

Equipping Teachers for Curriculum Change in Post-Compulsory Years

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This paper reports on a research project that constituted the first phase of a National Professional Development Program project conducted between May and September 1995. The ultimate goal of the research was to identify the professional development needs of teachers to meet the challenge of change in the post-compulsory years of schooling. To achieve this goal the research necessarily included an investigation of the changes that are to be expected if schools are to continue to provide students with optimum learning choices in a changing social environment.

1. The Research Design

1.1. The Research Problem

The problem addressed by the research was: What conditions need to be met if schools are to provide the optimum learning choices for every potential student in the post-compulsory years of schooling? The qualification 'potential' student is important, since the research was concerned not only with those students who currently remain at school in post-compulsory years but with all who might benefit from continuing at school during these years. A basic consideration, therefore, was the identification of the nature of the changes that would need to be made in order to make schooling an attractive option for all students beyond the compulsory years.

The subsidiary questions were:

- What changes are already occurring in schools to extend learning choices?
- What are the possibilities for the further extension of learning choices?
- What are the obstacles facing schools that wish to increase learning choices?
- What is the nature and impact of government policy initiatives in relation to post-compulsory schooling?
- What support do schools need in order to provide optimum learning choices, with special attention to professional development needs?
- What are the possibilities for the effective use of distance education, both in wider choices for students and in the professional development of teachers?

1.2. The Research Scope

Given adequate time and resources, there would have been merit in a

comprehensive study of a representative range of Australian schools. However, the constraints of limited time and resources made it necessary to focus on those schools associated with the body sponsoring the project - the Christian Schools National Consultative Group. This Group brings together schools affiliated with the Australian Association of Christian Schools, Christian Community Schools Limited, Christian Parent Controlled Schools Limited, Lutheran Schools of Australia, and Seventh Day Adventist Schools. This involved a total of 140 schools in every state, the Northern Territory and the Australian Capital Territory. These schools are referred to in this paper as the 'constituent' schools.

Attention was given to schools outside this grouping to investigate outstanding examples of innovative practice relevant to the research as

such examples came to the attention of the research team. In particular, there was on-site investigation of the use of telematics for distance education in state schools in north western Victoria and of a significant school/TAFE/industry partnership in Geelong, Victoria. Published reports of other best practice examples were also given careful attention in the course of the research. However, the main focus of the research was on the constituent schools.

1.3. The Research Team

The research team consisted of Stuart Fowler and Doug Blomberg of the National Institute for Christian Education and Barrie Dickie of Deakin University. Stuart Fowler was the team coordinator.

1.4. The Research Methods

A combination of literature review, survey and research interview was chosen as the most practical, and effective, combination of methods for the purposes of this research.

The research method adopted was what Powney and Watts [1987: 18,19] call a 'loosely structured informant interview', or somewhat more accurately, what Cohen and Manion [1989: 326,327] describe as a 'focused interview'. It may be described as a modified form of non-directive interview in which the researcher maintains a measure of control over the direction the interview takes while focusing on the perception of those being interviewed as the major research objective. In most cases two persons conducted the interviewing, with one tending to lead in the interviewing with the other concentrating on taking notes while interposing supplementary questions from time to time. The interviewees included representative samples of teachers and students as well as the relevant educational administrators in each school. The interviews had two broad aims: to clarify the existing situation in the school in relation to post-compulsory schooling and to determine the perceptions of this situation of the key players - students, teachers and educational administrators

2. Terminology

As the research proceeded it became apparent that there were two areas fundamental to the research in which it is essential to clarify the terminology used. In both cases, the terminology is common currency in

contemporary educational circles. However, the terms are either used with varying and inadequately defined meanings resulting in ineffective communication or are commonly used in ways that, in the judgment of the research team, obscure fundamental educational issues.

2.1. Pathways

In the general discussion of post-compulsory schooling in Australia today, the term 'pathways' is common currency. However, it is possible to encounter the term repeatedly without any clear indication of its meaning. As the responses to the research survey clearly showed, the term is used in a confusing variety of ways.

For the purpose of this research, we have adopted, with some further clarification, the meaning adopted by the Schools Council [1994b: 37], following Haydon and Evers:

A pathway is a sequential set of studies and learning experiences undertaken by an individual which leads to the goal of a desired qualification. The pathway may be found within the course requirement for a particular qualification in a sector or through those in another sector, or through assessable learning from experience in work-place situations.

On this definition, two sets of learning experiences are to be understood as alternative pathways if the qualifications to which they lead provide the basis for different kinds of opportunities beyond school. So, for example, a course of learning leading to a qualification that provides the basis for skilled employment as an electrician through an apprenticeship and/or TAFE studies constitutes a pathway that is an alternative to one that leads to a qualification giving entitlement to university study.

On the other hand, a course of study leading to a university entrance qualification within the provisions of the relevant Australian state education authority's guidelines and a course of study leading to the International Baccalaureate. Though providing significantly different patterns of learning, they do not constitute alternative pathways since they lead to a qualification with the same kind of post-school outcome, the opportunity for university study.

This is in no sense to deny that these two courses of study offer significant alternative choices for students, or that offering this extended choice can be a significant initiative for a school to take. It says only that they are not alternative 'pathways' as that term is understood for the purposes of this research; an understanding that reflects the usage of the term adopted by the School Council.

On this understanding of 'pathway', it should be observed that the provision by a school of opportunity for the study of some non-academic type subjects, such as photography or computing, that do not lead to any recognised qualification in these fields, does not constitute an alternative pathway. Again, it is not denied that such provisions do extend student choices in significant ways and, as such, have their own value. It means simply that they do not meet the criteria for an alternative pathway as understood for the purposes of this research.

2.2. Vocational and General Education

In addressing the problems that form the focus for this research, the issue of 'vocational' education inevitably occupies a significant, indeed, a central place. Both in the literature and among school decision makers it is a persistent theme. It is the dominant language in discussions about the broadening of learning opportunities in post-compulsory years. Commonly it is linked with the notion of 'general' education. Debate is commonly phrased in terms of the choice between maintaining a 'general' education in post-compulsory years or modifying the traditional 'general' curriculum with the addition of 'vocational' subjects - see Schools Council [1994b: 5-19].

While we concede that a distinction between 'general' and 'vocational' education may be useful, we question the way in which the distinction is commonly made. In the first instance, it seems clear that the 'general' curriculum, with its strong orientation towards preparation for university study, has a clearly vocational character. To see it as a non-vocational, 'general' curriculum ignores modern realities. Perhaps there was a time, long past, when students commonly entered a university not to pursue a vocation but to further some notion of 'general' education. However, there can be little room for doubt that the primary motivation for university study today is the pursuit of a career with appropriate status and rewards. There are, of course, exceptions represented by students who enrol for a general type university course, usually in an arts faculty. Yet, even these, in most cases, choose to study at a university because they see it as offering them better career opportunities, even though they have not yet fixed on a specific career.

This is reflected in the nature of the traditional school curriculum in post-compulsory years. It is clearly oriented towards the preparation of students for quite specific vocations. The kind of mathematics, or science, offered in these years is clearly well beyond anything needed for providing young people with a broad general education. It can be justified only on the grounds that it is important as a preparation for specific vocations that need the relevant levels of competence in these areas.

To see 'vocational' as related only to the pursuit of careers calling for skills of a 'practical' or technical nature is to accept an unacceptably narrow conception of vocation. It drives an indefensible wedge into the range of career possibilities facing youth. Any career pathway that is open to humans as a life calling is equally a vocation, whether the preparation for it requires a course of study at a

university, or a TAFE, or through on the job training. Therefore, any pathway of learning provided by a school designed to provide students with career opportunities by whatever means is to be regarded as a vocational pathway.

On the other hand, it seems to us clear that a satisfactory 'general' education will need to be much broader than that provided by the traditional curriculum in senior secondary years. The emphasis of this

'general' education has been on the acquiring of the kind of knowledge that is dependent on the conceptual organisation of experience in written verbal and mathematical categories, with an increasing degree of abstraction. The issues discussed below in section 3.3 are themselves sufficient reason for questioning the adequacy of such a curriculum as a general preparation for life. Such learning may, and indeed, should constitute a component of any such general education, but it should be matched with other ways of learning that are given equal place alongside it.

The abstractions of the traditional academic disciplines and of modern scientific theorising undoubtedly have their place in our knowledge of the world, expanding that knowledge in ways that nothing else can. As such they have a continuing place in the 'general' school curriculum, a place that we strongly defend. However, to give them priority over all other ways of learning about our world, or to make them the core of a 'general' curriculum, is to fail to do justice to the rich diversity of possibilities for learning about this rich and diverse world to which we belong.

The view that we adopt in this research, then, is that, on the one hand, a satisfactory 'general' curriculum will be one that embraces a rich diversity of ways of learning about the world. In this diverse pattern of learning, learning to organise our experiences in written verbal and mathematical categories will have a place, and will move towards greater abstraction as students' mature. It will be, however, one of a number of ways with equal status in which students are led to learn about themselves and their world.

The common usage that identified 'vocational' education with preparation for vocations other than those entered through university study has created some problems in the writing of this paper. In some places it has been convenient to follow the prevailing usage, but, in such cases the word 'vocational' is placed within quotes to indicate that it represents, in our view, a questionable usage. However, in the analysis of the research and the formation of conclusions and recommendations, the broader understanding of 'vocational', as developed above, has been followed.

3. The Winds of Change

It seems clear to us that there are three distinct factors that call for significant change in the patterns of schooling if schools are to adequately meet the needs of all students at the end of this century and on into the next. While these changes will most obviously affect the senior secondary years they can only be implemented effectively if the ground is prepared by changes from the earliest years of schooling. The first two factors are very public issues that are readily identified by people who are not professional educators. The third tends to be more in the background but, educationally, may be the most important of the three.

3.1. Information Technology

Firstly, there is the rapidly developing information technology that is bringing a bewildering array of information within the reach of most people - at least in the affluent West. Traditionally, much of the

information considered to be educationally important has been readily accessible to youth only through the school. It has also generally been available in libraries open to the public. However, these have been less readily accessible both because of the relatively few libraries with comprehensive resources and because the information is not stored

in a user friendly manner.

The development of information technology has made it possible to access immense stores of information electronically from the home and, for youth who have grown up with computers, has made accessing this information an exciting experience. It is no doubt true that this possibility has not yet been realised in the majority of homes but, equally, there is no doubt that the information revolution has begun and is rapidly gathering momentum. Those who care about the education of youth cannot afford to wait any longer before responding to it. This revolution in the accessibility of information does not make the school any less important, but it does call for changes in the way schools operate. The school can no longer assume that it can control the students' access to information and ideas. Neither can it assume that it will be the primary and preferred source of information and ideas. It must adjust to a situation in which, more and more, the students' primary source of information will be controlled by others outside the school. The challenge will be for the school to provide guidance, assisting students to develop a framework of values for a discerning and constructive response to the mass of information that is available.

It is folly to suppose that the information superhighway gives access to a vast data bank of value-neutral information. The selection of information to be made available and the way in which it is organised and presented, is decisively shaped by the values of those who control the information sources.

Education has always been, of necessity, a value-laden activity but the issue of values will need to be addressed more directly and openly by the effective school of the future. This cannot be confined to a narrow conception of values as moral values. It will need to involve a consideration of values in the broadest sense as including all those values - social, aesthetic, intellectual, economic, technological, etc., as well as moral - to which people appeal in 'judging the worth of actions, programs, and products which are, or claim to be, conducive to the education of the child' [Ormell, 1980: 79].

This does not mean that schools should become centres for values indoctrination. On the contrary, the effective school will be one that equips students for developing coherent personal values that enable them to make responsible value judgments in the face of the mass of information and ideas that confront them in the world of today and tomorrow.

The exploding information technology, therefore, presents a challenge that no school can ignore if it is to be educationally effective in the present social context. It is not just a matter of installing the

relevant technology in the school. To do this without making appropriate curricular changes to enable students to make the appropriate value judgments in a responsible way is educationally irresponsible.

3.2. Multiplying Learning Pathways

Secondly, there is the drive to provide a diversity of learning pathways for students in post-compulsory years. Traditionally, the curriculum structure in these years has been based on the assumption that it will prepare students for entrance to university. While the continuing importance of breadth of learning has been acknowledged, the requirements for university entrance have dominated the design of the curriculum.

This still persists in the popular perception. While it is usually possible for a student to obtain a state recognised certificate at the end of year 12 without having qualified for university entrance, such a certificate is popularly seen as having little value. Evidence of this surfaced repeatedly in the course of our research. What counts is obtaining the relevant qualifications for university entrance, even if

the student has no intention of enrolling at a university. To have succeeded at school in post-compulsory years is commonly equated with having qualified for university entrance.

While this perception is widespread in the popular understanding of schooling there is strong pressure from official policy makers for schools to change all this by providing distinct pathways of learning in post-compulsory years as preferred options for students who are not proceeding to university study. A recent example of this is the recent report on vocational education by the Schools Council [1994b].

Two related concerns may be regarded as underlying this drive, both predominantly socio-economic in nature. Being able to retain more students at school for a longer period is seen as a way of alleviating the persisting problem of youth unemployment. It is recognised that, if this higher retention rate is to be achieved, the patterns of learning must change to suit a more diverse clientele.

Linked with this is the perception that the workplace requires both a higher level and a greater diversity of skills. No longer can it be expected that workers who do not need university qualifications will be able to pick up the competence they need from the workplace alone. The post-compulsory years of school are seen as providing an appropriate context for developing this competence.

It should be obvious that this also calls for significant structural changes in the pattern of post-compulsory schooling. The situation cannot be met by a modification of the existing curriculum structure. Doing this will only create a group of second class students seen as the low achievers who cannot make the grade to university. It calls for major curriculum restructuring, together with changes in patterns of teaching, so that students are seen as taking parallel pathways of equal worth and status, though with different outcomes.

There is no question that this is a continuing need to provide a high standard of education for those students who do have the gifts for university study. The question is what responsibility we have to the others. It is, at the very least, a question that needs to be considered very seriously.

3.3. Diversity in Learning

Less prominent in public discussion, but of far-reaching educational significance is the growing body of evidence that the traditional pattern of learning in schools lacks the diversity needed to do justice to the diversity of ways in which people learn.

As long ago as 1969, Rudolph Arnheim published his 'Visual Thinking' [Arnheim, 1969] in which he argued that humans think in terms of visual images - pictures, symbols, signs - as much as in verbal concepts. He supported his argument with extensive evidence.

This notion was later further developed by Howard Gardner [1983] with the proposal that we need to recognise a wide range of 'intelligences' as different ways in which humans achieve ordered knowledge. He argued that the traditional reliance of education on just two of these - the verbal and the mathematical/logical, fails to do justice to the rich diversity of human intelligence. While he identified seven such 'intelligences', he has also made it clear that there may well be more. It is important to note that both these studies came from highly respected scholars who provided solid backing for their arguments. In no sense did they come from fringe figures whose credibility to speak on these issues is open to question.

Approaching the issue from a different angle, yet with similar implications, has been the learning styles movement. This covers a number of people who have been exploring the diverse ways in which people learn, largely by looking at patterns of learning. Among those in this group are Gregorc [1985], McCarthy [1987] and Dunn [1989, 1990].

There are some quite significant differences in the conclusion reached by those in this group. In some cases, particularly where heavy

reliance is placed on the right/left brain distinction, the argument rests on a somewhat tenuous basis - see Gardner [1982: 278-285].

Nevertheless, there is a compelling force in the central argument on which they all converge: people learn in a diversity of ways with the implication that education will be effective in meeting the needs of all students only if it recognises this diversity.

Recent studies in the classroom context [Fowler, 1994/95] confirm the conclusion that a greater recognition of the diversity of ways of learning will contribute significantly to improved learning for students who do not do well in the traditional patterns of schooling. Traditional patterns of schooling have focussed on learning through ability to manipulate verbal and mathematical symbols in written, and increasingly more abstract, forms. There need be no doubt that this is one important way in which we learn and extend our knowledge of the world. Yet the evidence is now compelling that people can and do learn

in other ways and that the learning acquired in these other ways is equally valid.

The recognition of this calls for a significant shift in the school curriculum to ensure that this diversity in learning is acknowledged in practice. Especially important is the need to develop a wider range of assessment tools. It will not be enough to provide greater diversity in learning if the assessment of learning continues to be dominated by the ability for written verbal and mathematical expression.

It is significant that this important educational motivation for change converges with the socioeconomic motivation represented in the drive for alternative pathways. The proposed alternative pathways, if they are to be effective, will necessarily involve the introduction of a greater diversity of ways of learning.

4. The Challenge of Second Order Change

Michael Fullan [1991: 29] contended, early in the decade, that the 'challenge of the 1990s will be to deal with more second-order changes - changes that affect the culture and structure of schools, restructuring roles and reorganizing responsibilities, including those of students and parents'.

At this point, it seems clear that he was right. It has been the purpose of this research to investigate both how far these changes are already occurring and the implications of such changes for schools and, especially for the professional development of teachers.

5. The Politics of Change

Educational change is a process, but it is more than a process; it is a political process. In the social context of modern Australia, in common with much of the Western world, this means that it involves contestation. The history of curriculum change in Victoria in the last twenty years exemplifies this - see Fensham [1988]. The struggle has been between those who have sought reforms that would deliver schooling more equitably to the full cohort of students, and those, represented among others by a number of the older universities and 'elite' schools, who have adhered to the sorting function of schools and fought to defend the traditional academic curriculum.

Some would maintain that the Victorian Certificate of Education (VCE) has forged an effective compromise between reformers and traditionalists. Under VISE, the Group 1 Options and the Group 2 subjects sought to support students as constructors and not merely receivers of knowledge; the Work Requirements of the VCE seek the same end. Students would be researchers too. But the question remains: how well does the VCE cater for the full range of potential students?

Victoria is merely an example here. In every state and territory, no matter what curriculum reforms have been introduced, there remains the popular perception that there are first and second class school exit qualifications. The universities do much to foster this perception, the tertiary entrance score, or the like, being the most visible

indicator of status. And it is not that the 'academic' subjects in

general contribute equally to such a score; there is a weighting in favour of the maths and sciences some might justify in terms of 'hard' versus 'soft' options, but which is perhaps more fundamentally tied to the conviction that it is these subjects that will best support the technologically advanced, and thus presumably the more economically productive, society that is desired.

No doubt the greatest obstacle to the kinds of curriculum reform envisaged in this paper is this pervasive commitment to material goals, that has seen politics concern itself more and more single-mindedly with economic objectives, to the detriment of that wider range of human goods that ought to be the concern of a humane and just society. The recent critique of the economists Goudzwaard and de Lange [1995] is salutary reading in this connection.

Once again, the issue of values underlies the political conflict in the educational arena, yet is too often ignored. What constitutes good education will depend on what we see as constituting the good life for humans in the context of today's world.

6. Literature Review

There is an extensive range of literature that relates to the issues addressed in this research. Indeed, it proved too extensive for a comprehensive review within the limited time frame of this research. Consequently, attention was given to a limited range of recent literature of the most direct relevance to the research. Apart from confirming the importance of the issues identified in section 3 above, this review drew attention to four issues related to professional development strategies to equip teachers for second order change:

- (i) The need for a reworking of the traditional distinction between theory and practice that gives greater status to the insights of teaching practitioners, without denying that competent theoretical work also has a contribution to make.

- (ii) The importance of ensuring that professional development addresses problems that emerge from and are posed by, the concrete situations in which flesh and blood teachers interact with flesh and blood students.

- (iii) The need to encourage critical reflection on practice in a way that identifies the underlying values that guide teachers, and others, in the making of educational judgments.

- (iv) The importance in the present context of forging effective partnerships between teaching professionals and others with a stake in the outcomes of schooling, including parents.

7. Survey on Alternative Pathways

7.1. The Survey Process

The initial step in the research process was to conduct a survey by a mailing to all the constituent schools that offer secondary education. The survey focussed on the issue of alternative pathways in post-compulsory years, specifically years 11 and 12. It was designed to gather information in three areas:

- (i) The extent to which the constituent schools either have already moved to provide some form of alternative pathway or have firm plans to do so.

- (ii) Perceptions of the difficulties and benefits for these schools in

providing alternative pathways.

(iii) Perceptions of the kind of support that schools need in order to develop alternative pathways.

The response to this survey was very good with 72% of schools responding by completing and returning the forms - designated respondent schools in the analysis of the survey. This high level of response gives good reason to believe that the results provide a substantially reliable picture of the existing situation in the constituent schools. Where the returned forms were incomplete or ambiguous, there was a follow-up by telephone and/or facsimile to ensure an accurate interpretation of the information supplied.

Among the schools surveyed were 30 schools that do not currently offer education for years 11 or 12, which are usually regarded as the post-compulsory years. 25 of these responded to the survey. There were two reasons for including these schools:

(i) To determine what plans, if any, these schools have for extending into years 11 and 12 and, if so, whether they plan to include alternative learning pathways when they do so.

(ii) To determine whether any of these schools recognise a need to begin providing an alternative pathway prior to year 11.

In the analysis of the survey results schools not offering education for years 11 or 12 have not been included except at certain appropriate points.

7.2. Analysis of the Survey

7.2.1 Types of alternative pathway currently provided

44 schools, or 64%, of those offering years 11 and 12 reported that they offer an alternative learning pathway for students not intending to proceed to university study. A further 13 schools reported that they have plans for introducing an alternative pathway.

On the surface this suggests that a high proportion of the constituent schools are taking seriously the need to provide an alternative pathway. However, when the descriptions of the alternative pathways being offered are examined, it becomes clear that what is meant by this differs widely. In order to provide a more accurate picture of the situation, therefore, the schools were divided into three categories depending on the nature of the 'pathway' being offered. This was based on the information provided in the completed survey forms, together with further contact with the school where necessary to clarify the situation.

The first category, which we have called 'incipient', covers schools that provide students with some opportunity to study subjects that do not attract credit for university entrance purposes, yet do not lead to any recognised career qualification. So, for example, a school may offer students the opportunity for study in applied computing or photography without attaining any recognised career qualification in computing or photography as a result. Such choices may be regarded as an incipient pathway since there is the potential for developing them

into a pathway. However, since they do not lead to a specific alternative qualification they clearly do not yet constitute alternative pathways as understood in this research.

Indeed, there is reason to believe that some schools reporting that they do not offer an alternative pathway do, in fact, offer such an 'incipient' alternative but do not see it as another pathway. Since this kind of alternative does have the potential for development into a pathway, and is seen by some schools as a first step in this direction, we have designated it an 'incipient' pathway.

The second category, which we have called 'basic', covers schools that offer students a discrete package of subjects, usually including some form of TAFE related certification, that leads to limited possibilities for qualifications other than university entrance. To qualify as a 'basic' alternative, what is offered must be clearly designed to provide some form of recognised qualification that equips students for a life beyond school that does not involve university study.

The third category, which we have called 'comprehensive', includes schools that offer students a comprehensive range of possibilities leading to qualifications that equip them for many different alternatives when they leave school. The difference between the 'basic' and the 'comprehensive' categories is that, whereas the 'basic' category school provides only a limited range of options for students not proceeding to university study, the 'comprehensive' school provides a wide range of such options.

It should be noted that some schools in the 'basic' category are just

beginning to develop alternative pathways and have the intention, as they develop this further, to expand their presently limited alternatives into a 'comprehensive' pathways program. In this sense also it is a basic alternative, constituting the base for further development.

Of those schools claiming to offer alternative pathways, only five, or 7%, offer a comprehensive alternative. A further 15% offer a basic alternative while 42% offer only an incipient alternative. 36% of schools currently offer no alternative at all, though this includes the 19% that are planning to introduce some form of alternative pathway - see fig. 1.

It is unclear at this point exactly how the implementation of the plans of those now planning an alternative will affect the overall pattern. At the present time, however, it is clear that 78% of respondent schools either make no attempt to offer alternative pathways or offer only an incipient alternative. The high level of response to the survey means it can be assumed with confidence that the pattern in the constituent schools as a whole does not differ significantly from that of the respondent schools. Indeed, since it is probable that the small number of schools that did not respond to the survey do not offer a significant alternative, it is probable that the proportion of schools offering alternative pathways in the constituent schools as a whole is smaller than that of the respondent schools.

The survey also suggests that the differences between the relevant regulations of State educational authorities have some effect on determining whether a school will offer an alternative pathway of some sort. Leaving aside the Northern Territory, where only two schools reported, Queensland and South Australia provided by far the highest proportion of schools offering an alternative pathway, with 76% and 71% respectively of the respondent schools reporting an alternative pathway. The nearest to these were New South Wales and Western Australia each with 38%. This situation is represented by fig. 2. At the same time, it should be noted that the great majority of Queensland schools reporting an alternative pathway offer only an incipient alternative pathway - 88%. Most of the South Australian schools reporting an alternative pathway, on the other hand, offer a basic alternative pathway.

It should be noted that the number of schools in Tasmania, Western Australia and South Australia is relatively small, so that too much weight should not be placed on the results in these cases.

7.2.2 Reasons for not providing an alternative pathway

Of those schools providing education in years 11 and 12 that give reasons for not currently offering, or planning to offer, an alternative pathway, 83% give the lack of demand or need as a reason for not doing so. Lack of demand means the lack of demand from parents and students for the provision of any alternative to the present pathway. Lack of need indicates a perception by the educational leadership of the school that the present pathway adequately meets the needs of all students in the school.

The second most common reason for not offering an alternative is the size of the school, with 29% giving this as a reason. This means that it is believed that the school is too small to be able to provide more than the one pathway currently being provided. It is worth observing, at this point, that some schools already offering, or planning to offer, at least a basic alternative pathway are no larger than some that give their small size as a reason for not doing so.

The third reason given is cost, with 22% claiming that the cost of an alternative pathway is beyond the school's current resources. Some of these indicated that they would be interested in providing an alternative pathway if they could see a way of financing it. The fourth reason, given by a small number of schools - 17% - is that the

provision of an alternative pathway is premature. This means that it is seen as a distinct possibility in the future but that it is regarded as too early in the school's development to make such a move, or to plan such a move, at this time.

Fig. 3 represents the pattern of reasons for not offering an alternative pathway. It should be noted that most schools gave more

than one reason.

7.2.3 Perceived difficulties in providing alternative pathways

The difficulties that schools report in either establishing or maintaining an alternative pathway may be grouped under five categories. 65% reported that difficulty in raising sufficient finance or in providing adequate facilities is a major problem. 38% cite the difficulties in coordinating the learning programs of the alternative pathway with other established learning programs as a significant problem - this we have designated 'internal coordination'.

7.2.4 Perceived support needed to establish alternative pathways

Of the fifteen schools with plans to introduce an alternative pathway, eleven responded to the question on the kind of support that they see as needed to help them achieve this aim. The pattern of responses is represented in fig. 5.

24% identified the lack of enthusiastic support from parents and/or staff as a difficulty. In this connection, it is worth observing that schools with a well established basic or comprehensive alternative pathway usually report good parental support, indicating that parental resistance is related to the idea in the abstract and that it tends to be overcome once parents see a substantial alternative pathway in practice. The same cannot be said for teacher resistance since evidence from other aspects of the research indicate that this can remain a problem even after a substantial, and, from the students' and parents' point of view, highly successful alternative pathway is well established.

This does not mean, of course, that all teachers resist this kind of change. Obviously change can occur only if there are some teachers with the commitment to make it happen. However, the persisting resistance of a substantial body of teachers means that, at best, those leading such a change experience significant frustration due to lack of collegial support and, at worst, the alternative pathways that are established have a tenuous status in the school. An example of this worst case scenario is one school that reported that a significant program providing alternative pathways had been discontinued when the teacher responsible had left the school.

15% saw the availability of suitable staff as a difficulty while 12% saw a difficulty in coordinating the school's endeavours with external agencies such as TAFEs. This last difficulty we have designated 'external coordination'.

This pattern of reported difficulties in developing and maintaining an alternative pathway is represented by fig. 4.

Most schools reported that they had been able to take some measures to meet these difficulties, though not always with a completely satisfactory resolution. A number indicated that they were still working on solutions. It is clear, however, that, while there are significant difficulties in providing alternative pathways, where there is a firm commitment these difficulties can be overcome. A senior educational leader of one school expressed the situation well in an

interview when he said in relation to more extensive alternative pathways possibilities in that school: 'We could do it if we really wanted to; it's a matter of priorities.'

When it comes to benefits, it is clear that the overwhelming majority of schools that have developed any kind of alternative pathway see it as beneficial in providing for a wider range of student abilities and concerns. Often it is seen as particularly valuable for students who do not do well in subjects with strongly academic orientation. In spite of difficulties the great majority see it as worthwhile to persist in this direction. Only occasionally are the difficulties seen to outweigh the benefits.

The most common kind of support seen as needed, mentioned by 64% of the respondents, is input of ideas about how to do it. Clearly there is a sense that this involves entering new territory where some guidance is needed. The second most frequently mentioned need is finance, with 45% seeing this as crucial to the fulfilment of their plans. Assistance in facilitating links with TAFE and/or industry was another perceived need - labelled 'external facilitation' on the chart.

Only one school mentioned the need for professional development for teachers, a significant fact in view of the aims of this project. The need for ideas, of course, suggests some form of professional development as one way of meeting this need. In this sense it may be said that the responses indicate an implied need for professional development targeted specifically to this issue.

7.3. Conclusions

A number of conclusions may be drawn from the information provided by this survey:

(i) For the large majority of the constituent schools, there is either no provision at all or only very limited provision for alternative pathways.

(ii) A significant minority of these schools see no need to introduce any alternative pathway, being convinced that the existing single pathway adequately meets the needs of all students, as seen by students and/or parents.

(iii) The general educational environment that is shaped by relevant State regulations has significant impact on both the nature and extent of the alternative pathways offered by the constituent schools. In other words, the prevailing educational values reflected in the policies of State governments shape the practice of these schools in significant ways.

(iv) Even where schools have introduced significant alternative pathways there is significant community resistance, initially from parents and, on a more enduring basis, from teachers.

(v) There are significant difficulties to be overcome in the establishment of alternative pathways but, given the will to do so,

these can be overcome even by relatively small schools with limited resources.

(vi) For schools planning alternative pathways, the two greatest perceived needs are practical ideas on how to go about achieving their goal and the provision of adequate funding.

8. On-site Research

The survey on alternative pathways was complemented with on-site research in eleven of the constituent schools in four states - Western Australia, South Australia, Victoria and New South Wales. Information from the survey provided the basis for selecting schools for on-site research. Three criteria governed the selection:

(i) Each school selected appeared, on the basis of the response to the survey, to be doing something significant towards the provision of alternative pathways;

(ii) The mix of schools included several states; ideally, all states would have been included but practical considerations limited the choice to four states;

(iii) The mix of schools was spread across the different school systems or affiliations among the constituent schools.

The on-site research was not confined to the issue of alternative pathways, but covered the full range of issues related to curriculum change in post-compulsory years and, specifically, professional development needs in relation to these issues. The research method for the on-site research was the 'focused interview' as described earlier. In addition to these eleven schools, on-site research in a small school in outer Melbourne, on the use of telematics, and related information technology in state schools in Victoria's Mallee region and on a three way partnership between a state high school, industry and TAFE in the city of Geelong further extended the scope of the research.

Case studies were developed for five of the schools visited, selected on the basis that each of these schools illustrates possibilities for the provision of alternative pathways to meet the challenge of the 1990s.

Three important conclusions emerged from the on-site research:

(i) Different strategies, tailored to the local situation, can be effectively used to extend the range of learning opportunities for students. One school provides an impressive range of alternative pathways relying almost entirely on TAFE links; another provides an equally impressive range relying on structured workplace learning; a third, a residential school for Aboriginal students, is doing an excellent job through on-site training, with some TAFE links and off-site workplace learning; still another, while not strictly speaking offering alternative pathways, offers an impressive range of learning options together with personalised counselling support services that prepare students for a wide range of career possibilities.

Another school not visited, reported offering alternative pathways through a mixture of TAFE links and structured workplace learning. It is clear that no one model will be the best model for all schools.

Schools need to develop strategies that suit their individual circumstances.

(ii) A leadership with vision, commitment and the ability for creative planning is essential for the development of an effective program of learning alternatives. Half-hearted or token attempts do not work. At the same time, it is vital that the leadership carry with them both the staff and parents of the school.

(iii) To be effective in the provision of alternative pathways, or other forms of alternative learning programs to deal with a wide range of learning needs, the fundamental culture of the school needs to be changed so that the alternatives are seen by all concerned as equally valuable ways of learning. The effectiveness of such alternatives is defeated from the start when they are seen, either explicitly or implicitly, as an alternative for low achievers. Such an attitude, often communicated in subtle, indirect ways, inevitably generates a negative attitude towards such alternatives that undermines their value.

9. General Conclusions

All the research conducted for this project confirms the importance of the broadening of learning opportunities, and the provision of alternative pathways, in order to meet the diverse educational needs of youth in post-compulsory years. While we do not accept the socioeconomic arguments as adequate in themselves to support this thesis, these arguments come together with other educational arguments to build a compelling case.

It should be stressed that this does not in any sense imply that there should be any lowering of the academic standards of the existing curriculum. What is called for, rather, is a significant broadening of learning opportunities to provide a wider range of choices suited to the diverse abilities of a wide range of students.

However, it is also clear that achieving this broadening of options is

no simple matter. It involves significant second order change requiring a major restructuring not only of the curriculum but of the culture, values and organisation of schools. It would be naive to suppose that this will happen without systematic measures to prepare teachers, and other stakeholders, for the changes involved. It will be convenient to list some of the main issues in this connection under three headings:

9.1. Possibilities for Change

(i) While it is clear that most of the constituent schools recognise the need for some change to provide a broader range of learning options, it is equally clear that most are not aware of the extent of the change that is needed, or, at least, have not taken steps towards the implementation of the needed change.

(ii) Few schools, even among those committed to fundamental change, are aware of the possibilities offered by structured workplace learning. Indeed, few recognise the distinction between structured workplace learning as a carefully structured and systematically assessed learning experience and 'work experience' as a brief taste of life in the

workplace.

(iii)The terminology that identifies 'vocational education' exclusively with the preparation of students for the world of the trades, industry and commerce as distinct from the more traditional, university-oriented education is still common currency. This usage often, though not always, goes along with associated language that identifies a 'vocational' alternative as something for those students who are not able to do well in the preferred pathway that leads to a university entrance qualification. Even the otherwise impressive Schools Council report [1994b] maintains this usage. In our view, alternatives to a university-oriented schooling will continue to be seen as an inferior, second best, in the popular imagination until this usage of the term 'vocational' changes.

(iv)The reasons given by schools for not providing alternatives need to be examined more closely. Perhaps the least defensible reason is the 'lack of demand' argument offered by a number of schools. Parents pay fees to send their students to a private sector school because it offers what they want for their children. If the school offers only one pathway it will attract only those students whose parents want that pathway. The fact that all those whose children attend the school are satisfied with what is offered says nothing about the possibility that there are others whose needs are not met. Indeed, there is reason to believe that broadening the options would broaden the client base for such schools.

More defensible is the argument offered by one school that it had deliberately adopted a selective policy providing only for students wanting to follow a university-oriented pathway, leaving it to an adjacent state school to cater for others. Yet, even in this case, the research suggests that the policy tends to be adopted without sufficient debate over the fundamental issues involved.

The argument that small size and limited resources prevent a school from providing alternatives no doubt has some force. Yet the research suggests that given commitment and the readiness to look for creative solutions it is, in many cases, possible to overcome these limitations.

9.2.Distance Education

The possibilities of distance education, and especially the use of information technology for the delivery of educational components both to students in schools and for the professional development of teachers, was explored through the literature, through on-site investigation, and through interaction with those currently involved in this area. Five conclusions emerged:

(i)While face to face interaction is to be regarded as the ideal context for education, distance education has real possibilities for expanding learning opportunities in a way that could not be achieved by face to face interaction. This applies both to the education of

students in schools, especially smaller schools and schools outside the larger urban complexes, and the professional education of teachers.

(ii)The intrinsic interest of course materials for students and

systematic contact between teacher and student is basic to the success of any distance education program.

(iii) Advances in electronic technology present significant possibilities for improved delivery of distance education which should be actively explored. However, at the present time, costs and the lack of availability of the appropriate hardware place limitations on these possibilities. Since these limitations may be expected to be overcome quite rapidly, the situation should be kept under constant review.

(iv) Even under the best circumstances, a relatively high student attrition rate can be expected in distance education programs for the professional development of teachers. However, this can be minimised by careful attention to course design and delivery.

(v) The effective use of contemporary technology for the delivery of education in schools calls for a retraining of teachers, since it calls for the use of different kinds of teaching strategies.

9.3. The Professional Development of Teachers

(i) Both the survey and the on-site research indicated that there is relatively little specific recognition of a need for professional development of teachers in preparation for change. What need there is related more to the needs of educational administrators than to those of classroom teachers. On-site interviews suggested that this is largely due to a lack of awareness of the scope of change involved. When alerted to the nature of the changes in view, most teachers readily agreed that there is need for professional development to equip them for these changes.

It is notorious that professional development programs generally fail to achieve their goals where there is no clearly perceived need for them by teachers. It is clear, therefore, that the first step in the provision of professional development programs should be aimed at promoting an awareness among teachers in the constituent schools of the nature and the extent of the changes that are facing schools if they are to meet the needs of a wide range of students in the post-compulsory years. It appears to be particularly important that the educational leadership should be targeted by these initial professional development programs.

(ii) Once given an idea of the nature of the changes in view, teachers suggested the following as perceived areas of need:

- Training in the educational uses of information technology, and, in some case, prior basic training in the technology itself;
- Developing better managerial type skills to enable them to be more effective in situations requiring them to provide oversight and direction of student learning, part of which is occurring in situations beyond the school's control.
- The ability to be effective working in educational partnerships with others who are not teaching professionals.

(iii) That professional development programs equipping teachers for change need to be developed to support schools that are planning change in post-compulsory years. These should deal with:

- Planning and coping with change;
- The educational implications of the revolution in information

technology;

- Developing effective educational partnerships with a range of people beyond the school in order to provide effective schooling in the post-compulsory years;
- Developing patterns of educational leadership to ensure that teachers continue to act as effective guides to students in situations where significant components of learning takes place outside the direct control of the school;
- Providing patterns of instruction that recognise the diversity of ways

in which people learn and encourages the recognition of all gifts.
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