectives that is being criticised but the use of highly specific behavioural objectives of the "to be able to state five causes of the First World War" type. We must recall that Tyler advocated the use of objectives which covered a wide range of learning experiences. If it is maintained that objectives can include Eisner's expressive objectives and also process objectives such as 'to develop group discussion skills' some of the criticism may dissipate.

The final criticism of the use of performance objectives is the claim that they are value free, are 'objective' as distinct from 'subjective'. It is not possible, so the critics say, to eliminate value judgements when translating aims or purposes into objectives. Even a TAFE purpose such as 'To produce competent motor mechanics' contains values such as it is desirable that there be more motor mechanics, that it is TAFE's role to produce motor mechanics, that it is beneficial for people to be trained as motor mechanics. When such an aim is translated into performance objectives it also contains values such as it is beneficial to the performance of a motor mechanic that he/she is taught this particular activity rather than some other activity. If objectives mean value free, empirical truths, there is much room for disagreement.

The debate concerning the advantages and disadvantages of a technological curriculum development method is far from over. In fact, in the current climate of efficiency, accountability and economic rationalism the approach is looked upon with much favour from some quarters and apprehension from others. In TAFE at the moment the debate is centring around "competencies" and "performance indicators". (Guthrie 1988).

## CHAPTER 4

### THE INSTRUCTIONAL SYSTEMS MODEL

The risks associated with the use of models, particularly in the Social Sciences, were touched upon in the preceding chapter. Most of those warnings went unheeded in TAFE with the result that a model was adopted and reified to the status of prescription. Rather than be seen as a map showing possible routes to a goal it was seen as a recipe, specifying elements and processes which had to be adopted. The particular model which gained this position is known as the Instructional Systems Model (ISM). ISM was adopted in Tasmania in the early 1980's following its widespread use in Victoria. Originally it had developed from a United States armed forces model of training and was popularised in Australia in the 1970's. ISM is a somewhat extreme version of an objectives model with narrow definitions of context analysis, strictly behavioural interpretation of objectives and an overwhelming testing procedure. Despite the copious amount of material written about the model a succinct definition is hard to find. One of the early Education Department of Victoria (1980) documents, the aim of which was to popularise the model, describes it thus:

...the Systems model has several characteristics:  
it has definite inputs, processes, outputs and  
controls. The training inputs, processes, outputs

can be defined and measured to ensure the efficiency and effectiveness of all parts. It is student-oriented and performance-oriented, and all processes are directed towards assisting the student to achieve what he must be able to do in his designated job. (Education Department of Victoria (1980, p 18).

The driving force for the introduction of the scheme was Victorian TAFE and all the sources quoted with regard to the nature of ISM are from that organisation. As with many innovations it came about due to dissatisfaction with the existing situation. TAFE had been criticised in some major reports (e.g. Kangan 1974) as not being responsive to the needs of industry. It was suggested that content of technical courses was often based on subjective judgements and too little on what the student should do in order to learn. Too little use was made of properly designed tests and feedback, and links between employing bodies and teaching staff were inadequate and ineffective. (Education Department of Victoria, 1980).

As well there was the beginning of a move to make TAFE more accountable; to make it more distinct from secondary education and to co-ordinate the numerous variables which had developed as a result of TAFE's rapid growth in the 60's and 70's. In this atmosphere a coherent,

comprehensive, manageable model such as ISM was extremely welcome.

One of the problems with TAFE, said the early advocates of ISM, was that it did not recognise the special features of adults as learners. Adult learners, so the argument goes, need to be more self-directing, to be involved in experiential techniques of learning, to see very clearly the relevance of what they are to learn and tend to have a problem-centred orientation to learning. Whether these characteristics are specific to adults is debatable. However, the Instructional Systems Model of curriculum development, it is claimed, fosters these desirable learning approaches.

The ISM is very much a systems approach to curriculum development.

The ISM is based upon systems theory. It is essential, if one is to understand the dynamics of the model, that basic components of Systems Theory are related to the processes developed.

(Education Department of Victoria, 1980 p 40).

With a systems approach curriculum development is seen as a whole which cannot be taken apart. The elements can be identified and then inter-relationships analysed and the variables can be manipulated to produce various outcomes. Systems theory does not stipulate any particular cause and

effect relationship between the components. Curriculum development, say the ISM proponents, is an open system; that is, it has exchange with the environment.

Vocational curriculum development is part of a larger manpower system which is influenced by factors such as personal, societal and industrial needs. Personal needs would include the need for satisfying employment; societal needs, the need for a competitive economy; and industrial needs such as that for skilled workers.

Such a statement as the above links this curriculum development model with Tyler's sources of educational objectives. As well, it closely allies the model to economic considerations because the ISM is aimed at producing economic results. The major concern is manpower; that is the person as worker for a wider, economic cause; it is not pre-eminently concerned with personal development. Vocational education, it is being claimed, is about producing workers. Vocational education prepares people for jobs, both now and in the future and is based on the requirements of individuals, society and industry only in relation to employment.

As with Tyler's model, the Instructional Systems Model is based on answering certain questions. These are:

(a) What skills, knowledge and attitudes must the person

possess to be able to perform the job and maintain employment?

- (b) What standard of performance is necessary?
- (c) Which skills do not have to be learnt, i.e. are already possessed by the student?
- (d) Which skills can only be learned on the job, i.e. cannot be learned effectively on a training course?
- (e) Which skills therefore can be effectively learned on a course?
- (f) What are the best methods of testing the student to see that he has achieved the required standard?
- (g) What are the best methods of teaching the required skills in terms of available staff and resources?
- (h) How may the efficiency and effectiveness of the curriculum in the school be controlled?
- (i) How can the effectiveness of the students on the job be monitored?

(Education Department of Victoria 1980 p 18).

This list is produced in full to contrast it in language, style and content with that written by someone such as Stenhouse. The model, in order to answer the above questions, is composed of five phases:

Analysis

Design

Implementation

Evaluation

### Validation

These elements are typical of most curriculum development models and it is only when one examines the content of each phase in detail that the unique features emerge.

The analysis phase is very different from that advocated by Kelly, Brady or even Tyler. The analysis phase looks at only one element, the job to be performed.

...the first step in the development of instructional systems is to obtain information about the duties and tasks performed in doing the job. This is done by occupational and job analysis. (Education Department of Victoria, 1980 p 20).

The analysis is conducted on three levels of specificity; the occupation, the job, the task. The results of this analysis, whereby the task is reduced to smaller elements is to be represented graphically in what is known as a scalar diagram. It is suggested that at least five stages of specificity exist:

- branches                      - major areas of operation within the occupation;
- duties                        - large segments of work which when combined form a branch;
- tasks                         - smaller segments of work;
- sub-tasks                    - smaller segments of work;



- task elements - smaller segments of work.

Typically, plumbing is chosen to provide examples. A breakdown of the job might go something as follows:

|           |   |
|-----------|---|
| Duties    | e.g. Installing waste disposal features.      |
| Tasks     | e.g. Install water service, main to meter.    |
| Sub-tasks | e.g. Tap the water main.                      |
| Elements  | e.g. Fix tapping ferrule into case iron main. |

The next stage in the ISM is the use of the information represented in the scalar diagram to produce student learning objectives. This is part of the design phase. The whole design phase consists of producing enabling objectives and tests, developing learning units, selecting learning strategies and producing learning resources. The advocates of the model are well aware of the debate which surrounds the use of objectives but maintain that much of the criticism of their use is unnecessary and that the advantages far outweigh the disadvantages, particularly in relation to vocational education. (Education Department of Victoria, 1980, p 21).

For objectives to be most useful there are three conditions which must be fulfilled. "Objectives state what students must be able to do, the conditions under which they must be able to perform, and the standards of acceptable performance". (Education Department of Victoria 1980, p38)

There is no room here for Eisner's 'expressive objectives'. The objective is a statement identifying exactly what the student is expected to do at the end of the course to demonstrate that he/she has achieved what is required. This may involve the application of knowledge or the demonstration of skills. The statement of objectives must also clearly define the conditions under which students will perform, what tools or equipment students will be provided with, what the physical environment will be, e.g. "The student will produce a mailable letter using an electronic typewriter with no assistance from the use of textbooks". The third requirement is a statement of the standard of acceptable performance. With the above example we could add "within a ten minute time allowance and with 98% accuracy".

One of the basic assumptions of the Instructional Systems Model is that it is meaningless to talk about a student having abilities unless he/she can demonstrate them. To know how to type a letter means being able to actually type one. Devising tests to judge whether the desired objective has been achieved is the next stage of the design phase. This can only be done by assessing student performance. Hence there is an inseparably close link between objective and assessment. The aim is for the student to be able to perform a certain task, the assessment is whether the student can perform that task. The features of the

assessment - the conditions and standards are those specified in the performance. Thus, the only type of acceptable performance is to actually carry out the action as specified in the objective. Therefore, if the objective is to produce an acceptable business letter, the assessment must be based on just that performance, not writing an essay about producing business letters or an oral explanation of the procedure. Hence the only type of acceptable assessment is criterion referenced testing. Norm referenced testing with its commonly associated percentage marks is quite inappropriate to this model. All performance tests should conform to the requirements of validity, reliability and usability.

The third phase of the design is the development of the teaching plan which includes developing learning units, selecting learning strategies and producing learning resources. This should cover aspects such as enabling objectives (distinct from performance objectives), instructor activity statements, student activity statements, learning aids and notes, and time recommendations. A rather weak admonition is made that the curriculum developer match the nature of the teaching method to that of the objective. (Education Department of Victoria, 1980)

The next major step in the ISM process is implementation.

Of the implementation phase the model does not make many suggestions. The aspects of implementation which are noted are the induction of staff, the teaching of the course and the administration of tests. The background briefing notes provided by the Education Department of Victoria talk about effective and efficient teaching; about discrepancy and deficiency problems. The outline of the procedures to be followed says very little about implementation other than that staff should be trained during the development phase so as to be ready to perform when a new course is introduced. Feedback as to how effective teachers are should be available to assist them improve performance.

The final phase, program evaluation, is divided into course evaluation and what is known as validation. Evaluation consists largely of ascertaining quantitatively how well students have achieved the stated course objectives. This information should be used as feedback into the development stage. Validation is a term used to describe a process of external evaluation which attempts to assess graduates' performance on-the-job. Validation is based on a comparison of the actual formal course training and what is expected of the on-the job worker.

As will be noted all references so far have been from the TAFE system in Victoria. That State developed the model and adopted it as the preferred modus operandi in the early

1980's. From Victoria its use spread to other States including Tasmania. Although ISM was initially intended to be used in trade courses its use spread across all of TAFE's offerings.

Gillespie (1986) quotes reports of the early 1980's (The Industrial Training Commission of Victoria (undated); John Braddy: TAFE Services 1980; Education Training and Retraining Sub-Committee Victoria 1981; J. Broderick 1981) which suggest that the introduction of ISM brought some significant improvements to TAFE in all States where it was adopted. These improvements were in the areas of documentation (TAFE was now accountable), industry involvement, increased hands-on approach to teaching and learning, more effective and greater responsiveness to technological change.

Although the model was adopted in Tasmania with great enthusiasm certain associated aspects of it were never fully enacted here, probably due to lack of resources. Self-paced learning, which is the desirable method of teaching, was never widely used in Tasmania. Mastery tests were, and are, being developed in many courses but there are still a majority of programs which use pen and paper tests simply because they are easier and cheaper to conduct. The degree of testing advocated in the ISM has rarely been adopted. The few instances where teachers have attempted to test all major objectives have proved almost

impossible due to the time commitment required.

The halcyon days of the Instructional Systems Model were in the mid 1980's and for the last few years its use has come under increasing criticism. Some of those criticisms are common with those more general ones of any objective model and some are specific to this model.

Perhaps the most fundamental of TAFE's functions is to increase a person's capacity for a career or an occupation. One of the most significant criticisms of ISM is that in fact it does not do this adequately. The reason, it is suggested, is that the model does not allow the development of a full picture of what a 'good employee' or worker is. As stated previously in this paper, TAFE may be suffering from a lack of theorizing about the nature of the 'good worker' and part of the blame can be attributed to the ISM. The latter ignores the wide range of possibilities for exploring the nature of the desirable worker (a wide-ranging contextual evaluation) and focuses on a very narrow analysis of the job as currently performed.

If the aim of vocational education is to produce the 'good employee' then the curriculum development model used needs to ensure that one knows what that is. The methods used in TAFE to obtain an occupational analysis and a job

description are focused at, firstly, observed performance, and secondly, at the present moment. This incorporates limitations in that it may not provide the full picture of either what is required now or in the future.

Curriculum research and development strategies adopted have been too concerned with observable skills directly and obviously related to a particular job and have not addressed important areas essential to a person being able to cope with the broad range of life experiences. (Burns, cited in Claydon, 1985, p5).

An analysis of the performance of a child-carer may provide some indication of the background knowledge about child development, program planning required, but is unlikely to throw any light on the desirable qualities of punctuality, reliability, loyalty, self-motivation, or some knowledge of non-observable phenomena such as cost-effectiveness or energy use. Hence there is a very real question when developing learning objectives as to how much these have to be based on observable job tasks. Teachers, will usually go some of the way to identifying at least the prerequisite theoretical knowledge needed to perform a task. Once outside the realm of job skills or related knowledge though, the case is a little more difficult. Communication skills, study skills, confidence building, career planning, industrial relations, negotiation skills are all areas the inclusion of which in a mainstream vocational education

program (as distinct from an access or personal development course) is difficult to argue because of the narrow interpretation adopted of a job analysis. Rather than a job analysis, Blachford (1987) suggests curriculum developers should be carrying out a context evaluation. Many of those features which were noted in Chapter 2, such as social changes, the nature of the subject matter, the expertise of the staff, the needs of the students, institutional ethos and future trends, should be investigated to produce a fuller picture of the purposes of a program.

Another serious limitation of the ISM job analysis is its focus on the current situation only. What this means is that by the time a student is trained, say three or four years hence, some of his/her skills may be redundant. Curriculum developers have had to overcome this limitation by undertaking some form of forward estimating procedures. To do this they have had to move outside the Instructional Systems Model. Various group analysis techniques have been developed to facilitate this process, the aims of which are to make predictions of likely changes, usually technological, taking place in jobs. TAFE has been accused numerous times of not being responsive to changing industry needs (Anderson and Jones, 1984; Meeting Australia's Skill Needs, 1987; Skills for Australia, A Changing Workforce, 1988; Industry Training in Australia: The need for Change, 1988).



To become more flexible and readily able to meet changing needs, TAFE requires a curriculum development process which encourages not only up-to-date considerations of employment but looks to the future and predicts likely trends. These trends may well include considerations about social roles and even ethical issues. In the computer field, for example, training has moved away from programming to the use of packages, but in the light of claims of the chances of computer technology producing a down skilling of operators, should TAFE train to the narrow base of skills which apparently are going to be required? In the retail sales area, should TAFE train supermarket assistants to do more than work the cash registers now installed which require very little skill? Should TAFE make the assumption that it is unlikely that a particular student will be a supermarket assistant all his/her life and would find valuable other skills as well? These sorts of dilemmas persist because TAFE has not clarified its role and has not enunciated its philosophy. As a result, it is possible to have people arguing for different content because they start from different bases of what the goals of a course should be.

A common practical objection to the job analysis is that it is unmanageable. To undertake an occupational, job and duty analysis as stipulated in the ISM is a mammoth task. A properly produced scalar diagram is an incredibly detailed

document. It has been found in a state like Tasmania with limited resources that such undertakings are virtually impossible. A few have been tried but now numerous short cuts are taken. Again the model has had to be adapted.

A related issue is the epistemological one concerning the question of whether knowledge can be separated into small component parts, and secondly, whether that is an effective way to learn. This atomizing of knowledge is widespread across the education system. Examples are reading and writing, performing mathematical calculations, appreciation of literature. A viable case may be made for teaching skills in this manner, although there is always the bike riding argument to refute that. However, the method needs to be analysed, questioned and justified if it is to be an integral component of the model.

A final criticism of the job analysis phase of ISM is that not all vocational education has an identifiable job to analyse. Art is such a course. There are certainly people earning their living from art, either visual or performing. It is very doubtful, however, whether any useful information could be gained from analysing what any one artist does to identify training requirements. To analyse what a painter, a sculptor, a ceramicist or a weaver does at best could reveal the physical skills needed in each case. Another method is needed to identify the

underlying cognitive and aesthetic knowledge involved.

New areas of employment also do not have an established job to be analysed. An employer may very well come to TAFE with the request to conduct a training program for potential employees in a certain area. A typical example would be a case where a local employer had purchased or was planning to purchase a new piece of major equipment and wanted some existing employees trained to work it and perform resultant associated tasks. To identify training needs in such a situation is a much wider matter than analysing an existing job. Not only would the working of the equipment need to be looked at but also the work roles present and future in that workplace, worker attitudes to the proposed change, the relocation necessary as a result of the change, and so it goes on.

By comparison with the richness of the contextual analysis as suggested by writers such as Brady, Kelly and Blachford, that advocated by the ISM is narrow and restrictive. As a result, it may be argued, the debate between short-term employability and longer-term career viability is perpetuated and TAFE could again be criticised for not producing workers who can cope with the rapidly changing nature of technology and the workplace.

The second phase of the model, the development of

performance objectives is open to even more criticism. Firstly the model gives little guidance as to the process of translating job tasks into objectives other than a few simple criteria such as: is the task essential and can it best be taught by TAFE or on-the-job? Decisions such as what is necessary enabling knowledge for this task, in what sequence should the objectives be arranged, what is an enabling objective and what is terminal, into what degree of detail does a task need to be segmented, what objectives should be assessed, still need to be made. The identification of objectives cannot be disassociated with that of content and all of those criteria as suggested by Hunkins, Brady, Taba, Blachford, Tyler etc. should be taken into consideration. Again, the ISM is ignoring a wealth of considered knowledge.

There are, of course, all those criticisms of the use of any form of objectives model which have been discussed previously. This section will concentrate on aspects of those which have been levelled specifically at this rather extreme version. Many of the criticisms of this model are associated with the high degree of specificity involved in its performance objectives. The plumbing examples given previously illustrate the detail required. An example from another area may help to illustrate. A suitable objective in a secretarial course may read something like: "The student should be able to manually file twenty pieces of

assorted correspondence within 10 minutes and with 100% accuracy."

Such an objective puts considerable pressure on teachers. They have to have the equipment to so allow students to carry out the task; they have to test every student and they have to fail a student who is outside the prescriptive time and standard specifications. Surprisingly, when talking to teachers, one seldom hears any complaint about lack of autonomy. Curricula which have attempted to adhere to the ISM requirements end up being highly detailed, prescriptive programs. A more general objective such as "The student should be able to satisfactorily use a manual filing system" would be acceptable to most teachers.

A further danger associated with the search for clear, unambiguous, specific performance objectives is the risk of trivialising the learning outcome. What is most obvious is often the easiest to specify. For example, if we take the task of interviewing a welfare recipient in a welfare work course, the easiest objectives are those associated with physical performance such as where to sit in relation to the interviewee, what sort of physical surrounds to establish, what sort of opening questions to use, what method of recording system to use. While these features are important there is more to the task. Those other requirements such as how to make the interviewee feel at

ease, how to ascertain the veracity of what is being said, how to elicit necessary further information, are at least of equal importance but are not easily translated into performance objectives.

The gap between the crucial but complex components of a job and the obvious but perhaps trivial components increases considerably as one moves away from very obvious skills-based jobs such as the trades. Perhaps one of the greatest mistakes in the use of ISM was its application to all areas of technical education. In learning programs where cognition, aesthetic appreciation and attitude or value formation are significant such as in the humanities, arts and some management type programs, the relevance of ISM is severely questionable. Ross Gillespie (1986) in his critique of ISM puts it thus:

Often in these areas objectives are best described using verbs of state. For example, 'to know', 'to understand', 'to think critically'. Objectives worded this way are subject to more ambiguity but may be highly restrictive or even worthless if they are attempted to be broken into more concrete components. They involve intellectual and valuing processes, and understanding social phenomena. They involve the development of social skills and a myriad of personal values and attitudes (behavioural, procedural and substantive) which

are not readily observable and are not measurable  
in any objective way. (1986; p 29)

Despite the model's supposed use of feedback loops it is in fact a closed, linear model, suggests Gillespie. It is a convergent rather than a divergent model whose aims are certitude of outcome, order and control. (Gillespie, 1986; p 28)

Such aims are inappropriate for a large number of TAFE courses.

It is assumed falsely that the ISM has the capacity to deliver on goals, however, many and of whatever kind.... It is assumed falsely that performance objectives are appropriate in all courses and for all aspects of courses.

(Blachford, 1987, p 60)

For any programs which have a high proportion of what R.S. Peters (1986) would call initiation and induction as distinct from training and instruction, highly prescriptive performance objectives are unsuitable.

This convergent model is not appropriate to TAFE programs where initiative and creativity are valued such as Photography, Modelling, Graphic Design. The graphic designer may be required to interpret what the client wants and propose a layout accordingly. Such an outcome cannot

be pre-specified. The attempt to spell out conditions, behaviours and standards is just as absurd for abilities such as communications and inter-personal relationships (both of which employers are saying are of the utmost importance). 'The ability to get along with others' is one of the most commonly expressed desirable attributes in an employee according to industry representatives. Training institutions will continue to ignore such attributes because they cannot be described in objective terms. Similarly with goals such as self-confidence, originality, imagination, curiosity, independence of thought and honesty. These goals are valued by employers and are not the same as the behaviour reduction which is an indicator and not a definer of the term (Blachford, 1987, p 22). Such attributes may be better described in terms of Eisner's expressive objectives:

...planning of events that appear to be educationally fruitful but whose specific consequences for different students might not be known in advance. (1979, p 40)

In the light of this assumption that the ISM is inappropriate for use outside the trade areas a later part of this study will deal with a survey of the attitudes of teachers/curricula developers in this State who have had experience in attempting to use the model in non-trade areas.



Another feature of the ISM which attracts a good deal of criticism from practitioners is the sheer volume of documentation it requires (Blachford 1987). In the TAFE system in this State teachers are expected to be highly involved in curriculum development, often as part of their normal duties. To ask them to produce a document of perhaps a hundred pages specifying in great detail what a student will do in every learning situation is an imposition. The effect of such a demand is to discourage teacher involvement in curriculum development. A second limitation imposed by the degree of specificity required and the resultant volume of documentation is that the syllabus document can become out-of-date in certain specifics very quickly. For example, if an objective is "to file manually" etc., such an objective becomes irrelevant when industry changes over to an electronic system of filing. Even though teachers may be aware that what they are teaching is outdated the process of changing the syllabus may be so daunting that nothing may be done for years. Such a situation is in stark contrast to the TAFE requirement to maintain currency and relevance of program content.

After the selection of objectives and content, that is, after the development of the plan, the next phase in most curriculum development models is implementation. This is the case with ISM. The relationship between the various

phases is crucial. Stenhouse, with his belief in the teacher as researcher, would maintain that the development or design phase and the implementation phase are so closely linked as to be part of the same process. Technological models, such as ISM, on the other hand, see the two stages as quite distinct. A plan is produced by one group of people, it is handed to another group who are inducted into it and are then required to implement it.

As mentioned previously, the ISM, like similar models, was introduced partly in response to a lack of faith in teachers. As a result, an attempt is made to produce 'teacher-proof' curricula. Teachers may well have limitations but Stenhouse would suggest that the answer is to value them more highly and allocate more resources to their development. The ISM response is to separate them from the development phase and to instruct them on how to carry out a task; to see them as technicians rather than professionals.

Not only in relation to teachers is the implementation phase of ISM weak. Little consideration is given to student backgrounds and needs, school or college resources, institutional ethos, teaching methodology, individual learning styles, and variations across regions. If curriculum is truly to act as a change agent then its full ramifications need to be considered. When talking about

curriculum-led institutional development Shackleton (1984) suggested

...the curriculum is as much about support systems as about learning content and pedagogy, and those support systems include not only counselling and guidance for the student, but also a comprehensive management support system. It is true to say that the whole college and all its operations are part of the curriculum. It all impacts upon the student's experiences and their learning (p 55).

Picking up on Gillespie's point about the lack of effective feedback loops with ISM, the model can be said to be deficient in relation to evaluation. As stated in the outline of the model, evaluation is taken to mean assessment of how well students performed on tests of objectives. If most students achieved the stated objective the course was successful. This is a narrow interpretation of program evaluation. Gillespie (1986) suggests that there are other evaluation methods which are divergent, naturalistic, more extensive, adaptable, holistic and which rely to a great extent on the realities of the teaching/learning situation (p 16). What the ISM calls evaluation is in fact simply an analysis of student assessment. Gillespie puts a case for a much broader meaning of evaluation. Program

evaluation should look at features such as students' personal outcomes, teacher beliefs and attitudes, social and environmental outcomes. He uses as his reasoning for this, not that the narrow ISM approach does not effectively judge whether a program has been not only effective but worthwhile, but the argument that employers in fact want employees with more general skills such as problem solving abilities, communication, conflict resolution and with personal qualities such as confidence and initiative. What he, in fact, is criticising here is the narrow aims and goals of courses developed using ISM.

Despite the model's claims to be circular, and despite the feedback loops, it has tended to be interpreted as a prescriptive, linear model. It has not been seen as a process with numerous possibilities for change and re-interpretation, but as a lock-step process where the relationship between the components is pre-determined. Because each element is narrowly defined the chances for oversight are high. For example, because the situational analysis does not involve an analysis of resources, one could develop a program which was impossible to implement.

In summary, the Instructional Systems Model, which is a form of objectives model has considerable advantages

and disadvantages. Its advantages are that it helped TAFE to become more considered in its course development, more specific, to clarify its aims, to specify its expectations, to develop a uniformity across states, to become more responsive and accountable. Its disadvantages are that it has been reified to the position of a prescriptive standard recipe for developing courses and as such has excluded the richness of other possibilities. Its use has been extended across all programs whereas its appropriateness may be quite limited. While the ISM itself may be adequate in some situations, TAFE's simplistic whole-hearted adoption of it has narrowed the range of choices available to the curriculum developer.

To quote Eisner: "Why do the schools (and colleges) so often, pursue simplistic, mechanical solutions to complex educational problems?" (1979, 6) The reason, he says, is the search for a 'science' of education, a systematic, means-ends, objective approach.

## CHAPTER 5

### THE SURVEY

This study has developed a tentative proposal that the curriculum development philosophy and practices which have become prevalent in TAFE in Tasmania are not well suited to all the courses offered by TAFE. Defining 'well suited' with any degree of precision would be difficult. Operationally it may suffice to mean that the people who have had to work with the particular procedures have found the process difficult and could recommend an alternative procedure. The range of courses to which the practices may not be suitable are those classified as non-trades. This includes courses covering access programs, para-professional occupations, especially those in the humanities, fine arts and social sciences.

Specifically, ways in which current practices may not be the most suitable have been suggested in this study as:

- (i) The context analyses undertaken are not comprehensive enough in that they focus on one element only and ignore such potentially important elements as future trends, the needs of students, teachers' backgrounds, and the ethos of institutions.

- (ii) That conducting a job skills analysis as recommended by the ISM is too resource demanding.
- (iii) That performance objectives do not cater for the full range of desired outcomes.
- (iv) That performance objectives are seen as too prescriptive and limiting by practitioners.
- (v) That implementation is largely ignored by ISM, and that it should be part of the curriculum development process.
- (vi) That ISM interprets evaluation too narrowly and does not give it its full significance.

To provide supporting evidence to this argument by ascertaining whether practitioners did, in fact, perceive shortcomings in the model and would prefer other options, a survey of teachers as curriculum developers was conducted.

The type of research undertaken was of the practical/critical/interpretative mode (Carr, Kemmis, 1986). Here research is seen as a form of enquiry which is reflective and deliberative and which results not in the production of theoretical knowledge, but in morally defensible decisions about practice. It acknowledges that practice may be distorted by fallacious views or by institutional structures. It aims to produce free and open dialogue which will allow practitioners to achieve greater self-understanding. In brief, the aim is to interpret

practitioners' actions in the light of their beliefs and the external institutional requirements. In this case, the survey is an attempt to verify theories which have been proposed, not as externally given or scientifically provable, but as interpretations of current practice.

The information required was teachers' attitudes to past curriculum development activities and their views as to desirable procedures to follow. It was not intended to seek opinions on theory or philosophy.

The inquiry was of an exploratory nature, attempting to produce a description of the current situation. Essentially teachers were asked to describe their experiences and make judgments on it. The resultant data provided information as to teachers' needs in their role as curriculum developers.

Several similar investigations have been conducted (Broderick, 1981; Blachford, 1987; McBeath, 1989). Blachford's study, in which he surveyed curriculum developers in Victoria, is of particular relevance and its findings are consistent with this survey: namely, the acceptance of ISM as official policy while deviating from it in practice, the requirement to have a procedure which is in fact usable and takes into account the local context, the desirability of a broad contextual analysis and of



course evaluation, the diversity of TAFE courses and students presenting a case for a diversity of curriculum development. (1987, p7)

To investigate the proposition that current TAFE curriculum development practices do not meet the needs of all course developers a small scale research project was planned.

The purpose of the research was to:

- a) Investigate the hypothesis that the Instructional Systems Model was not perceived by all practising teachers/curriculum developers to be suitable for their area of professional expertise.
- b) Investigate the hypothesis that the Instructional Systems Model was perceived by non-trade teachers/curriculum developers to be less suitable to their area of expertise than by trade teachers/curriculum developers.
- c) Ascertain the nature of the curriculum development requirements of TAFE programs.

The type of information required could be acquired from a variety of research methods such as questionnaires, interviews, case studies, observations, action research, diaries, and anecdotal accounts (Cohen and Marion, 1985).

Two possible approaches considered were the more detailed one of a close scrutiny of the curriculum development

process for several of the major non-trade programs such as welfare studies and fine arts, or a broader study of views of teachers as curriculum developers across a range of programs. For several reasons the latter approach was chosen.

Firstly, to ascertain whether there is any fundamental difference between manual skills-based and cognitive/affective program development, a relatively wide sample needs to be studied. Secondly, it became obvious that this study was very preliminary, in the nature of an exploratory investigation. For this purpose a broad approach to develop some understanding of the range of issues involved was considered appropriate. Thirdly, for practical reasons, to bring about any likelihood of change in the system, a quantifiable approach would be more acceptable.

If the numerical data did show that the current prevailing method of developing curricula was not satisfactory for a range of programs, then a more insightful method such as diaries, case studies or observation may be acceptable as a second stage of the research. With such qualitative methods there is always the question of how generalised one's findings are, and whether the researcher has chosen the right people and setting to investigate.

For the above reasons it was decided to survey as many TAFE teachers/curriculum developers as was practical. Because

the information sought was practitioners' opinions (rather than the nature of the practices) a method of eliciting views was necessary. The two most frequently used methods are by interview or questionnaire. To increase reliability it was decided to use both; a questionnaire with follow-up interview in a limited number of cases.

The selection of questions was based on eliciting three categories of information: personal details, experiences and evaluations of ISM and general comments on curriculum development processes. The order of questions was designed to lead from the highly specific to the more general. Each section had a brief introduction, explaining the nature of the information sought and instruction on how to answer the questions.

The biographical information was designed to identify the respondent, ascertain how much experience he/she had had in curriculum development and in what area his/her expertise lay. This latter question was of particular significance as part of the hypothesis under consideration was that non-trade curriculum developers were less satisfied with ISM than trade curriculum developers.

The questions relating to ISM attempted to gain information regarding the source of teachers'/curriculum developers' knowledge, their use of ISM and their evaluation of its

various elements. Information as to the source of teachers' knowledge was sought in an attempt to ascertain to what extent local TAFE teacher training programs had emphasized ISM. The questions relating to the various elements attempted to identify those aspects of ISM which curriculum developers saw as valuable and those with which they had most concern. The hypothesis suggests that certain processes such as the production of objectives are easier with the ISM than others, such as selecting teaching methodologies.

The final group of questions were those concerned with curriculum development requirements in general. These questions were based on the information relating to processes as identified in Chapter 3 of this paper. The aim was to ascertain the processes curriculum developers saw as important for their particular area, the nature of these processes and particularly, the range of activities perceived as being valuable. The hypothesis suggests that curriculum developers would nominate a wider range than that enumerated by the ISM, particularly those practitioners working in non-trades areas. Questions in this group were aimed at producing information which would lead to improved practices; practices which to a greater extent than at present, met the needs of curriculum developers across the whole range of TAFE programs.

Because the information sought was opinions, many questions were open-ended, and ample space was provided for additional comments. Though such information is difficult to analyse, it was considered important to encourage respondents to provide not only judgements but reasons for those judgements. The small sample size should enable a satisfactory analysis to be conducted. Direct answers to questions were both scaled and of the yes/no type.

A covering letter was written, explaining the nature of the survey, its purposes and details regarding completion of the questionnaire, its return, the possibility of a follow-up interview and a contact person for any further information required (See Attachment A). A draft questionnaire was developed, considered by several groups of colleagues with expertise in developing questionnaires and amendments made. The amended version was trialled on a limited basis, and further amendments made.

Reliability and validity of the questionnaire were considered and ensured by the following procedures:

- a large number of questions were asked; several overlapping in content,
- spaces for comment as well as quantitative responses were provided and comment was encouraged,
- explanations of questions and definitions of terms were provided,

- a contact person (who was known to all respondents) and a telephone number were provided for those seeking further clarification,
- interviews were planned to follow-up the questionnaire,
- the questionnaire was trialled and amendments made.

The sample of possible respondents was taken from the list of TAFE teachers who had had substantial (involvement in the development of at least one major course) curriculum development involvement over the last five years. This covers the period of the widespread use of ISM. The list included approximately eighty names. The final selection was made with the aim of obtaining a representation of all major colleges. Because a major theme of this study is the inappropriateness of ISM to non-trade curriculum development and an interest in the needs of this area, a preponderance of non-trade teachers was chosen. A final list of fifty-two was selected.

These people were sent the questionnaire and covering letter. Most teachers were known personally and prior notice and explanation was provided where possible. In several instances arrangements for an interview were made. The interview was seen as a means of elaboration; the questionnaire could stand alone.

Of the 52 questionnaires sent, 48 were completed and

returned. These were classified according to expertise of the teachers, resulting in 16 trade and 32 non-trade responses. This high response rate, possibly due to teachers' having the impression that the survey was of an official nature, added to the reliability of the instrument.

Eight follow-up interviews were conducted. These covered the same topics as did the questionnaires but provided more detail and background.

The questionnaire and interview data was analysed and generalisations made. This analysis was done by the use of an analysis sheet for the quantifiable responses. Dealing with the responses to the numerous open-ended questions and additional comments was more time consuming and difficult. Generally comments were classified into categories of related responses and selections made to cover the range of ideas offered.

A summary of the results is as follows:

The first question after the biographical detail sought information as to teachers' familiarity with the Instructional Systems Model (ISM).

Question

5. How familiar are you with the Instructional Systems Model for developing a curriculum?

Please tick one of the statements below which most closely describes your experience with the Instructional Systems Model.

- I have never heard of it.
- I have only heard about it, I have never used it.
- I have only used it in a minor way
- I have used it in collaboration with others for developing portions of courses.
- I have been heavily involved with developing curricula using the Instructional Systems Model

Responses

These indicated widespread knowledge, and use of the model.

Table 1  
Teachers' familiarity with the Instructional Systems Model

|                   |                             |   |          |             |
|-------------------|-----------------------------|---|----------|-------------|
| Never heard of it | Heard about it but not used | Used in minor way or in collaboration with others | Much use | No Response |
| 6%                | 13%                         | 60%   | 27%      | 1%          |



Obviously the categories were not seen as mutually exclusive. Many of the teachers who were familiar with the model had been made aware of it at professional TAFE teacher training courses with the next most common familiarisation technique being through talking with other teachers. (Question 6).

Question

6. If you are familiar with the Instructional Systems Model, how did you hear of it?
- through reading
  - through talking with other teachers
  - through attending professional training courses in Tasmania
  - from experiences I have had outside Tasmania

Responses

Table 2

Methods of becoming familiar with ISM

|                          |                                     |  |                                      |
|--------------------------|-------------------------------------|--|--------------------------------------|
| Through reading about it | Through talking with other teachers | Through attending professional training courses. | Through experiences outside Tasmania |
| 20%                      | 41%                                 | 61%  | 11%                                  |

Again, it appears that the categories are not mutually exclusive. The proportion of teachers becoming familiar with the model via a TAFE training course may be even larger because of the possibility of those teachers who attended such courses familiarising colleagues with it by conversation.

On the question of the usefulness of the ISM there was an even spread of responses.

#### Question

7. If you have used the Instructional Systems Model for developing a small or substantial part of a curriculum, how did you generally find it?

Useful only as a structured approach to developing curricula

Of very limited use owing to the nature of the subject areas I am involved with

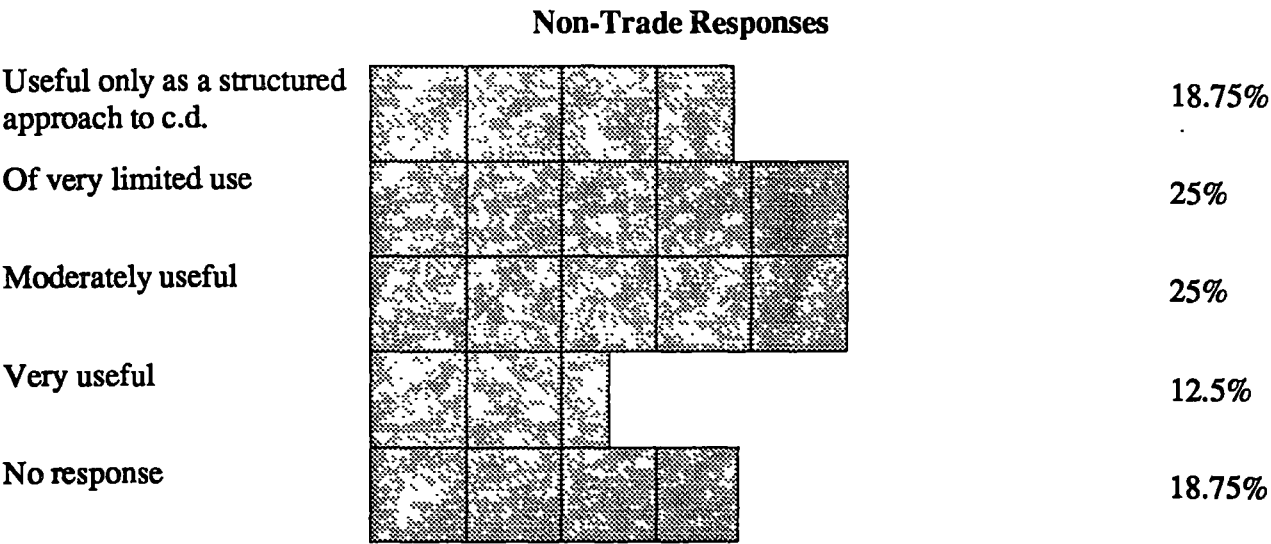
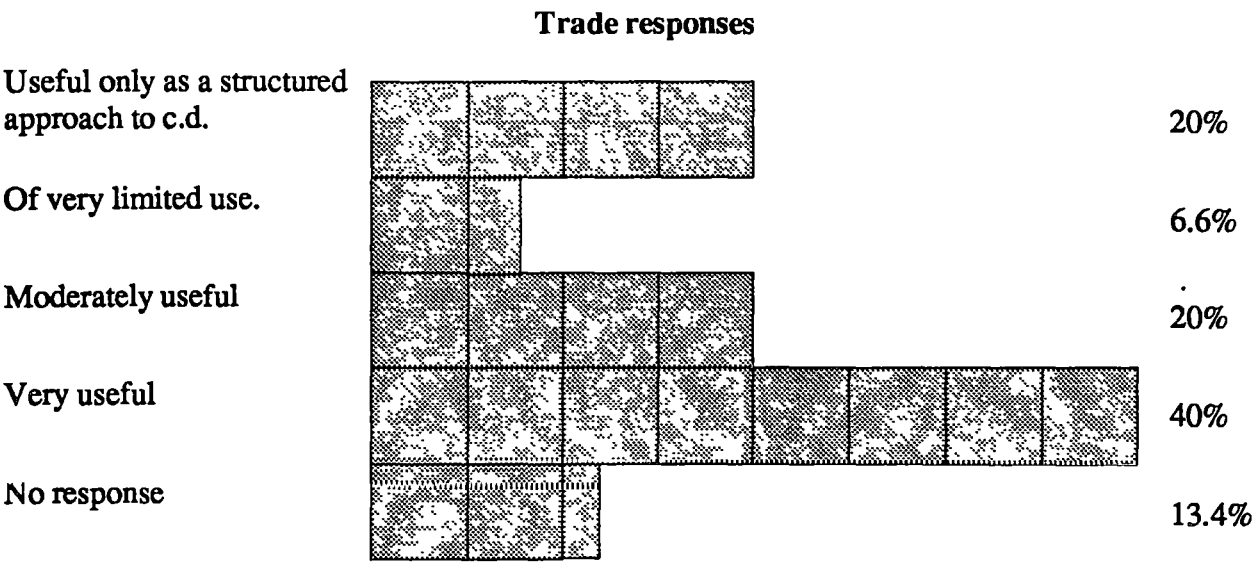
Moderately useful for certain subject areas

Very useful for most of my subject areas

Please write any comments you may care to make:

Responses

Table 3  
Usefulness of ISM



The wording of this very significant question proved to lack some clarity. The descriptor "useful only as a structured approach to curriculum development" was interpreted differently by respondents. Most, according to their comments, interpreted it to mean that the ISM was no better than any other method which provided guidelines to procedures, but a few apparently interpreted it to mean that the model was very valuable because it provided such a structure.

However, when the responses of trade and non-trade curriculum developers are considered the picture is significant. A much higher proportion of non-trade respondents saw ISM as only useful as a structured approach or of little use while those with a trade background saw it as very useful (see Table 3).

56% of respondents offered comments on this question.

These comments range from the two extremes of very useful to almost impossible to implement. (Appendix C)

However, there were some recurring themes.

- a) The Instructional Systems Model was (is) valuable as a structured approach to curriculum development. It organises widely disparate activities and allows people from different backgrounds and perspectives to

participate in the decision-making process. This highly organised, structured approach is particularly necessary in TAFE because of its relationship with industry and the need for public scrutiny and acceptance.

- b) The method was felt to be most useful to trade areas where highly predictable outcomes are required and where the emphasis is on manual skills. Generally, trade teachers seemed to be very satisfied with the model.
- c) ISM was considered to be not as relevant to those courses with an emphasis on cognitive or affective abilities. The comments here covered a wide range of limitations of ISM. In many vocations, satisfactory performance is more than the sum of the identifiable parts. The model could not take account of outcomes which are not highly predictable, or able to be specified in detail.
- d) The method does not recognize the importance of interpersonal relationships such as that between a teacher and student. In fact, the model wastes much of the talent of teachers by being too prescriptive. It does not allow teachers the scope and flexibility to make full use of their skills.

- e) Many teachers, both supporters and critics of the model, suggested that in the current TAFE situation such a model is almost impossible to implement. It is too time consuming and expensive, they stated, and it is inevitable that short cuts will be taken.
- f) Several respondents commented that, in fact, criticism of the process is due to lack of understanding of the steps involved, and the lack of commitment of resources to properly implementing the process. It could be used properly, they suggest, if the time and resources were made available. The reverse of this argument, offered by some teachers, is that it is important to have a curriculum development model which can be implemented with the resources that the system has at its disposal. Related to this was the comment that a model(s) is needed which is flexible enough to accommodate the variety of demands made on it.
- g) Finally, ISM ignores much of what goes on in a learning situation, it was suggested  
The hidden curriculum is also significant and should be taken into account.

The next question asked respondents to evaluate the various elements of the model. (Question 8).

Question

8. If you have used the Instructional Systems Model, how difficult did you find it in fulfilling the following curriculum development processes?

|           |       |       |
|-----------|-------|-------|
| Very      | Mod.  | No    |
| difficult | diff. | diff. |

Analyse the job

Identify the training requirements

Formulate training objectives

Prepare training objective tests

Derive enabling objectives and tests

Develop learning units

Select instructional strategies

Produce learning resource

Teach the course

Review college performance

Feedback from the job

Please write any comments you may care to make.

Responses

On the question of which stages of the model were most satisfactory and able to be implemented the answers were interesting, even though predictable. The most easily

implemented steps were seen to be conducting a job analysis, formulating objectives and teaching the course. These responses are somewhat predictable in that these stages are perhaps the fundamentals of a technological approach to vocational training. The most difficult stages to implement were seen to be those related to feedback and review. In fact, several respondents suggested that these were not part of the model.

The questionnaire then moved on to more general questions relating to curriculum development. The first asked respondents to identify those people whom they felt should be involved in curriculum development.

#### Question

9. Please write in the space below, the sorts of people, whom you think should be involved with curriculum development in TAFE.

#### Responses

These, though producing a wide range of results, were highly predictable. Teachers heading the list with (72%) affirmations, industry specialists (47%), curriculum



specialists (45%), and employers (21%), very much reflects the current situation. The industry involvement is even higher than suggested at first glance in that in many cases industry specialists and employers may represent the same group. Other groups mentioned were college administrators, professional institutes, students, employees, graduate students, other educational institutions, unions.

The more specific question of whether students should be involved produced a very divided response. (Question 10).

#### Question

10. Do you think students should be involved with curriculum development, that is, help decide what should be taught in the course and the way it should be taught?

NO

Not sure

YES      If you answered YES, please list below course or subject areas for which student input would be appropriate.

## Responses

Answers to this question were very divided: 38% for, 44% against, and 8% not committing themselves. Of those who considered student involvement desirable, many qualified the response by commenting that it should only be mature age, or graduate, students. These comments suggest that in many cases respondents were talking about course review rather than the development of new programs. Only five respondents said that students should be involved in a developmental way, and then mainly with regard to implementation methodology rather than content. The only unqualified response, saying that students should be involved in all aspects of course development and implementation was from a teacher of a program in the humanities (whose students are required to be mature age).

Question 11 sought respondents' definition of the term "curriculum". This was aimed at ascertaining whether the majority of respondents saw a curriculum in a narrow or broad perspective. To some extent a narrowly defined meaning of the term may be associated with a technological approach, a broad definition with a humanistic approach. In addition, the extent to which respondents associated with an outcomes definition reflects upon the usefulness of ISM.

### Question

11. There are various interpretations of the term "Curriculum". What do you mean by "curriculum" as applied to your course areas?

Please tick an appropriate box:

Curriculum is a plan of expected student outcomes

Curriculum is a description of all that goes on in a learning situation

Curriculum is a list of topics which have to be learned

Curriculum is a guide to what the teacher is to do in the classroom.

Curriculum is a description of the learning experiences students should undergo.

If NONE of the above definitions of curriculum is appropriate to your course area, please write briefly what your definition is:

### Responses

When asked to identify various definitions of curriculum, teachers chose a broad interpretation rather than narrow. The categories were obviously not seen as mutually exclusive.

TABLE 4    DEFINITIONS OF CURRICULUM

|   |  |                        |  |  |       |
|---|--|------------------------|--|--|-------|
| A plan<br>of<br>expected<br>student<br>outcomes | A description<br>of all that<br>goes on in<br>the<br>classroom | A list<br>of<br>topics | A guide<br>to what<br>the<br>teacher<br>is to do | A description<br>of the<br>learning<br>experiences | Other |
| 38%   | 41%  | 6%                     | 10%  | 40%  | 19%   |

The next group of questions attempted to identify the curriculum development stages or processes which respondents considered important for their area of study. A list of generally accepted procedures (See Chapter 3 of this paper) was provided in an attempt to explain to respondents what is meant by curriculum development procedures. Both the procedures which respondents considered important and the desirable degree of variation or flexibility was sought.

Question

12. The following is a list of processes which are often considered when planning a curriculum:

Preliminary planning and Analysis (a study of the context of the proposed development project)

Development of Aims (general purposes)  
Development of Objectives (specific outcomes)  
Selection of Content (what is to be taught)  
Selection of Teaching/learning methods  
Implementation  
Evaluation.

Because different sets of processes may need to be considered for developing curricula in different subject areas, will you please write down in the order in which you think they should be carried out, what you perceive to be an appropriate list for your subject areas, either based on the above list or distinct from it.

Would the elements in the list you wrote above, or the sequencing vary from one project to another?

NO                      NOT SURE                      YES

Please underline elements in the list you wrote above, which are the most important ones to consider when dealing with curriculum development processes related to your particular course areas.

### Responses

Respondents were very accepting of the proposed list identifying as the most important the selection of aims and objectives. Comments emphasized the importance also of verifying the need/demand for a program before commencing development, of ensuring that it will be adequately resourced and of developing feedback loops.

The applicability and nature of some form of contextual analysis was the focus of the next two questions.

### Question

13. Some curriculum development projects include an analysis of the context of the proposed development, both inside and outside the college. Is some form of situational or context analysis relevant for your courses?

YES

NO

Not sure

If you answered YES, please tick the following elements which you think should be investigated:

Nature of the job graduates will perform

- Needs of the students
- Needs of potential employers
- Resources available
- Community expectations
- Courses offered by other educational institutions.
- Educational background of the students

Please write down any other elements you think should be investigated.

Responses

There was overwhelming support for a broad contextual analysis as part of any development. (83% support) There was no significant disparity amongst features to be analysed.

Table 5  
Elements to be investigated in a situational analysis

| <u>Elements</u>                           | <u>% of responses</u><br><u>supporting each</u><br><u>element</u> |
|---|---|
| Nature of the job graduates will perform. | 83  |
| Needs of potential employers              | 83  |
| Needs of the students                     | 69  |

|                                    |    |
|------------------------------------|----|
| Nature of subject matter           | 67 |
| Resources available                | 67 |
| Courses offered elsewhere          | 58 |
| Educational background of students | 56 |
| Community expectations             | 35 |

Additional elements mentioned by one or several respondents

Resourcing (teaching and teaching expertise, funding, equipment, etc).

Industrial relations implications

Environmental and social impact of programs

Future trends

Portability of training and award

Socio/economic background of students

Student expectations

Question 14 sought to identify how specifically respondents desired educational purposes to be expressed, what the focus of such purposes should be and whether a product and/or process orientation is preferable.

Question

14. How should specific educational purposes be best expressed for your course areas?

Please tick if appropriate:



- As a list of topics to be covered
- As student performance objectives
- As a list of learning experiences
- As general objectives

Any other:

Responses

The overwhelming majority of respondents indicated specific student outcomes as being the most desirable form of educational purpose.

Table 6

Most appropriate mode of expressing educational purposes

| As topics | As list of learning experiences | As general objectives | As student performance objectives |
|-----------|---------------------------------|-----------------------|-----------------------------------|
| 17%       | 27%                             | 38%                   | 66%                               |

As with several other questions, the categories were not seen as mutually exclusive.

The next two questions relating to curriculum implementation sought respondents' views on the desirable

relationship between course development and implementation. These questions were based on the distinction between, on the one hand, ISM where the two phases are quite distinct and of limited interrelatedness and, on the other, an interactionist approach where no such clear distinction exists.

Question

15. Should curriculum planners decide on the teaching and/or learning methods to be used for implementing a course?

Yes

No

Please write any comments you may care to make:

Question

16. Should curriculum developers decide on the teaching/learning materials to be used for implementing a course?

Yes

No

Please write any comments you may care to make:

### Responses

Views were very divided on the question of whether the curriculum development process should include decisions relating to teaching/learning methods.

Table 7

#### Should curriculum developers decide on teaching/learning methods

|           |     |
|-----------|-----|
| No        | 49% |
| Yes       | 42% |
| Undecided | 9%  |

This question elicited much comment and many qualifiers. Several of those who answered in the negative were most adamant that such 'interference' was undesirable as it reduced teacher autonomy, creativity and flexibility. It devalued the relationship between teacher and student, they suggested, and did not take into account local conditions.

Many of the affirmative responses were qualified by the provision that the methods so identified were suggestions only and that teachers must be part of the decision making team.

On the related question of teaching/learning materials, negative responses were more dominant and the comments were similar to those of the previous question.

Table 8

Should curriculum developers decide on teaching/learning materials

|           |     |
|-----------|-----|
| No        | 47% |
| Yes       | 34% |
| Undecided | 19% |

Comments suggested that such decisions should not be made by the curriculum development team because conditions vary, recommended resources are not always available, prescribed material may not suit all students and that packages reduce the teachers' choice and flexibility.

Again, several affirmative responses were qualified by the provision that teachers be consulted, that the material be for suggested use only, and that the central authority supply the resources.

The next three questions relate to student assessment and course evaluation. That dealing with student assessment sought respondents' views on the most suitable forms of student assessment for their particular course(s). The reason for this question is that there are certain assessment procedures which are more closely allied to ISM, such as practical tasks, whereas the essay or project is

more usually associated with a philosophy and curriculum development methodology which emphasizes processes and open endedness.

The questions relating to evaluation were included to ascertain the importance respondents gave to course evaluation, and the nature of any possible evaluation.

Critics of ISM (Blachford 1987; Gillespie 1986) have suggested that evaluation is not a significant feature of ISM.

#### Question

17. What types of student assessments are most suited to your area?

Please write below or on a separate sheet.

18. Should consideration of course evaluation be part of the curriculum development process?

Yes

No

Not Sure

If you answer YES to the above, please write down those who should be involved in course evaluation.

19. What elements should be investigated in a course evaluation?

Please list:

### Responses

The request for a list of assessment techniques most suited to specific teaching areas did not produce many variations on current practice. The most popular methods apparently are:

- practical tests
- theory tests
- projects/assignments
- final examinations

Other methods listed by a small number of teachers were subjective, on-going, non-competitive methods; self-assessment; profiles; case studies and class participation.

There was overwhelming support for course evaluation

|             |     |
|-------------|-----|
| For         | 81% |
| No/Not sure | 8%  |
| No response | 11% |

However, the 'yes' response appears to contain a mixture of opinions: yes, course evaluation, should be conducted (after implementation), and yes, course evaluation should be considered during the development stage. Whichever the case, there is significant support for program evaluation.

The question of who should be involved in evaluation was apparently ambiguous and respondents interpreted it differently. The question did not distinguish between who should conduct an evaluation and from whom information should be sought. Most responses appear to relate to the latter while the former is the information the questionnaire was seeking. However, the information received was still useful, even if broader than anticipated. It showed that teachers regard the process as being largely an internal one:

Table 9

Those who should be involved in the course evaluation process

|                                     | <u>% of responses</u> |
|-------------------------------------|-----------------------|
| Teachers                            | 70%                   |
| Students (both<br>current and past) | 47%                   |
| Employers                           | 36%                   |

|   |     |
|---|-----|
| Curriculum Specialists  | 23% |
| <hr/>   |     |
| Industry representatives<br>(Some of whom would also<br>be employers) | 19% |
| <hr/>   |     |

Others included: professions - both individuals and institutions, the public, government agencies, unions, licensing authorities. Only one respondent suggested that evaluation might be better conducted by an outsider, someone who is not intimately connected with the development or implementation of the program.

The list of what should be investigated in a course evaluation was extensive - everything about a program should come under scrutiny. The suggestions made by the teachers can be classified into four categories:

- the curriculum development process
- the course
- implementation
- outcomes.

Little elaboration was made about what aspects of the development process should be investigated.

The course itself should have the following features investigated: aims, objectives, content, level of



difficulty, length, timing, appropriateness, quality, coherence, relevance to both students and industry.

Implementation should be analysed paying attention to: modes of presentation, teaching/learning methods, materials, teacher competence, student suitability, cost effectiveness, testing methods, adequacy of resources, general morale of students and teachers, mode of attendance and any identified problem areas.

An investigation of outcomes should focus on: the meeting of objectives, skill levels achieved, attrition rates, entrance and exit skills, student and employer opinions of the program, students' success at gaining employment, validation, (that is, the matching of skills learned to those subsequently required in employment), continuing demand, student pass rate and unintended outcomes.

A further group of comments were those relating to expectations of both students and industry and of student satisfaction with the program.

Question 20, relating to the roles of the possible participants in the curriculum development process attempted to identify a desire for a centralised or dispersed procedure. ISM advocates a strongly centralised process while a humanist approach emphasizes the importance

of the decision-making being at the implementation site.

### Question

20. From where should the major curriculum development decisions be made?

A central agency

The implementation site

A combination of both

Other, please write below:

21. Please comment on your perception of the role of a central curriculum section.

### Responses

The response to the question of where planning decisions should be made was a highly predictable combination of the implementation site and a central agency. The role of a central agency was seen as being extensive, but mainly concerned with administration.

A central curriculum section should provide guidelines as to interpretation of policy, initiatives for new developments, practical guidance as to procedures to be

followed and resources to carry out development projects. It should also provide an information gathering and dissemination function, acquiring data from many sources and making it available to teachers and storing statistical data about programs. Many teachers commented on the co-ordination function of such an agency, suggesting that it should ensure no duplication of effort. An important function was to ensure standardisation, and finally, it was seen as a support agency whose job was to facilitate program development and review, the actual tasks being carried out by experienced teachers. Several teachers criticised the curriculum section saying that it was too bureaucratic, inflexible and did not appreciate the realities with which teachers had to work.

### CONCLUSIONS

Teachers' response to the survey was very satisfactory in that 47 of the 50 who were sent questionnaires completed and returned them. This high response adds to the survey's reliability. Answers to questions plus comments suggested that some questions had ambiguous wording. In no case does this invalidate the questions and answers but it does mean that the answers are more general than desired. A further limitation of usefulness of some questions was that the categories offered were not mutually exclusive. To ask respondents to make only one choice may have been

preferable, though several responses may more accurately reflect their opinions. The questionnaire results could be analysed more closely on particular question if the need arose.

Most respondents answered all questions and a high proportion made comments, some quite lengthy. These comments were in agreement with the answers to specific questions in all cases except those questions in which there was some ambiguity.

The interviews which were conducted were unstructured and open-ended but based on the questionnaire. In all cases they supported the questionnaire response but provided much anecdotal additional evidence.

The findings are consistent with those of Blachford's 1987 Victorian survey.

Because of the general nature of the questions asked and the exploratory nature of the investigation, no very specific conclusions can be drawn. However, some generalisations can be suggested and indications of useful future investigation made.

1. The teachers' responses were highly predictable in that they reflect the status quo. Obviously, the current

way of doing things is a strong factor influencing teachers' perception of options. Very few highly unexpected responses were received and this in itself was somewhat unexpected. A possible reason for a narrow range of responses is that TAFE teachers are practitioners, rather than theorists, and few have any theoretical background in curriculum development.

This highly practical nature of the teachers as curriculum developers was illustrated many times. Their comments emphasized the need for a curriculum development model which was able to be implemented, for the consideration of the need and demand for a course before beginning to develop it, and the pre-eminence of the significance of resourcing a program.

2. The responses to questions relating specifically to the Instructional Systems Model, and to curriculum development generally, suggest a range of interpretations. Firstly, attitudes to the usefulness of ISM vary considerably. However, there is widespread acceptance of some of the major features of ISM (job analysis, student performance objectives, assessment of task performance). There are at least two possible interpretations of these results. Firstly, it may be that while many teachers apparently find ISM unsatisfactory for curriculum development in their

area, this dissatisfaction may be due to problems of implementation such as the time and resource commitment needed, and not to a fundamental dissatisfaction with an objectives model. It may be that it is just this particular type of objectives model that is not meeting teachers' needs.

A second explanation, suggested by Kevin Blachford (1987) is that there is a general lack of clarity of curriculum development concepts amongst TAFE personnel and this leads to apparently conflicting views. When teachers (as curriculum developers) say that they are happy with ISM, what they are meaning is that they are happy with their version of it.

Dr Blachford has carried out extensive studies of curriculum development in TAFE and his findings suggest that almost nowhere is, or has, ISM been implemented according to the model (Blachford, 1987). It is just too time consuming and restrictive. However, almost any systematic approach to curriculum development, which focuses on a task analysis and student outcomes, is called ISM. What may have happened, at least in Tasmania, is that the model has all but been abandoned while the terminology has remained. Hence, whatever approach is used, one still hears and reads of "needs

assessment, job analysis, performance objectives, quality control, validation", etc. It is, suggests Blachford (Victorian TAFE Paper 1988, p 21) as though there is an "official" procedure and a "real" procedure. While the "official" model may have been abandoned in practice, its terminology remains. This terminology and the associated mind set, restricts the freedom of practitioners to develop a model which fully meets their needs.

3. Evaluation of programs has largely been ignored in Tasmania, the reason given as being lack of resources. The survey indicates overwhelming support by teachers for evaluation, and it may be an issue which will have to be addressed. The responses suggest that teachers consider the process should be largely internal with teachers playing the major role, but that almost every aspect of a program should be investigated. Features such as teacher morale, the hidden curriculum, should be scrutinized as well as quantifiable outcomes.

It is worth noting that teachers perceived the ISM to be weak with regard to college and course evaluation. Several in fact, questioned whether it was part of the model at all. This suggests that teachers have interpreted ISM as being a linear process with no feedback loops, or to least a model which does not

encourage such loops.

4. A structured approach is valued by TAFE teachers/curriculum developers. This was exemplified by the comments rather than by quantifiable responses. Such a need cannot be ignored but can be explained. Because TAFE teachers have little training in curriculum development (and that in the past has been limited to ISM), but are expected to be involved in curriculum development, they may find the process more manageable if firm guidelines are provided. This need for structure may have led to an over-simplified set of procedures. The obvious challenge for TAFE appears to be to provide guidelines without restricting the choices available. It will not be adequate to abandon ISM and put nothing in its place.

An alternative may be to identify the key questions which need to be asked, the stakeholders who have to be consulted and possible methods for gathering information and making decisions.

5. That much more information, or information of a different nature, needs to be gathered was evidenced by the respondent's identification of the desirable contextual elements to be considered. The list produced by respondents (Table 5) is much wider than



that suggested by the ISM. While the nature of the task heads the list, other elements suggested include the educational background of students, community expectations, the environmental and social impact of the program and student expectations. The list may well reflect what practitioners actually do at the moment but some policy acknowledging the necessity for a broader contextual analysis or evaluation and suggested procedures for conducting such, may be helpful.

6. Part of that initial consultative process may well include students. This is a vexed question in TAFE and the survey responses reflect the division of opinion. However, there may be no need to adopt any uniform policy on the matter. If course developers consider it important to consult students (both intending for a new program and current and past for a review) then they should be encouraged to do so. While ISM is a preordinate model, such past practices should not blind curriculum developers to the possibilities of broader information sources. It is quite conceivable to call for expressions of interest in a program and then negotiate with those potential students some aspects of what should constitute the course.
7. In general the survey findings indicate a widespread dissatisfaction with ISM. They suggest that a

curriculum development model is needed which is well structured, which focuses on student outcomes, which is able to be implemented with the resources available and which allows a considerable degree of flexibility in who is consulted and what decisions have to be made. The teachers surveyed suggested that more consultation should take place in both the contextual analysis phase and in the program evaluation phase. The latter needs to be strengthened and curriculum decision making should be more of a circular process with evaluation feed-back loops.

## CHAPTER 6

### CONCLUSION

The aim of this study has been to investigate the curriculum development requirements of TAFE, the range of options available and to evaluate current practice. The significance of the activity is in its attempt to respond to widespread criticism of current practice both from the literature and from practitioners and to identify those features of curriculum development models which satisfy TAFE's requirements.

The methodology used for the study has been a combination of an analysis of the current situation, a perusal of the literature and a survey of practitioners. The focus has moved from the general to the specific with the early sections of the study attempting to identify the scope of the field of curriculum development. Following that, a particular orientation to curriculum development was analysed and more specifically the version of that orientation which has been adopted by TAFE. Certain assumptions about its usefulness and applicability are formulated and tested through a survey of practitioners. Conclusions are drawn and some tentative proposals for further action and study are made.

Because vocational education is undergoing a phase of considerable re-evaluation as a result of the state of the economy and the initiatives of the Federal Government, it is imperative that its aims and practices receive scrutiny. At the core of TAFE's activities is the development of training programs. Only if this process results in relevant, quality courses which meet the needs of both the students and the industrial community can TAFE adequately fulfil its role. While such programs are not a sufficient condition for quality training, they are a necessary one.

While the link between economic concerns and technical and further education may not be clear or proven, the fact remains that the government and the community have very clear perceptions about the desired functions of that education institution. Chapter 1 of this paper attempts to analyse the current social and economic environment and identify some major functions of technical and further education. These functions relate to the students as individuals, to the social fabric of the community and to industry and the economy. To the individual, TAFE is to offer programs which allow all people regardless of prior educational experience, sex, race or age to undertake training which will prepare them for life-long employment. This may be either initial training or re-training. TAFE's responsibility to the community lies in its providing an

opportunity for all members of the community to undertake training, to increase the pool of skilled personnel, to focus on groups with special training needs and to generally enhance the social harmony and cohesiveness of the community. To industry and the economy, TAFE has the more specific function of producing relevant, efficient (in terms of time and cost), technologically up-to-date training programs which produce highly skilled employees in those areas as identified by industry.

In order to develop these programs a methodology or procedure for curriculum development needs to be adopted. There is a widespread body of literature dealing with curriculum development and from this extensive source of considered opinion Chapter 2 identifies some common features. Despite the diversity of orientations there appear to be some common functions which need to be carried out. The aims of a program need to be identified, the context in which it is to be developed and implemented analysed, more specific learning objectives agreed upon, content has to be selected, sequenced and resourced, teachers have to be prepared to teach the program which then has to be implemented and finally, students need to be assessed and the overall program evaluated.

While there may be little disagreement as to this list of requirements; their sequencing, relative emphasis, the

details of what they entail and how they should be carried out, cause a good deal of disagreement. Various approaches have been labelled orientations, schools, or models of curriculum development. These orientation or models are investigated in Chapter 3, with the finding that they can be classified as ranging from a negotiated, interactionist approach, through a process model to a view of curriculum as technology. Of the latter orientation, one of the most controversial methodologies is known as the objectives model. This is the approach which is commonly used in vocational education. It is outcomes oriented, highly prescriptive, based on the belief that human actions are predictable and has as its objective specific, measurable human behaviours. The approach has a considerable number of supporters and critics and both its advantages and limitations are considered in this study.

The form of objectives model which has been adopted by TAFE is known as the Instructional Systems Model. The nature of this methodology, its history, strengths and weakness are considered in this paper in Chapter 4. From this evaluation, based on both the literature and comments from practitioners, certain judgements are made. These are, firstly, that the method is more suitable to developing trade programs where the outcomes are predictable manual skills, than to those where aesthetic or cognitive skills are of more significance. Secondly, that the exclusive use

of the model has restricted the options available to curriculum developers. Finally, that a more flexible, varied approach may more satisfactorily achieve TAFE's program development requirements.

The survey of practitioners (Chapter 5), was conducted in order to ascertain the views of people who had undertaken curriculum development regarding the usefulness of the Institutional Systems Model and their perceptions of the needs of curricular development in their professional area. The results of the survey suggest that focusing on training outcomes is widely accepted, and in most cases these are behavioural outcomes. However, these behaviours must encompass long-term and aesthetic and cognitive behaviours. Approximately half the teachers surveyed expressed dissatisfaction with the sole use of ISM. They had found the model time-consuming, difficult to implement and not widely understood. There was concern that it appeared to be a lock-step, linear model with very weak feed-back loops. Several areas, it was suggested, are too scantily treated in the model. These are initial research into the social and environmental context of the proposed program, the resourcing and the evaluation of the program.

Overall, the study, while reaching few conclusions, has explored many issues. While the community's view of TAFE's function is clear and unambiguous there is some confusion

from within the organisation as to how best to fulfil its role. This confusion partly results from a lack of clarity concerning the nature of a worker. If such a person is envisaged in the short-term as carrying out a particular task then one method of training is suggested. If, on the other hand, a broader, longer-term perspective is taken, the training requirements are considerably different.

However, whatever the emphasis adopted, a procedure for developing educational programs needs to be considered. Such procedures have exercised the minds of numerous writers on the subject and there is a wealth of valuable comment available. Though commonly accepted processes seem to be identified by most writers there is considerable variety as to what questions should be asked, who should be consulted, what the sequencing and inter-relatedness of stages should be and how quality can be assured. In the light of such an array of material, it appears that Tasmanian TAFE curriculum development practices do not make full use of the options available.

That methodology chosen and widely used by TAFE, the Instructional Systems model, while having considerable strengths and weaknesses, is only one of several possibilities. In fact, no one method of developing curricula is likely to meet all of TAFE's requirements and there is no advantage to be gained from a uniformity of approach.



The survey of teachers indicated that there is agreement on some matters relating to curriculum development methodologies and widespread disagreement on others. Such a response is to be expected and possibly reflects a healthy diversity but demands variety and flexibility in practices.

The diversity of opinion amongst TAFE teachers as curriculum developers, to some extent reflects the diversity of opinion referred to in the opening chapter of this paper, namely the distinction between training as being for immediate employment requirements and training or vocational education as being for longer-term broad-based employability. Though this paper has tended to talk in terms of trade and non-trade course areas these distinctions should be treated with caution.

Because of the exploratory nature of the study, no decisive conclusions have been reached apart from the general one that the curriculum development methodology debate needs to be re-opened. Part of this debate could focus on issues emerging from the survey, such as how wide-spread a contextual analysis needs to be, whether students should be consulted, and the nature of the diversity of the curriculum development needs of the various TAFE courses.

Such a debate would not only clarify the issues but

initiate many teachers into the language and concepts of curriculum development. This is particularly important in TAFE where teachers with no expertise in the procedure are expected to act as curriculum developers. While such teachers have expressed an understandable need for structure and guidelines, they have also expressed a very healthy acceptance of widespread consultation, analysis and evaluation.

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## **APPENDIX A**

Mrs. P. Steenholdt  
73 Murray Street  
HOBART, TAS 7000

Phone 002 30 7114 (Work)

Dear

QUESTIONNAIRE ON TEACHER'S ATTITUDES TO CURRICULUM DEVELOPMENT

As part of my Master of Education Studies programme I am writing a paper on curriculum development theories and practices in TAFE.

Aspects of the paper deal with various models of curriculum development and I would like to include an empirical study of teacher's experiences with various models and their attitudes towards curriculum development practices in general.

The findings will be treated in strictest confidence and will be used only in an academic paper. No names will be used.

I would be most appreciative of any time you could devote to answering the enclosed questionnaire and returning it to me. If time allows I will phone you to investigate the possibility of my visiting you.

Do not hesitate to telephone me on 30 7114 if you have any queries with regard to the questionnaire.

Thank you for your assistance in this project.

Yours sincerely

PAULA STEENHOLDT

Encl/

**APPENDIX A****QUESTIONNAIRE ON TEACHERS' BACKGROUNDS IN CURRICULUM DEVELOPMENT**

The aim of this questionnaire is to identify curriculum development practices which have been used in TAFE in Tasmania, to gather practitioner's views as to their suitability and any suggestions for methods which may be more useful.

**PART A - BACKGROUND IN CURRICULUM DEVELOPMENT**

1. Name of respondent:

---

2. In which college do you work?

---

3. What is your area  
of teaching expertise?

---

4. What formal curriculum development activities have you been involved with over the past three years? Please list below:  
Also, will you please estimate the number of hours you have spent on each of the activities during the past 3 years.

**PART B - EXPERIENCE WITH THE INSTRUCTIONAL SYSTEMS MODEL**  
**(ISM)**

The aim of this part of the questionnaire is to ascertain your views on the nature and usefulness of the procedure for developing curricula called the Instructional Systems Model. This model has been widely used in TAFE throughout Australia over the last few years.

The Instructional Systems Model for curriculum development is briefly described on the blue sheet attached to this questionnaire.

5. How familiar are you with the Instructional Systems Model for developing a curriculum?

Please tick one of the statements below which most closely describes your experience with the Instructional Systems Model.

- ☐ I have never heard of it.
- ☐ I have only heard about it, I have never used it.
- ☐ I have only used it in a minor way.
- ☐ I have used it in collaboration with others for developing portions of courses.
- ☐ I have been heavily involved with developing curricula using the Instructional Systems Model.

-----

IF YOU TICKED RESPONSE "I have never heard of it", IGNORE QUESTIONS 6, 7 and 8

-----

6. If you are familiar with the Instructional Systems Model how did you hear of it?

- ☐ through reading
- ☐ through talking with other teachers
- ☐ through attending professional training courses in Tasmania

\_\_\_\_\_ through attending professional training courses in  
Tasmania

\_\_\_\_\_ from experiences I have had outside Tasmania

7 . If you have used the Instructional Systems Model for  
developing a small or substantial part of a curriculum,  
how did you generally find it?

\_\_\_\_\_ Useful only as a structured approach to developing  
curricula

\_\_\_\_\_ Of very limited use owing to the nature of the  
subject areas I am involved with

\_\_\_\_\_ Moderately useful for certain subject areas

\_\_\_\_\_ Very useful for most of my subject areas

Please write any comments you may care to make:

8. If you have used the Instructional Systems Model, how difficult did you find it in fulfilling the following curriculum development processes?

| Very<br>difficult | Moderately<br>difficult | No<br>difficulty |                                    |
|-------------------|-------------------------|------------------|------------------------------------|
| _____             | _____                   | _____            | Analyse the job                    |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Identify the training requirements |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Formulate training objectives      |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Prepare training objective tests   |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Derive enabling objectives & tests |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Develop learning units             |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Select instructional strategies    |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Produce learning resources         |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Teach the course                   |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Review college performance         |
| _____             | _____                   | _____            |                                    |
| _____             | _____                   | _____            | Feedback from the job              |

Please write any comments you may care to make:

**PART C - CURRICULUM DEVELOPMENT METHODS IN GENERAL**

The aim of this part of the questionnaire is to ascertain your views on the best ways to go about curriculum development in your area of teaching.

**PART C (i) - Persons involved in curriculum development**

9. Please write in the space below, the sorts of people, whom you think should be involved with curriculum development in TAFE.

10. Do you think students should be involved with curriculum development, that is, help decide what should be taught in the course and the way it should be taught?

\_\_\_\_ NO

\_\_\_\_ Not sure

\_\_\_\_ YES

If you answered YES, please list below course or subject areas for which student input would be appropriate:

**PART C (ii) - Curriculum development processes**

11. There are various interpretations of the term "Curriculum". What do you mean by "Curriculum" as applied to your course areas?

Please tick an appropriate box:

- ☐ Curriculum is a plan of expected student outcomes
- ☐ Curriculum is a description of all that goes on in a learning situation
- ☐ Curriculum is a list of topics which have to be learned
- ☐ Curriculum is a guide to what the teacher is to do in the classroom
- ☐ Curriculum is a description of the learning experiences students should undergo

If NONE of the above definitions of curriculum is appropriate to your course area, please write briefly what your definition is:



12. The following is a list of processes which are often considered when planning a curriculum:

Preliminary planning and Analysis (a study of the context of the proposed development project);  
 Development of Aims (general purposes);  
 Development of Objectives (specific outcomes);  
 Selection of Content (what is to be taught);  
 Selection of Teaching/learning methods;  
 Implementation;  
 Evaluation.

Because different sets of processes may need to be considered for developing curricula in different subject areas, will you please write down in the order in which you think they should be carried out, what you perceive to be an appropriate list for your subject areas, either based on the above list or distinct from it.

Would the elements in the list you wrote above, or the sequencing vary from one project to another?

☐ NO

☐ NOT SURE

☐ YES

**Please underline** elements in the list you wrote above, which are the most important ones to consider when dealing with curriculum development processes related to your particular course areas.

13. Some curriculum development projects include an analysis of the context of the proposed development, both inside and outside the college. Is some form of situational or context analysis relevant for your courses?

☐ YES      ☐ NO      ☐ Not sure

If you answered YES, please tick the following elements which you think should be investigated:

- ☐ Nature of the job graduates will perform
- ☐ Needs of the students
- ☐ Needs of potential employers
- ☐ Nature of the subject matter
- ☐ Resources available
- ☐ Community expectations
- ☐ Courses offered by other educational institutions
- ☐ Educational background of the students

Please write down any other elements you think should be investigated:

14. How should specific educational purposes be best expressed for your course areas?

Please tick if appropriate:

- ☐ As a list of topics to be covered  
☐ As student performance objectives  
☐ As a list of learning experiences  
☐ As general objectives

Any other:

**PART C (iii) - Curriculum implementation**

15. Should curriculum planners decide on the teaching and/or learning methods to be used for implementing a course?

☐ YES      ☐ NO

Please write any comments you may care to make:

16. Should curriculum developers decide on the teaching/learning materials to be used for implementing a course?

☐ YES      ☐ NO

Please write any comments you may care to make:

**PART C (iv) - Evaluation**

17. What types of student assessments are most suited to your area?

Please write below or on a separate sheet:

18. Should consideration of course evaluation be part of the curriculum development process?

☐ YES      ☐ NO      ☐ NOT SURE

If you answer YES to the above, please write down those who should be involved in course evaluation:

19. What elements should be investigated in a course evaluation?. Please list :

**PART C (v) - Agencies of curriculum development**

20. From where should the major curriculum development decisions be made?

- ☐ a central agency
- ☐ the implementation site
- ☐ a combination of both
- ☐ other, please write below:

21. Please comment on your perception of the role of a central curriculum section:

22. Thankyou for answering this questionnaire. If you have any other comments you may care to make, please write them below or on a separate sheet:

## **APPENDIX B**

APPENDIX B

RESPONSES TO:

QUESTIONNAIRE ON TEACHERS' BACKGROUNDS IN CURRICULUM DEVELOPMENT

NUMBER OF QUESTIONNAIRES DISTRIBUTED = 52

NUMBER OF RESPONSES RECEIVED = 48

The aim of this questionnaire is to identify curriculum development practices which have been used in TAFE in Tasmania, to gather practitioner's views as to their suitability and any suggestions for methods which may be more useful.

PART A - BACKGROUND IN CURRICULUM DEVELOPMENT

1. Name of respondent:

\_\_\_\_\_

2. In which college do you work?

\_\_\_\_\_

3. What is your area  
of teaching expertise?

\_\_\_\_\_

4. What formal curriculum development activities have you been involved with over the past three years? Please list below:  
Also, will you please estimate the number of hours you have spent on each of the activities during the past 3 years.

NUMBER OF RESPONSES = 34 (See Comments)

PERCENTAGE OF RESPONDENTS = 71%



**PART B - EXPERIENCE WITH THE INSTRUCTIONAL SYSTEMS MODEL**  
**(ISM)**

The aim of this part of the questionnaire is to ascertain your views on the nature and usefulness of the procedure for developing curricula called the Instructional Systems Model. This model has been widely used in TAFE throughout Australia over the last few years.

The Instructional Systems Model for curriculum development is briefly described on the blue sheet attached to this questionnaire.

5. How familiar are you with the Instructional Systems Model for developing a curriculum?

Please tick one of the statements below which most closely describes your experience with the Instructional Systems Model.

IN THIS QUESTION SOME RESPONDENTS TICKED MORE THAN ONE BOX

| NUMBER AND<br>PERCENTAGE OF<br>RESPONSES<br>(No.) (%) | TOTAL NUMBER OF NIL RESPONSES = 1<br>PERCENTAGE OF NIL RESPONSES = 2%                         |
|---|---|
| 3      6  | I have never heard of it.   |
| 6      13   | I have only heard about it, I have never used it.   |
| 12     25   | I have only used it in a minor way.   |
| 17     35   | I have used it in collaboration with others for developing portions of courses.               |
| 13     27   | I have been heavily involved with developing curricula using the Instructional Systems Model. |

-----  
IF YOU TICKED RESPONSE "I have never heard of it", IGNORE QUESTIONS 6, 7 and 8  
-----

6. If you are familiar with the Instructional Systems Model how did you hear of it?

IN THIS QUESTION SOME RESPONDENTS TICKED MORE THAN ONE BOX

| NUMBER AND<br>PERCENTAGE OF<br>RESPONSES TO QUESTION 6<br>(No.) (%age) | TOTAL NUMBER OF NIL RESPONSES<br>PERCENTAGE OF NIL RESPONSES | = 4<br>= 8%  |
|--|--|--|
| 9  | 20   | through reading  |
| 18   | 41   | through talking with other teachers                            |
| 27   | 61   | through attending professional training<br>courses in Tasmania |
| 5  | 11   | from experiences I have had outside Tasmania                   |

7. If you have used the Instructional Systems Model for developing a small or substantial part of a curriculum, how did you generally find it?

IN THIS QUESTION SOME RESPONDENTS TICKED MORE THAN ONE BOX

| NUMBER AND<br>PERCENTAGE OF<br>RESPONSES TO QUESTION 7<br>(No.) (%age) | TOTAL NUMBER OF NIL RESPONSES<br>PERCENTAGE OF NIL RESPONSES | = 6<br>= 13%   |
|--|--|--|
| 11   | 26   | Useful only as a structured approach to<br>developing curricula                    |
| 11   | 26   | Of very limited use owing to the nature of<br>the subject areas I am involved with |
| 10   | 24   | Moderately useful for certain subject areas  |
| 11   | 26   | Very useful for most of my subject areas   |

Please write any comments you may care to make:

27      64      (See Comments)

8. If you have used the Instructional Systems Model, how difficult did you find it in fulfilling the following curriculum development processes?

TOTAL NUMBER OF NIL RESPONSES = 9  
 PERCENTAGE OF NIL RESPONSES = 19%

THE PERCENTAGES GIVEN BELOW ARE PERCENTAGES OF THE  
 NUMBER OF RESPONDENTS WHO RESPONDED TO QUESTION 8

| Very<br>difficult<br>(No;%age) | Moderately<br>difficult<br>(No;%age) | No<br>difficulty<br>(No;%age) |                                       |
|--------------------------------|--------------------------------------|-------------------------------|---------------------------------------|
| 8;20                           | 9;23                                 | 17;44                         | Analyse the job                       |
| 3; 8                           | 15;38                                | 16;41                         | Identify the training<br>requirements |
| 3; 8                           | 16;41                                | 13;33                         | Formulate training<br>objectives      |
| 9;23                           | 14;36                                | 11;28                         | Prepare training<br>objective tests   |
| 7;18                           | 14;36                                | 11;28                         | Derive enabling<br>objectives & tests |
| 8;20                           | 13;33                                | 12;31                         | Develop learning units                |
| 5;13                           | 15;38                                | 13;33                         | Select instructional<br>strategies    |
| 12;31                          | 11;28                                | 10;26                         | Produce learning<br>resources         |
| 5;13                           | 12;31                                | 17;44                         | Teach the course                      |
| 13;33                          | 9;23                                 | 7;18                          | Review college<br>performance         |
| 9;23                           | 9;23                                 | 9;23                          | Feedback from the job                 |

Please write any comments you may care to make:

24;50 (See Comments)

### **PART C - CURRICULUM DEVELOPMENT METHODS IN GENERAL**

The aim of this part of the questionnaire is to ascertain your views on the best ways to go about curriculum development in your area of teaching.

#### **PART C (i) - Persons involved in curriculum development**

9. Please write in the space below, the sorts of people, whom you think should be involved with curriculum development in TAFE.

NUMBER OF RESPONSES = 46 (See Comments)

PERCENTAGE OF RESPONSES = 96%

NUMBER OF NIL RESPONSES = 2

10. Do you think students should be involved with curriculum development, that is, help decide what should be taught in the course and the way it should be taught?

|               |  |                               |   |    |
|---------------|--|-------------------------------|---|----|
| NUMBER AND    |  | TOTAL NUMBER OF NIL RESPONSES | = | 1  |
| PERCENTAGE OF |  | PERCENTAGE OF NIL RESPONSES   | = | 2% |
| RESPONSES     |  |                               |   |    |

(No.) (%age)

21 44 NO

4 8 Not sure

18 38 YES If you answered YES, please list below course or subject areas for which student input would be appropriate:

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID NOT TICK A BOX BUT MADE A COMMENT

5 10 (See Comments)

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID TICK A BOX AND MADE A COMMENT

29 60 (See Comments)

**PART C (ii) - Curriculum development processes**

11. There are various interpretations of the term "Curriculum". What do you mean by "Curriculum" as applied to your course areas?

Please tick an appropriate box:

IN THIS QUESTION SOME RESPONDENTS TICKED MORE THAN ONE BOX

| NUMBER AND<br>PERCENTAGE OF<br>RESPONSES<br>(No.) (%age) |    | TOTAL NUMBER OF NIL RESPONSES = 2   |
|--|----|---|
|  |    | PERCENTAGE OF NIL RESPONSES = 4%  |
| 18   | 38 | Curriculum is a plan of expected student outcomes                               |
| 18   | 38 | Curriculum is a description of all that goes on in a learning situation         |
| 3  | 6  | Curriculum is a list of topics which have to be learned                         |
| 5  | 10 | Curriculum is a guide to what the teacher is to do in the classroom             |
| 21   | 44 | Curriculum is a description of the learning experiences students should undergo |

If NONE of the above definitions of curriculum is appropriate to your course area, please write briefly what your definition is:

9        19        (See comments)

12. The following is a list of processes which are often considered when planning a curriculum:

Preliminary planning and Analysis (a study of the context of the proposed development project);  
 Development of Aims (general purposes);  
 Development of Objectives (specific outcomes);  
 Selection of Content (what is to be taught);  
 Selection of Teaching/learning methods;  
 Implementation;  
 Evaluation.

Because different sets of processes may need to be considered for developing curricula in different subject areas, will you please write down in the order in which you think they should be carried out, what you perceive to be an appropriate list for your subject areas, either based on the above list or distinct from it.

NUMBER OF RESPONSES = 44 (See Comments)  
 PERCENTAGE OF RESPONSES = 92%  
 NUMBER OF NIL RESPONSES = 4

Would the elements in the list you wrote above, or the sequencing vary from one project to another?

|               |                             |       |     |
|---------------|-----------------------------|-------|-----|
| NUMBER AND    | NUMBER OF NIL RESPONSES     | =     | 8   |
| PERCENTAGE OF | PERCENTAGE OF NIL RESPONSES | =     | 17% |
| RESPONSES     |                             |       |     |
| (No;%age)     |                             |       |     |
| 23;48 NO      | 7;15 NOT SURE               | 13;27 | YES |

**Please underline** elements in the list you wrote above, which are the most important ones to consider when dealing with curriculum development processes related to your particular course areas.

NUMBER OF NIL RESPONSES = 31  
 PERCENTAGE OF NIL RESPONSES = 65%  
 17;35 (See Comments)

13. Some curriculum development projects include an analysis of the context of the proposed development, both inside and outside the college. Is some form of situational or context analysis relevant for your courses?

|   |     |                                   |          |
|---|-----|-----------------------------------|----------|
| NUMBER AND<br>PERCENTAGE OF<br>RESPONSES<br>(No;%age) |     | TOTAL NUMBER OF NIL RESPONSES = 3 |          |
|   |     | PERCENTAGE OF NIL RESPONSES = 6%  |          |
| 40;83   | YES | 2;4                               | NO       |
|   |     | 1;2                               | Not sure |

If you answered YES, please tick the following elements which you think should be investigated:

| (No.) (%age) |    |   |
|--------------|----|---|
| 40           | 83 | Nature of the job graduates will perform          |
| 40           | 83 | Needs of potential employers                      |
| 33           | 69 | Needs of the students                             |
| 32           | 67 | Nature of the subject matter                      |
| 32           | 67 | Resources available                               |
| 28           | 58 | Courses offered by other educational institutions |
| 27           | 56 | Educational background of the students            |
| 17           | 35 | Community expectations                            |

Please write down any other elements you think should be investigated:

20      42      (See Comments)

14. How should specific educational purposes be best expressed for your course areas?

Please tick if appropriate:

IN THIS QUESTION SOME RESPONDENTS TICKED MORE THAN ONE BOX

|               |  |                               |   |    |
|---------------|--|-------------------------------|---|----|
| NUMBER AND    |  | TOTAL NUMBER OF NIL RESPONSES | = | 4  |
| PERCENTAGE OF |  | PERCENTAGE OF NIL RESPONSES   | = | 8% |
| RESPONSES     |  |                               |   |    |

(No.) (%age)

|    |    |                                   |
|----|----|-----------------------------------|
| 10 | 21 | As a list of topics to be covered |
|----|----|-----------------------------------|

|    |    |                                   |
|----|----|-----------------------------------|
| 33 | 69 | As student performance objectives |
|----|----|-----------------------------------|

|    |    |                                   |
|----|----|-----------------------------------|
| 14 | 29 | As a list of learning experiences |
|----|----|-----------------------------------|

|    |    |                       |
|----|----|-----------------------|
| 19 | 40 | As general objectives |
|----|----|-----------------------|

Any other:

|    |    |                |
|----|----|----------------|
| 14 | 29 | (See Comments) |
|----|----|----------------|

### **PART C (iii) - Curriculum implementation**

15. Should curriculum planners decide on the teaching and/or learning methods to be used for implementing a course?

|               |  |                               |   |    |
|---------------|--|-------------------------------|---|----|
| NUMBER AND    |  | TOTAL NUMBER OF NIL RESPONSES | = | 3  |
| PERCENTAGE OF |  | PERCENTAGE OF NIL RESPONSES   | = | 6% |
| RESPONSES     |  |                               |   |    |

(No.) (%age)

|    |    |     |
|----|----|-----|
| 21 | 44 | YES |
|----|----|-----|

ONE RESPONDENT TICKED BOTH BOXES

|    |    |    |
|----|----|----|
| 21 | 44 | NO |
|----|----|----|

Please write any comments you may care to make:

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID NOT TICK A BOX BUT MADE A COMMENT

|   |   |                |
|---|---|----------------|
| 4 | 8 | (See Comments) |
|---|---|----------------|

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID TICK A BOX AND MADE A COMMENT

|    |    |                |
|----|----|----------------|
| 36 | 75 | (See Comments) |
|----|----|----------------|



16. Should curriculum developers decide on the teaching/learning materials to be used for implementing a course?

|   |   |
|---|---|
| NUMBER AND<br>PERCENTAGE OF<br>RESPONSES<br>(No.) (%) | TOTAL NUMBER OF NIL RESPONSES = 4<br>PERCENTAGE OF NIL RESPONSES = 8% |
|---|---|

18      38      YES

19      40      NO

Please write any comments you may care to make:

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID NOT TICK A BOX BUT MADE A COMMENT

7      15      (See Comments)

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID TICK A BOX AND MADE A COMMENT

27      56      (See Comments)

### **PART C (iv) - Evaluation**

17. What types of student assessments are most suited to your area?

Please write below or on a separate sheet:

NUMBER OF RESPONSES      =    43      (See Comments)

PERCENTAGE OF RESPONSES    =    90%

NUMBER OF NIL RESPONSES    =    5

18. Should consideration of course evaluation be part of the curriculum development process?

|   |   |
|---|---|
| NUMBER AND<br>PERCENTAGE OF<br>RESPONSES<br>(No.) (%) | TOTAL NUMBER OF NIL RESPONSES = 1%<br>PERCENTAGE OF NIL RESPONSES    = 2% |
|---|---|

41      85      YES

1      2      NO

4      8      NOT SURE

If you answer YES to the above, please write down those who should be involved in course evaluation:

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID NOT TICK A BOX BUT MADE A COMMENT

1            2        (See Comments)

NUMBER AND PERCENTAGE OF RESPONDENTS WHO DID TICK A BOX AND MADE A COMMENT

43           90        (See Comments)

19. What elements should be investigated in a course evaluation?. Please list :

NUMBER OF RESPONSES            = 43        (See Comments)

PERCENTAGE OF RESPONSES      = 90%

NUMBER OF NIL RESPONSES      = 5

### **PART C (v) - Agencies of curriculum development**

20. From where should the major curriculum development decisions be made?

IN THIS QUESTION SOME RESPONDENTS TICKED MORE THAN ONE BOX

|               |  |                               |   |    |
|---------------|--|-------------------------------|---|----|
| NUMBER AND    |  | TOTAL NUMBER OF NIL RESPONSES | = | 1  |
| PERCENTAGE OF |  | PERCENTAGE OF NIL RESPONSES   | = | 2% |
| RESPONSES     |  |                               |   |    |

(No.) (%)

3            6        a central agency

5            10        the implementation site

39           81        a combination of both

7            15        other, please write below:

21. Please comment on your perception of the role of a central curriculum section:

NUMBER OF RESPONSES = 43 (See Comments)

PERCENTAGE OF RESPONSES = 90%

NUMBER ON NIL RESPONSES = 5

22. Thankyou for answering this questionnaire. If you have any other comments you may care to make, please write them below or on a separate sheet:

NUMBER OF RESPONSES = 18 (See Comments)

PERCENTAGE RESPONSES = 38%

NUMBER OF NIL RESPONSES = 30

QUESTIONS

TO OPEN-ENDED

COMMENTS RELATING

APPENDIX C

**QUESTION 7**

If you have used the Instructional Systems Model for developing a small or substantial part of a curriculum, how did you generally find it?

**TRADE ORIENTED RESPONSES**

1

A basic understanding of ISM is a must for persons involved with curriculum development.

However it would be bordering on lunacy to follow the model in every detail for each project, especially if clients' requests are to be responded to within reasonable timeframes. ISM is a useful tool to ensure performance objectives are met. A weakness of the model is that problem-solving and the development of analytical and inquisitive thinking are neglected by the system.

2

Useful in the respect of having everything detailed and then correlated with the subject and sorted to be relevant and non-relevant, but taking into account or assuming a student has little or no previous knowledge.

13

The ISM is a very useful tool in identifying all of the components that need to be considered in putting a training course together. I believe the model is too "clinical" for most multi-faceted trades and professions but is extremely useful for single component trades/professions

29

I found it very useful if you have a full working knowledge of it and know its limitations.

33

\* Original thoughts - (trade) very useful for my subject area.

\* Provision is too expensive.

47

The inability of people explaining the model to successfully and succinctly describe the process caused me quite a deal of frustration.

48

I think that when a curriculum writer is new to the game he needs to follow a method of C.D.

Planned methodology is important and this is an integral part of ISM. When the C.D. writer has gained experience he/she will develop his/her own methodology/structure.

## NON TRADE ORIENTED RESPONSES

5

Not suitable in the Commerce course.

Lends itself to trades and prac.

How can you have a p. o for "Stress management or attitudes and values.

Couldn't use ISM for Comm.

Trouble in testing all objectives.

Students need to pass all objectives of 100%.

"Spend half on testing".

7

Many parts of the syllabus content are philosophies, values, beliefs, etc. Found this approach (i.e. ISM) difficult to apply as compared with absolutes e.g. a defined and easily demonstrated end standard of attainment.

11

Although useful the model has limitations, particularly in these subjects that are more values/knowledge/attitudinally based, e.g. "Family and Society".

The DACUM process is a very "neat" and useful approach to curriculum design.

14

With subjects of a practical nature but which are aesthetic as well I found that parts of the process (on blue sheet) too difficult or irrelevant

1(d) because of specific standards

2(a) not necessary

(iv) and (v) have never been formally performed.

18

ISM also broadly known loosely as Scientific method.

19

Useful

1. If the end result is known.

2. If the procedure to the end result is totally needed for the end result

3. The human subject is of low mental capacity.

4. The material does not need to be taught.

20

The use of the ISM model was in my opinion designed for the teaching of skills as in trade areas and testing such skills against specific criteria and standards.

To use such a method for subjects based mainly on the transmission of theory to students - I have found difficult to accept as an appropriate way of writing syllabus documents.

23

I have used ISM as an ideal model modified in application of duties, tasks and student performance objectives were more affective-cognitive than "skill" based or psychomotor based.

27

Attitudes, values more important than concepts often.  
 Carer behaviour always more than a summation of  
 skills/abilities of particular time periods of a course!  
 Being "human" means something more than being able to "do"  
 sill 1:1:1 or whatever!  
 The "hidden" curriculum is important in education!  
 Teacher differences (skills & abilities) have to be allowed  
 for.  
 A course of study must be dynamic with constant revision.

30

None of the above statements gives a complete picture. ISM  
 has been very valuable for trade courses and traineeships.  
 The model is still valuable for providing a structured  
 approach in developing many "technician" courses.

32

The time frame and the rigidity of the approach tends to  
 make it unwieldy to use effectively.

34

Useful where curriculum developer is unsure of break down of  
 particular subject area.  
 The ISM model forces the brain to itemise minute steps that  
 might possibly be missed.

35

The approach did enable a varied group of people engaged in  
 curriculum development to develop a common approach to the  
 task. Co-ordinators, client-group (e.g. Police), course  
 writers and experts in different subject areas could use the  
 approach to sort out priorities and proceed according to a  
 logical and structured plan.

36

Time consuming and expensive to complete. Focuses mainly on  
 outcomes and tends to ignore social issues which emerge from  
 the curriculum. Useful for trade-based training where much  
 of the curriculum is performance-based.

40

Not used.

41

Commercial/secretarial current curriculum is wholly based on  
 ISM.

43

May have used the approach implicitly in developing  
 curricula.

44

It's basically common sense.  
 However your interpretation of it is very training oriented  
 rather than educationally oriented with a large training  
 component.

45

I have used very similar approach to writing syllabus in early 80's.

### QUESTION 8

If you have used the Instructional Systems Model, how difficult did you find it in fulfilling the following curriculum development processes?

### TRADE ORIENTED RESPONSES

1

Most difficulties are time/resources related.

12

Although we do not follow the system in detail we have been able to achieve our results by using at random most areas.

13

As stated earlier, I believe ISM to be too "clinical" for metal fabrication courses. The model takes the important teacher/student group relationship out of training and the valuable experience gained by a trade teacher's previous work experience is not used effectively enough.

23

Questions whether "Produce learning resources, Teach the course, Review college performance, Feedback from the job" are part of ISM.

29

I don't believe it does these (ie. review college performance, feedback from the job)

33

Due to preconceived ideas/attitudes of teachers a high degree of resistance existed in the early stages of use.

Lack of direction also created many difficulties in the implementation stages, eg. apprentice reporting procedures are confused due to the total lack of planning in the first instance.

38

An extremely thorough process but expensive.

39

Although the ISM method lends itself well to quite a few of the subjects, the time taken to develop and produce a program is prohibitive in my case.

48

Difficulty with learning resources



## NON TRADE ORIENTED RESPONSES

4

The time factor is probably the vital area.

11

I do not think this (the production of learning resources) applies

14

Last Peo (review college performance, Feedback from the job) not yet performed. There is a danger in reviewing a course at College level and not State level.

We have had problems in the past with the syllabus being interpreted very differently by each college.

The main reason for the review was to develop a standardised course. Too much informal review will lead us off along diverging paths again.

19

(this section) has little use in a creative area. Might relate to some initial technical process but unable (too complex) to cope with multiple choices and quantum leaps.

22

I think the arguments against ISM tend to be prejudiced by inflexibility. There are many alternatives to chose from and it's a case of choosing the right tool for the right job. Because ISM is a good tool for trade skills designers, white collar workers tend to think that an ideal tool should be available for them. Perhaps 2-3 days introduction to literature on other curricula models would be a good thing.

24

The ISM probably had the most impact for me in determining the objectives of the learning packages.

The general overall course content was already decided upon before I started. I was given N.S.W course material and told to go from there.

27

Reading should, ideally, be monitored to fit precise objectives - this doesn't occur - most reading in the Developmental Disability area overlaps subjects within the course.

Problem: - a reading approach?

- a precise ISM course approach?

Job situation varies tremendously with service type.

Problem: teaching for generalisation to different environs. ISM is excellent for particularising/detailing objectives, but these have to be performed in an actual, practical setting.

Interpretation of objectives varies with staff.

Writer of objectives may not be the teacher - there is no one approach to successful caring.

32

Some of the negative aspects are often centred around the constraints within the system rather than the model, however for higher levels of education the model complicates matters.

34

The only attempt at evaluation of college performance was inconclusive.

35

Most steps involved considerable liaison for me: I wasn't always the expert or writer, and even where I was, I had to gather data from client groups (not always readily accessible) to determine needs (eg. collect large bundles of reports from Parks and Wildlife to see what they reported on, to whom, how, and whether reports tended to be analytical or information.) Much liaison/meetings etc needed to be organised. However, most steps were achieved quite satisfactorily, except for review/feedback. Informal from structured feedback was available from students, but I felt that all curriculum development needed formal review after the first year of operation to pick up on areas of difficulty or inadequacy etc. in teaching/learning. I also felt that an updating/upgrading was needed after 4-5 years.

41

No formal review has been attempted at college, department or Divisional level.

42

Not applicable - I haven't really used it.

44

There is no time to analyse the job thoroughly, much from own perception and knowledge.  
In identifying the training requirements and problems you need to be ahead of industry.  
The review of college performance has been ad hoc.  
There have been no formal processes for feedback from the job.

45

Very logical but long winded approach to reaching goals.

#### **COMMENTS FROM QUESTION 10**

Do you think students should be involved with curriculum development, that is, help decide what should be taught in the course and the way it should be taught?

**TRADE ORIENTED RESPONSES**

1

Yes

In all post trade type courses.

2

Not sure.

Only if they have past experience or knowledge of subject area. (not experts)

12

No.

The students we deal with are mostly people in their teens and if they had any say would do nothing.

17

Students should be involved in review and in the way it is taught - but not in the original curriculum development.

21

Yes.

Mainly by the feedback method, ie. questioning students after the training has been given.

29

They do not in most cases know what they want to learn.

33

Trade training does not relate to your questions.

Students do not have the experience within the trade to make objective comment, particularly in the early stages. I do think that students should be surveyed in respect to their attitudes to syllabus and teaching methods at the end of each year.

Employers should be involved as in the majority of instances they are tradesmen and relate to the trade in question.

46

Yes

Past students should be used as part of a market research exercise to determine the relativity and interest of course content and how that content is delivered.

**NON TRADE ORIENTED RESPONSES**

22

Yes

In real estate any thinking student could have a reliable input - students provide good insight into relevance, level of difficulty and commencement bench marks. I have made a lot of use of student feedback. But average age is around 40.

5

It depends on the area.

4

No

Idealistically students should be involved in the way curriculum is implemented - however practically in TAFE colleges I don't see this as being possible due to the short time students are in the college.

19

Yes

Student input is appropriate to the part that they play in the end process.

18

No

But yes for ex-students, especially those who have recently graduated.

15

Yes

All subjects in Welfare Studies.

14

No

(a) Their motivation for doing the course may not relate to the aim of the course.

(b) Immaturity

Past students who are working in the field may have something useful to contribute.

11

Yes

Probably more useful for ex-students and/or 2nd year students.

I think they could be involved in all areas.

10

No

It could be useful to survey exiting students as they leave their courses to judge what seems effective - methods of instruction, packages etc.

45

Yes

Students should not be involved in all aspects of curriculum development but their comments are useful/important in implementation stages.

42

Yes

Personally, I make a point of discussing with students generally their responses to different aspects of the course and how it could be improved. I imagine that this sort of discussion with students should occur with all courses/

41

Yes

Students' opinions should be sought on teaching methodology

They should also be given an opportunity to negotiate their curriculum where possible as they then become more committed to the tasks involved.

36

Yes

Not subject/course oriented. Past students can be surveyed for evaluation/redevelopments of any course. For new courses it is more difficult, but sometimes the target group can be identified and surveyed in advance.

35

Yes

(a) Student input is necessary at the review stage for all courses or subject areas.

(b) Mature age students already working in vocational areas can provide valuable input and may identify gaps in curriculum provision.

(c) Mature age students (and young ones) ought to be consulted if possible about the way in which a course should be taught.

(d) Where content may be altered because of the student's previous knowledge or experience in the field, then students of any age should help decide what should be taught in the course (although I believe that their competency should be firmly established by an appropriate means.)

34

Yes

In Library Technician area I think there should be total involvement. Graduate students represent part of the market we are serving.

32

Yes

All areas. The vast majority of students in the programme are of mature age with a variety of education, life experiences etc. They range from illiterate Among people from Laos who have received no formal education, having spent 8 years in refugee camps in Thailand and are entering Australia under Family Reunion Schemes, plus qualified professional people - doctors, teachers etc arriving in Australia with documentation and good English skills and valuable experience which is untapped. Learning a second language as a mature person offers educational, cultural and self esteem improvement opportunities.

27

No

Students do have input into curriculum at the interface anyway.

eg. - speed of going through particular aspects of course  
 - interests  
 - extra-course work  
 - student input ( education is a dialogue).

25

Yes

In ATP programs - short specific courses, I feel Personal Development and Communications subject should be negotiated with students. A selection of topics could be suggested by the teacher, but each group have varying backgrounds and what is relevant for one group may not be for another.

In YTP programs teenagers respond better if they feel they have played a part in planning the programme.

24

Yes

Students could be consulted, especially if a course is undergoing review, to determine if their needs are being met. Perhaps this refers more to graduates.

## QUESTION 12

Deals with a list of processes in curriculum development.

## TRADE ORIENTED RESPONSES

47

Preliminary Planning and Analysis. Development of Aims.  
 Development of Objectives.  
 Content.  
 Teaching/learning methods.  
 \*Staff Development - implementation, evaluation.

48

Preliminary Planning and Analysis.  
 Selection of Content.  
 Development of Aims.  
 Development of Objectives.  
 Selection of Teaching/learning methods.  
 Implementation.  
 Evaluation.

1

Documentation of need for the course (if possible demonstrating industry support).  
 Prepare budget for all stages of project.  
 Conduct job analysis (if adequate resources available).  
 Select content and negotiate standards acceptable to industry, clients and TAFE.

Develop learning units/modules and determine performance criteria (i.e. objectives).  
 Run pilot course - evaluate - make adjustments.  
 Implementation - (formative) - evaluation - performance indicators.

2

An evaluation testing process before implementation.  
 Evaluation - TAFE industry, student needs, funding has a large influence, is the environment suitable.

3

Expression of a need from industry - due to a shortage or extension of skills.

12

The list above would suit my area of teaching and planning in the way you have outlined.

13

Evaluation of existing course and its' outcomes should come first, to see if it is meeting current needs - then follow the steps above e.g. -

- . analysis of work requirement
- . selection of training course content
- . use of a variety of teaching methods/styles
- . use an appropriate set of assessment tools
- . check quality of outcomes of course.

17

As above.

After evaluation then appropriate modification to curriculum.

21

From my experience, the list shown above includes all the steps necessary and basically in the order shown.

23

Analysis - Analyse Job  
                   Identify Training Requirements  
                   Prepare Training Objectives

Design - Prepare Syllabus - Select Project  
           Performance  
           Conditions  
           Standards  
           Enabling Objectives  
           Test Check Lists

          Prepare Learning Units - Student Packages  
           Training Manuals  
           Learning Resources

Conduct - Implement Course.

Evaluate - Review College Performance  
 Review Student Performance

Validate - Follow up on the job.

29

Write aim in general of project.  
 Write job description of person/persons who you want training for.  
 Develop content based on job description.  
 Evaluation of content.  
 Selection of teaching/learning methods.  
 Implementation.  
 Evaluation.

39

The list above seems to be adequate and in logical sequence.

46

1. Determine the need for development.
2. Determine the outcomes or product of the course in conjunction with industry and commerce etc.
3. Seek approval to develop - Bureaucracy, Unions in form of submission.
4. Develop course aims - similar to 2.
5. Produce shopping list content - DACUM.
6. Have ratified by stake holders.
7. Write content in objective form.
8. College select their own method of delivery.
9. Implement.
10. Evaluate after course has run its full term.

#### **NON-TRADE ORIENTED RESPONSES**

22

I have used this model (above). However, I find the application of this scheme tends to be reorganised by perverse and adverse circumstances. I think people should not abandon a good approach simply because in particular circumstances difficulties are encountered. Sometime the search for a "good model" is a search for means to avoid a difficulty.

5

Study of content (need and demand).  
 Market place requirements - employers.  
 Content.  
 Aims and objectives.  
 Sequencing of content.  
 Teaching method - implementation.  
 Evaluation.  
 Spiral curr - for comm.



6

The first question that should be considered if a teacher is to be involved in the planning process is, have they had any previous experience in curriculum development? They should be given some training or relevant reading matter if they are reasonably new to the system.

The meeting with industry personnel should not be at the beginning or pre-planning stage, but after some of the syllabis have been formulated.

4

Agree with the above order, when developing new curriculum particularly if changing to ISM.

20

The above list would be acceptable to use in the priority set out.

19

Need.

Analysis.

Resources.

Strategy - aims and objectives.

Process - content and teaching.

Implementation - objectives and resources.

Evaluate.

18

The top-down, step-wise refinement method, (with feed back) as outlined in your list is generally applicable.

11

As above but without selection of teaching/learning methods. Objectives are sometimes less appropriate than broader aims or goals, as in Family and Society.

10

I would insert pilot trials before general implementation. This would eliminate waste of time and effort by sorting out major difficulties.

8

As above.

Specific outcomes are not necessarily a high priority in creative areas.

44

The above is fine as long as it is an iterative process and it involves consultation with all the groups previously identified.

43

Would add:

Recognition (at end of list)

Need for course (at beginning)

Funding (at end of list)

42

I would consider that the order should be as indicated above. In my experience I find 3 and 4 to intermingle to a certain extent.

41

Aims and objectives.  
Preliminary analysis and planning.  
Selection of content.  
Teaching/learning methods.  
Implementation.  
Evaluation - were aims/objectives met?

40

As above.  
This seems to be a model planning process.

36

As above - applicable to any program.

35

I believe that the list above is a close approximation of what I like to do and have done.

34

Curriculum should follow the above in a cyclic movement  
Test Market  
Develop plan  
Formulate objectives  
Prepare content  
Implement  
Evaluate

Evaluation will be constant by a constant test in market place.

31

1. Understanding the needs of the student group.
2. Development of aims.
3. Selection of content.
4. Development of presentation.
5. Selection of teaching methods.
6. Trialling draft.
7. Implementation.
8. On-going improvement of product.

30

You need to confirm that there is a need (not just a demand) for a course before doing preliminary planning.

25

1. Development of aims - general purposes.
2. Preliminary planning.
3. Implementation (how? where? how long?)
4. Development of objectives.
5. Selection of content - awareness of what's around, appropriate to student
6. Selection of learning methods.

7. Evaluation - status awarded, recognition, use for student's future.

28

I get very concerned at the selection of teaching/learning methods and implementation stage. This stage seems to present most problems that I have had to deal with due to overprescriptiveness of teaching methods.

Problems.

Teachers reduced to supervisors -> much frustration -> very high staff stress levels.

Teachers inadequately prepared to teach new ways.

Badly designed material.

Teachers not free to introduce components which make for effective comprehension and concept development.

Elimination of the above component as well as other components I consider essential prerequisites for Australia's future workforce.

### QUESTION 13

Is some form of situational or context analysis relevant for your area? Please comment.

### TRADE ORIENTED RESPONSES

46

Add Industrial relations implications

38

The requirements vary to suit different client groups : preparatory/access, trade/skills, certificate.

33

It is not the entry standard of students which counts but the exit standard.

13

In order of the requirements of the metal fabrication course the following elements are important:

1. The nature of the job graduates will be required to perform
2. The needs of employers
3. The needs of students - which will be taken care of if 1 and 2 are well managed.

3

Add trends in industry and equipment being used.

2

1. Although I have ticked needs of potential employers, a greater liaison is required between educational institutes and industry.

2. Strategic planning for future growth especially as we are considered the flavour of the year - tourism and hospitality industry.

1

Add:

Is the job training of acceptable quality (for apprentices, trainees etc?)

Is adequate time allowed for acquisition of skills/knowledge?

## **NON TRADE ORIENTED RESPONSES**

27

Nature of the job graduates should be performing (not are performing).

31

Expectations of students and employers.

35

Add:

Socio-economic background of students

Credit transfer/articulation within/outside TAFE

Perhaps the expected "life" of the subject matter could be established too - how long it is expected to be relevant or how often it will need review .

Some courses have highly specific student outcomes (eg. labour market programs)

40

Add:

Portability of the course - ie. start in Hobart, finish in Sydney.

41

As many factors as possible should be explored.

44

Add:

Environmental impact

Effect on society - social impact

8

Add:

Student expectations

14

Add:

Availability of teachers with expertise to teach subject

Training required for teachers

20

Add:

Industry expectations

Needs of student other than content of course/subject eg. environment.

6

Add:

Funding level for course.

**QUESTION 14**

How should specific educational purposes be best expressed for your course area?

**TRADE ORIENTED RESPONSES**

1

More than ever students will need to learn how to cope with change. They will need problem solving skills, how to apply basic skills and knowledge to changing situations is becoming more important - this is a challenge for curriculum development.

2

As a set course of study.

13

Add:

As a list of terminal tests that each student must prepare for and complete. However this list should not be based on millions of meaningless mini-tests.

33

It is a trade which requires defined skills, however a problem-solving/self reliance attitude should be developed.

**NON TRADE ORIENTED RESPONSES**

22

I believe student performance objectives can be an inherent harbour of effective - cognitive learning experiences :- in simple terms, there is "education" in "training". The trick is not to get seduced by the expectation that every objective has to be reduced to the simplest level of performance.

19

Learning experiences are mostly presented through topics as method to verify the aspect(s) of the experience in a given time.

42

The course which I manage contains both theoretical and practical components - obviously, practical areas are best covered by performance objectives. Theoretical areas may be better covered by other means.

36

And/or as subject/course aims.

25

There needs to be flexibility as student backgrounds and teacher skills and experiences vary.

### **QUESTION 15**

Should curriculum planners divide on the teaching and/or learning methods to be used for implementing a course?

### **TRADE ORIENTED RESPONSES**

46

The selection of a teaching/learning method is directly affected by the resources available. Therefore colleges should have the flexibility to select their own teaching/learning method.

39

Yes, provided that the curriculum developers include the teachers.

38

No.

Much depends upon the local environment in respect to facilities and staffing levels. Consultation must be observed with all parties.

29

Yes, but this should be guided by:

- (a) industry working party
- (b) known resources available to implement such a course.

23

No. I consider this has been a problem with some of the newly implemented trade syllabus in TAFE. Teachers and Head Office expect ISM curricula to be self-paced. This is not correct.

ISM is a tool for developing curricula. The teacher should select the appropriate teaching strategy that best suits his or her style of teaching and this may not be self paced etc.

21

These should be decided in conjunction with those who actually teach the subject and who are very familiar with the subject material.

17

Too many variables to answer yes or no, in some situations yes, in some no - eg. level of teaching experience and/or training of staff.

a) - planning curriculum

b) - implementing curriculum

will alter teaching/learning methods enormously.

13

Yes, but the teaching methods listed should be suggestive only, allowing each teacher to select the most appropriate method to suit each topic, group, individual or facility.

12

Yes, if all areas of the trade are present when meetings are held.

9

No. These decisions should be made by a wider cross-section of persons involved in the total TAFE planning process as plans implemented for curriculum development must reflect the resources needs/implications.

2

Yes, only in consultation with the person(s) responsible for teaching the course.

1

Yes. Initial guidelines must be available, methods will of course be subject to continual review.

47

Yes, BUT not without consultation with college staff.

#### **NON TRADE ORIENTED RESPONSES**

28

No, but they could strongly advise and resource.

27

No. Teachers are the ones who should determine method. Education. A reciprocal interaction? (or bureaucratic - imposed/controlled) nonentity.

26

Yes. I find this difficult as it is dependent on the developer's experience eg. Do they have recent industrial experience?

25

No. It is difficult to find teachers to fit a prescribed course. I feel as a professional, that I have the skills to achieve course objectives in a variety of ways. I believe flexibility is needed to present courses to suit the students.

30

Yes. Suggestions as a guide, not prescriptions.

31

No, planners should guides for teachers to follow. This allows for each individual teacher to take stock of the student needs and create appropriate styles suitable to students and teacher. This allows for creativity and flexibility in the subject areas.

34

Yes. With consultation with those who will implement curriculum.

35

Yes. As I have said, this stage may be vital to achieving educational aims in a course. Child-carers shouldn't learn just by sitting in a class-room! Equally, people don't learn how to speak by being told. However, there should be room for flexibility so that individual teachers may bring their own expertise/creativity/knowledge of student group into play.

36

Yes. But only in a general sense to give guidance to the teacher with respect to the intended rationale underpinning the course.

37

No. Flexibility should be encouraged in course interpretation.

40

No. The objectives and learning outcomes should be clearly defined. Method of implementation should be left to individuals - different people perform in different ways to reach the same goal.

41

No. Autonomy must be given to teacher at the implementation stage - too much imposition is stifling to individuals. Everyone should develop his/her creativity.

43

Yes. Only in consultation with those who will have to teach it.

44

No. Unless the curriculum planner is the teacher but even then there needs to be some accommodation for different teaching styles.

45

Must consider but leave final decision to teacher, otherwise teachers become robots and lack individual flair. Poor teachers would like much guidance. I have formed my best



teachers want to do their own thing.

8

No. Information from a wide variety of sources (as per 9) could assemble suggested teaching strategies for the individual to use, extend or change according to situation and available resources.

10

Yes. There should be equal input from experienced teachers in the area of study as they will know if suggestions etc are likely to "work".

11

No. Some suggested guides/recommendations would be useful.

14

Yes. To determine the time needed for teaching/learning acceptable learning/teaching method has to be developed. The sequencing of units is affected too. To try to develop a common approach between college and to reduce misinterpretation of syllabus suggested strategies should be developed.

15

No. Not decide but suggest possibilities/alternatives each teacher brings to the course their own approach and particular learning/teaching methods - whilst to the planners may seem appropriate - may be inappropriate for the time/place/teacher.

18

They should give guidelines but there may be cases where the methods will change and improve motivation and success of the students.

19

No. What makes a good teacher? What makes a good learner (student)? Not the curriculum - it is the catalyst. As such it is important but not a substitute for the human element.

20

No. Such methods of teaching should be left to the teacher. The specific objectives set out for the student should be his guide to method of teaching and resources he will need.

4

No. Because quite often they tend to be divorced from the implementation area and different colleges have to adapt a different method to other colleges due to physical difference, equipment, etc. However, they recommend (the planners) and if possible provide resources needed for their strategy otherwise it will have to be left of the teacher.

6

If the curriculum planners decide on the teaching and/or learning methods the following may apply.

Yes, that teaching and learning may be more standardised in different learning centres.

No, the planning (or learning method) may not be appropriate (outdated) to what industry is requiring.

5

No. Teacher's should have the choice. Need room for change - flexibility. Teaching method should be evaluated - teachers trialling. How one class learns may not be the same as another.

22

Yes. Real Estate was planned around the external mode. Evaluation shows that some continuous face-to-face teaching is necessary for the course to succeed. Having missed this point in the curriculum stage, some restructuring of the implementation is required.

## **QUESTION 16**

Should curriculum developers divide on the teaching/learning materials to be used for implementing a course?

### **TRADE ORIENTED RESPONSES**

47

Yes. But only if they are aware of the whole scene and not restricted areas.

1

No. Recommended material yes - but no compulsory use of learning materials. To maximise flexibility and teacher performance the selection of learning materials and methods should largely be left to the teacher.

2

Yes. Only in consultation with the person's responsible for teaching the course.

9

No. These decisions should be made by a wider cross-section of persons involved in the total TAFE planning process as plans implemented for curriculum development must reflect the resource needs/implications.

12

Yes. If all areas of the trade are present when meetings are held.

13

No. A variety of materials should be available, from which teachers can select the most appropriate to suit each occasion.

17

Yes. The materials should be under annual review by teachers as to appropriateness to achievement of student performance objectives and should be neither exclusive nor rigid - but rather recommended.

21

These should be decided in conjunction with those who actually teach the subjects and who are very familiar with subject material.

29

No. This should be a teachers freedom!

33

Yes. But only if they intend to provide them and the justification?

38

Decide. Assistance re statewide available facilities, etc.

39

Yes. Again, provided that the teachers are involved in the curriculum development.

46

No. The selection of a teaching/learning method is directly affected by the resources available. Therefore colleges should have the flexibility to select their own teaching/learning method.

#### **NON-TRADE ORIENTED RESPONSES**

31

No. Appropriate materials for appropriate situations.

25

No. Decide - suggest would be better. Resources may not be available. Doesn't allow for teacher creativity. Students may have covered this in another course; teacher may be unfamiliar with material, material may not all students.

28

No. But again, make recommendations.

34

Yes. With consultation.

35

Sometimes it may be relevant - specific equipment may have to be used or specific resources may provide the best standard. I'm unsure on this one though, because it would presume the availability of resources, and their on-going relevance. I have, when listing resources, left this as a discretionary area.

36

Yes. But only in a general sense to give guidance to the teacher with respect to the intended rationale underpinning the course.

40

Yes. Particularly where state exams are part of the assessment. But this should be flexible as resources date and are continually being upgraded.

41

No. Suggestions only can be made - etc. date far too quickly - see 15 on previous page.

43

Yes. Again only in consultation with those who will have to teach it.

44

Yes. Only if it helps if the whole process is interactive, again it is best if teacher - curriculum planner.

8

Yes. A basic essential list, and an additional desirable optional list for individual scope.

11

No. With the following qualification - provide a guide in the form of recommended materials/resources.

14

No. I have done this for Pattern Grading (cost \$1000 plus planning time). It is probably not possible because of cost factor in many cases. In theory it could save a great deal of work statewide but who would do it and would it be of a standard that would suit all individuals.

No. Again I think they should suggest a range of materials from which the implementors can choose from/add to.

18

Yes. Advisedly.

19

Should provide a guide - even a choice.

20

No. This is the domain of the teacher.

4

Yes. Provided they can come up with the goods. Quite often they decide on what is to be used but don't deliver leaving the classroom teacher dissolusioned. It should be part and parcel of any new curriculum development.

6

No. If decisions are made about teaching/learning materials to be used they should ensure a) made available to students (funding) and b) that the cost to students is not prohibitive.

5

No. Packages not good. Reduces teacher's flexibility and professionalism. Individuality of students.

### QUESTION 17

What types of student assessment are most suited to your area?

### TRADE ORIENTED RESPONSES

47

Practical Ability.

48

Competency based (performance).

1

Predominately practical test (performance criterion).  
Paper and pencil tests to measure retention of knowledge ie underlying theory.  
The dos, the don'ts and the whys.

2

Depending of the area:  
Cookery Practical      Pycho \motor  
                                 Theory              Objective questions.

3

Practical tests. Weekly theory test. Controlled menu cookery. Mini practical test.

12

Practical - all areas of the trade.  
Theory. Technical Drawing. Calculations.

13

Continual assessment plus terminating examinations for practical subjects.  
Assignments (30%) plus terminating examinations for academic subject areas.

17

Skills - performance based assessment.

Knowledge - a combination of continuous, assignment and examinations.

21

Written (theoretical concepts).

Student performance of tasks ( both to assist theoretical concepts and the assessing capability to perform practical tasks).

29

Practical tests - pass or fail to a given standard.

Multiple choices, short answer and essay question.

33

Performance based mastery, however, employers require a simple percentage based on identifiable skills.

38

Trade & skill training - performance based - achievement or non-achievement of a given task.

Access - ongoing overview subjective assessment.

39

Dependant on subject but both formal tests and task achievement would be needed.

46

There is no one type. A range of assessment methods are used.

## **NON-TRADE ORIENTED RESPONSES**

31

Informal and formal.

Informal - comments, feelings.

Formal - tests, written and oral.

A combination of both.

24

Exam, assessment and practicals.

25

Ongoing teacher assessment - demands on ongoing effort by students.

If specific skills are to be learnt - a required standard may be expected and tested.

26

Performance based tests.

27

Short tests, essays, mufti-choice, etc. Intra-college assessment (teacher knows emphasis/what has been taught).

32

Objective testing in some areas and normal accepted procedures in the theoretical phases of the course.

34

Examination, practical testing, progressive classroom testing, on-the-job testing.

35

Self assessment, case studies etc are best for comm skills. I've used all types of assessment. (Comm Skills teachers feel vulnerable here - obviously I'll do things like make every role-play, complaint/handling which is how they really learn, then get them to write down how you handle a complaint and give a mark. I won't go on ...)

36

Continuous/summative. Practical/Psychomotor/Effective, The lot.

37

Assignment, class participation, attendance.

40

Written and practical assignments. No exams.

41

Currently unit tests are used - although serving a purpose a variety of methods would be preferable.

42

In the case of practical subjects, assessment of ability to perform defined tasks. Otherwise assessment of assignments and examinations.

43

Part internal, part external. Employers/industry still view examinations as the only legitimate forms of testing.

44

Formative, projects, internal and final external test mainly for motivation.

45

Combination of assignments and examination. Combination of assignments only. Never examination only, however TAFE restraint often make this the only practical method of measurement.

8

Written teacher evaluation. Student evaluation discussions. Positive constructive comment being the most important element of the above.

10

Objective tests for practical subjects e.g. typing, office skills. Essay - type for broader topics e.g. personal skills, human relations. Observation - machine operation

and care.

11

Classroom evaluation in form of 'quick quizzes' group work, role plays. Exams. Performance evaluation in real work settings.

14

Practical tests of total tasks or duties if you like that the student would carry out on the job. May need to be lengthy and would need some time constraints.

15

Non-competitive. Based on personal (individual) development/advancement dealing in mind an overall minimum standard. From what I understand of the "student profile" system, this type of assessment seems appropriate.

18

Practical assignments, short tests, exams with short answers and diagrams (logical argument).

19

Assessment to cope with the variables. Must be structured to maintain a high level of objectivity.

20

Class tests and assignments as a progressive assessment with a final written examination.

4

Objective tests.

6

Assessment of students' practical work. Testing of general knowledge of trade. Testing related to practical skills.

5

Oral, role play, essay, multiple choice, written assignments, performance - e.g. typing, shorthand. Shouldn't test attitudes and values.

22

I haven't decided yet Paula. I lean towards "field tests" or simulations of work place events. However this is a bit pie-in-the-sky as we can't afford it anyway.

## **QUESTION 18**

Should consideration of course evaluation be part of the curriculum development process? If yes, who should be involved?



**TRADE ORIENTED RESPONSES**

4

Yes. In order to maintain credibility  
 1. Industrial rep. 2. Teaching staff. 3. Questionnaire to successful students. 4. Counselling unsuccessful students.

48

Yes Students. Teachers. State Co-ordinators and employers.

1

Yes. Students, employers, teachers but not necessarily including the developers and deliverers of the course.

2

Yes. Persons responsible for developing and implementing and delivering the course.

3

Yes. Teachers involved in actually teaching it.

9

Yes. Curriculum officers in conjunction with college staff so that effectiveness of a given curriculum can be assessed.

12

Yes. Employers, TAFE instructors.

13

Yes. Relevant Head teacher from each college in which course is conducted, in conjunction with the state co-ordinator and industrial representatives.

17

Yes. TAFE - teachers. Industry - employers and graduates in work place. Students - on a progressive basis as the course is conducted.

21

Yes. Teachers, development.

23

Yes. Employers, students and staff.

29

Yes. Industry who are the end users. Students. Interstate "TAFE" or other personnel with Horticultural expertise.

33

Planners - curriculum. Presenters - teachers. Users - students, employers.

39

Yes. The teachers and the curriculum developers.

46

Yes. Students, staff, employers and statistics.

**NON-TRADE ORIENTED RESPONSES**

31

Yes. It is essential for consistent and continuous evaluation. Teachers, students, curriculum planners and employers should be involved.

24

Students/graduates of course. Teachers.

25

Not sure. Maybe specific evaluation requirements should be decided on in week 2 or 3, after teacher is aware of student capabilities. Those involved should be teacher, head of school and TAFE person familiar with standards of other courses.

26

Yes. Developers, teachers, employers, students and potential.

27

Yes. Teachers.

32

Yes. Graduates, employers, teachers/tutors.

34

Yes. As for curriculum development.

35

Yes. Students, teachers, client group/employers/industry, course co-ordinator, curriculum (to be notified or informed liaison if necessary).

36

Yes. The stakeholders, students, teachers, employers, government, unions, etc.

37

Yes. Students, staff, industry.

40

Yes. Those teaching the course with course developers.

41

Yes. Implementors, students, employers, designers.

42

Yes. I'm not sure what is meant here. If evaluation w.r.t. assessment, then teachers and tutors. If evaluation w.r.t. the success of the course, then teacher, students (informally), industry rep and curriculum rep.

43

Yes. Teachers, industry, students.

45

Yes. Industry, curriculum specialist, not teachers.

8

Yes. Those listed in 9. Those who have participated in the course and have the opportunity of ascertaining how effectively the course has prepared them for their profession.

10

Yes. Curriculum planners, experienced teachers in course area, input from new teachers in course area.

11

Yes. Students, industry personnel, teachers.

14

Not sure. Yes but who is going to do it. The syllabus writer on contract, a volunteer. When syllabii are used statewide it is difficult to share workloads.

15

Yes. Students, implementors - teachers, curriculum planners, industry reps.

18

Not sure. Evaluation - counting "burns on seats" or is the value of the course measured by the value of each student to the nation in 5, 10, 20 years time?

19

Yes. Relevant parties.

20

Yes. Subject syllabus document content and objectives must be continually reviewed by both teaching staff and industry.

4

Yes. But setting up proper evaluation procedures is again a time consuming business and because of this is often glossed over or missed and even if a true evaluation is carried out it is wasted unless recommendations are put into practice and trialled. Some teachers are afraid of evaluations because they feel threatened. Evaluation has to come from a number of areas, e.g. teachers, students and where appropriate employers.

6

Yes. Personnel who designed the course; from curriculum development, those involved in the developmental process. Teachers, including some who may not have been involved in its development, but may be teaching a subject from the course.

5

Yes. Teachers, employers of students - validation, those involved in designing the curriculum.

22

Yes. For Real Estate - 1. Licencing authorities. 2. The Real Estate Institute. 3. Sub graduate, post graduate students, 1&2 are indifferent, 3 are most helpful. 4. an independent TAFE Curriculum "auditor".

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## QUESTION 19

What elements should be investigated in a course evaluation?

## TRADE ORIENTED RESPONSES

48

Scope, depth of coverage, presentation, changing technology.

47

Did the course meet the students expectations. Did it train the students to do the job they were doing. What changes need to be carried out to the course. Were learning/teaching resources adequate.

1

Have all objective been met? Were the objectives the right ones and complete in the first place?

2

All aspect of what the specific objectives were set out to do. If possible. But not always achieved.

3

If the objectives have been met and the students have performed well, feed back from industry as to the relevance of the skills that have been taught.

12

Practical work - all areas of trade. Theory work. T/Drawing. Calculations.

13

Wether all pars of course content have been taught. Wether all parts have been learnt to a satisfactory standard. Wether the pass/failure rate is with-in acceptable limits.

17

Aims, objectives, content, method of instruction, mode of release.

21

Relevance, implementation problems, student needs, employment possibilities (in some courses).

23

Does the course cover the previously identified training requirements.

29

All elements, content, delivery, mode of delivery, teaching staff, courses.

33

Relativity, quality, satisfaction.

38

Evaluation must be based on stated performance objectives.

39

The students understanding of the theory and its relation to practical areas.

46

Analyse the difference between incoming and outgoing skills of students in conjunction with the aim and objectives of the course. Success in student gaining employment or going on to further study. Students opinions on relevancy. Attrition. Cost effectiveness. Continuing demand. Did the course have adequate resources.

#### **NON-TRADE ORIENTED RESPONSES**

31

Appropriateness, resource materials, teaching methods, length of course; hours, times, macro skills - reading, writing, listening, speaking.

30

The majority of TAFE courses are vocational so we need to know whether students carry out their tasks effectively on-the-job but a f?

24

Content, method of presentation/learning experiences.

25

Have objectives been achieved? Were employers, students and teachers satisfied with course content and outcomes. Was the time allowed appropriate? Was the costing sufficient?

26

Relevance of content.

27

All

32

Appropriateness, level, application, methods of delivery, evaluation (testing) methods.

34

Global implications.

35

Content (did gaps appear or "muddy" areas etc. Did students need all of content). Delivery (teaching). Student outcomes (exam results, applicability of knowledge to job, interesting or boring etc). Suitability of location/venue. Length/timing.

36

It depends on the purpose of the evaluation. Generally, it relates to the aims of the course, but other outcomes, intended and otherwise may be investigated.

37

Relevance of course content to students industry. Relevance of aims and objectives.

40

Content, learning outcomes, materials used (learning), student feedback.

41

All those listed for 12 (page 7).

43

Relevance of course matter, level of difficulty. student suitability (entry, etc), modes of presentation, suitability of facilities.

44

The process itself, aims, objectives, content, teaching/learning methods, teacher competence.

45

All stages of curriculum development.

8

Skills: general and specific, employability.

10

Relevance of matter dealt with student success rate, student employment placings, staff and student general morale: is there enthusiasm and energy present?

11

Match between student outcomes and industry needs. Views of students on how well prepared for employment they were, and how stimulating the course content and delivery was.

14

Is the level of the course suited to the students? Do some/all students meet the objectives. Are the students adequately prepared to work in industry. Are the resources available to teach adequate? What is the work load on the teachers e.g. preparation and marking?

15

Not only outcomes but also "distance travellers".  
Fulfilment of student expectations - teacher, industry,  
institution.

19

Any areas causing problems. All other areas - to critically  
evaluate for any improvement.

20

Are the outcomes being met from the objectives set.

4

Teacher reactions, student reactions, employer reactions,  
admin reaction - cost effectiveness.

6

The syllabus: identification of any problems i.e. enabling  
objectives, materials identified to be used in the course.  
The Teachers: especially those who teach part time (feedback  
from them).  
The Student: quality, relevance, materials and availability.

5

Content, sequencing, relevance, teachability, assessment  
(what is in it is what is needed), testing methods,  
materials, resources, holistic approach.

22

I haven't thought this out beyond the usual things.

## **QUESTION 20**

From where should the major curriculum development decisions  
be made?

## **TRADE ORIENTED RESPONSES**

2

Could be a combination of three.

33

State Co-ordinators should ? represent the areas of the  
presenting colleges.

38

In order to provide continuity (statewide).

46

In the colleges.

**NON-TRADE**

25

Many resource to draw on. In touch with the student and staff needs.

35

I believe in involving a central agency which provide guidelines and maintain standards, and the implementation site. Both of these may need to involve industry or a client organization where the decision has a major effect on their training needs however.

44

Networked with other sites with some input from central authority.

20

Plus industry.

5

Central agency - has an overall view. Teachers on specifics.

**QUESTION 21**

Please comment on your perception of the role of a central curriculum section.

**TRADE ORIENTED RESPONSES**

47

To co-ordinate the functions and performances of individual people involved and to advise and support those involved.

48

A necessary evil.

1

Maintaining consistency of all curriculum projects. Guidance and direction for staff not sufficiently familiar with curriculum development.

2

As long as it had specific guidelines and personnel with the relevant knowledge and experience in to combine and be able to be flexible or adopt to the needs of all whom its intended for.

9

A support role for colleges and colleges should have a curriculum officer on their staff to assist teachers who may be required to be involved in local curriculum projects.



12

Decision can be made at a central section without not knowing what is being done at the site of teaching. It is important to involve various people but the final decision should be made at a central agency.

13

To provide consistent leadership to curriculum project teams - advising of guidelines within which the project is to be completed, providing clerical support, etc. Ensuring that all colleges follow course structure, assessment and delivery guidelines. THIS IS NOT INCONSISTENT WITH WHAT IS CURRENTLY HAPPENING.

17

Collation/Accreditation (National) consultation.

21

Facilitate the writing of the course. Supply the time and manpower to do the work. Use those that teach the course to make sure that the content is correct.

23

There to assist project officers in developing realistic training objectives.

29

A central curriculum section is needed as a co-ordinator. However, these co-ordinators need to only have 2-3 areas of co-ordination not so that they can develop specialist expertise, not generalist.

33

Not enough space! In the majority of mainland (major) states large comprehensive curriculum development branches exist which have the capacity to provide a total service. In Tasmania direction of central admin situation with the work done at the coal face. A good system if adequate compensation and backup were to exist.

38

Co-ordination/overview/assistance role.

39

Very important - most teachers need help when developing curriculum.

46

To rationalise resources. To maintain consistency and standards. To monitor duplication. To co-ordinate accreditation and certification. To co-ordinate course development. To maintain statistical information and to update same. To liaise with other organisations and agencies.

## NON-TRADE ORIENTED RESPONSES

31 .

My perception of a central curriculum centre is that it is the body/place where formal decisions are made regarding curricula. It is where one must go to have courses accredited, knowledge of processes regarding subjects to be offered and where courses get stamped.

30

A co-ordinating role but with the power to arbitrate and make final decisions when there is conflict in the groups developing the syllabus.

24

Support role.

25

Prior to making a personal visit, I was annoyed and afraid of the Central Body - what did they know?, why were they hassling me?, where was I to find the time to prepare curriculum? Since visiting the central section, the personal interest and sensitivity shown is very conducive to work. Experience with working, objectives, evaluation techniques etc, is valuable in maintaining a sense of standards and new ideas in parallel courses.

27

Allows mobility, common standard, must also allow flexibility of course (adapted to teacher/envirom).

32

The difficulty I see in a centralised role is that they become isolated and unaware of the constraints with the teaching/documentation arena. Centralised agencies often are inflexible and rather than meet the needs of client groups, meet their own theoretical needs.

34

Them and us.

35

Information source/data bank. Facilitator (your expertise makes us more efficient and saves us lots of time and trouble). Guardian of standards. Can monitor course provision for TAFE and gain overview on areas such as articulation/ credit transfer, etc.

36

Oversee statewide curriculum development. Provide educational expertise which is not subject oriented. Provide policy. Provide priorities for funding.

37

Guide to technical aspects of curriculum development and implementation.

40

To facilitate new courses and revise old ones. To activate evaluative processes involving implementation people.

41

Required for final legal opinions on curriculum, etc. To ensure statewide consistency. To initiate curriculum review. To formerly 'write' curriculum. To assist and lead discussions on all the aobe and to clarify problems etc.

42

As long as there is adequate access for teaching staff, and capacity to deal with the numerous courses, it is probably valuable to have this expertise condensed into a central section.

43

Have appeared to make life difficult and been inflexible. Should be supportive and encourage change nd flexibility. TAFE is being criticised for being out of date and inflexible and there is need for more flexibility, responsiveness to change. The moves of late seen to be increasing inflexibility (eg Assoc. Diplomas) and removing opportunities for change.

44

Give the administrative ground rules and guidelines. Provide necessary training in curriculum development processes/techniques. Facilitate the process. Minimise the paper work. Fight for and obtain resources for CD.

45

Broad policy based with experts in CD to manage the development of courses. Preferably experts should have knowledge in the particular course area.

8

A central agency may provide specialist skills in research and formulation. A central agency may find difficulty in effectively covering all technological change, trends and developments of each area of TAFE. To actively encourage staff and staff development in research and passing information back to a central agency where it could actually be seen to be used in curriculum development.

10

To set up the initial framework of a course (with input from experienced teachers) and then to combine with those teachers to develop actual courses. Finally, to complete the code numbers, titles etc of a proposed new course.

11

Maintenance of standards in development process and style of presentation.

Ensuring that there is an employment market for all courses and matching number of students trained and the centre in which they trained to this market. This match is a poor one at present.

To be part of all curriculum development activities which take place.

Maintenance of a national standard.

Collection of information from other states - eg curricula, resources, numbers - make available during development process.

14

To co-ordinate activities and provide expertise in knowledge of the TAFE system and how it works. To provide training for staff developing curricula for the first time. To provide leadership when needed. To maintain a certain amount of conformity across the system. To keep up to date with new developments in curriculum models etc. To liaise interstate to 'beg and borrow'.

18

To facilitate and streamline course creation and modification.

19

Central agencies must maintain accessibility to colleges. This takes time to facilitate a 2 way flow of ideas.

20

Purely an administrative role unless it employs suitable professional people with the expertise to write syllabus. See question 9 response.

4

Some very good work is being done.

6

Very necessary. Have the expertise; enable the teacher's involved to gain advice and guidance.

5

Overall perspective.

22

The C.C.S. should be a curriculum facilitator in the same way that classroom teacher should be a facilitator. Its a case of providing curriculum knowledge and services to the persons who are working on the curriculum development.

## **QUESTION 22**

Any further comments.

## **TRADE ORIENTED RESPONSES**

9

There appears to be a number of teachers in colleges who

tend to confuse ISM and the teaching methods used e.g. self-paced learning. I believe that this matter requires attention in some departments in some colleges as it tends to affect the acceptance of change in curriculum design.

21

Curriculum work is essential if TAFE programs are to meet the needs of individuals and industry. This work is not being done often enough and thorough enough because of the lack of time and people to do the work in most TAFE programs of my experience. It is essential that industry are consulted in the content, objectives, etc., of the course, this is not done often enough, this situation will worsen as TAFE teachers have their workload further increased by involvement in fee for service activities without any consideration of time release or manpower replacement.

### **NON-TRADE ORIENTED RESPONSES**

5

A lot of people who know nothing about it have been involved in the design of courses. Specialist, expert, area expertises involved in curriculum development and in technical expertise. Curriculum design involves eg a knowledge of learning, epistemology, philosophy, learning theories.

6

Should be more evaluation of courses. Probably as important as curriculum planning. Changes if required to syllabus should take place at the end of the first year of course implementation by all involved. i.e. Curriculum personnel, teachers, P/T teachers, (personnel from other colleges, if relevant), industry personnel and perhaps even graduating students.

10

Most subjects/topics in most courses require variety and flexibility in presentation methods. It is too restricting for individual teaching styles and spontaneity when a course is tightly structured as in strictly ISM can be. My ideal would be a imiature of ISM and more flexible, open course structure, depending on the particular topics to be studied. Students and teachers should enjoy their shared learning experiences - this can only happen when spontaneity is possible in the classroom/study area.

45

The ISM is logical and a sound method of developing curriculum.

Unfortunately it is very time consuming if done competently which is in conflict with the present TAFE system of people doing more than one job e.g. Head teacher - administration, Teacher - teaching, State Co - curriculum. Sorry this has taken so long but administration takes priority.

25

With a signed and sealed package, time is needed to hire appropriate staff, purchase appropriate resources, hire/purchase appropriate equipment, advertise and select only students directly applicable to the course. I feel strongly against a tight package i.e. all students must pass all prescribed subjects. i.e. what if teacher is ill and class cannot complete prescribed material. i.e. what if students would not be progressing in their learning by completing prescribe subject e.g. already covered in previous course.

I feel we need objectives, aims and a selection or menu of content - some flexibility is needed.

Rigid evaluation requirements can be like a noose around your neck.

31

I recently, for the first time was involved in accrediting a course. I found the people involved in the process very helpful and co-operative. Prior to this experience my perception was that curriculum office was isolated from the teacher and the classroom. I believe many teachers and students feel this. In order to link the two together it would be advantageous if there was closer, personal contact. Too often this contact is restricted to administrators.