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Intentions versus actualities: Have the New Zealand education reforms met their objectives?

Lynne Eagle and Dick McDonald

ABSTRACT

We examine the way in which education reform policy emerged into practice through the establishment of the New Zealand Qualifications Authority and the National Qualifications Framework. Specific objectives for these entities are examined, along with underlying assumptions such as the anticipated high levels of industry support and involvement in developing and maintaining framework units. The focus on a specific interpretation of competency-based learning and assessment for Framework units is analysed and the links between the overall policy intentions and their implementation are critically examined.

Introduction

Policy began to be implemented into education practice, in a wider environment of deregulation, after the introduction of the Education Amendment Act (1990). Tertiary institutions established boards of trustees and individual charters, but by far the biggest impact was to come through the establishment of the National Qualifications Authority (NZQA) and the National Qualifications Framework.

Specific Objectives for the NZQA

A crucial part of the remedy for the education system's perceived failure to deliver the skills required by the labour market was the establishment of a National Education Qualifications Authority (later established in 1990 as the New Zealand Qualifications Authority). This organisation was to be the primary instrument through which many of the reforms were to be implemented. Its aims were originally to co-ordinate national secondary school educational qualifications, national vocational qualifications, and national advanced academic qualifications. The main functions of the authority were then spelt out in detail in the NZ Government's *Learning for Life* report (1989:44) and appeared in an expanded form in the subsequent Education Amendment Act, 1990 (Section 253):

- to oversee the setting - and regular review - of standards for qualifications in secondary schools and in post-school institutions;
- to develop a framework for national qualifications in the post-compulsory area in which
  - all qualifications (including prevocational courses... have a purpose and a relationship to each other which clients and the public can understand;

- o there is a flexible system for the gaining of qualifications, with recognition of competency already achieved;

- to establish policies and criteria for the validation (confirmation) of those courses which lead to national qualifications;

- to establish policies and criteria which will enable institutions and other providers to be accredited (recognised) as deliverers of education and training courses that can lead to national awards;

- to ensure there are mechanisms in place to guarantee that different providers of nationally validated courses have assessment procedures which are fair, equitable, consistent, and in keeping with the required standard;

- to endorse certificates for those courses which meet the validation criteria,

- to maintain effective liaison with overseas certifying and validating bodies, in order to recognise overseas qualifications in New Zealand and to achieve recognition of New Zealand qualifications overseas; and,

- to ensure that post-school qualifications maintain international comparability.

In October 1990, NZQA published a consultative document *Towards a National Framework: General Principles and Directions* which outlined possible alternative structures for a modular framework system based on the accumulation of credits. It also signalled a shift from norm referenced assessment (measurement of one person's achievement against others being assessed) to performance based assessment (measurement of a person's achievement against previously established standards) - a concept which had been raised in the NZ Government's *Learning for Life* document (1989:44). No mention was made in this document of any models that had been studied and that may have formed a theoretical basis for this decision.

In subsequent documents, the preference for the Scottish Vocational Education Council (Scotvec) model as a foundation for the New Zealand reforms became apparent. Scotvec began the introduction of a modular curriculum based on a criterion-referenced system in the early 1980s. Emphasis was placed on demonstration of competence and on credit accumulation. It was envisaged that modules would be grouped into programmes with the groupings varying to meet the needs of employers or students. "Thus, through the modular approach, current industry and commercial needs could be met, choice and change of direction would be facilitated and flexible entry and exit points could be made available" (McCool, 1992:316).

Specific Objectives for the NZ National Framework

The development of a new qualifications framework is specified as a function of the NZQA in the Education Amendment Act ii. 990. In NZQA's 1991 *Designing the Framework* document, the Framework is stated as being a co-ordinated set of units of learning, available to students at senior secondary schools, in polytechnics, colleges of education, universities or private training establishments, wananga, marae or community organisations. "Such learning must be equally available in the workplace, and through self-directed study or experiential learning" (NZQA, 1991a:36). "The building blocks of the framework are units of learning, designed around clearly specified outcomes" (NZQA, 1991a:36). Each unit is assigned a credit value which reflects the total time expected for an average learner to complete the unit, with one credit equating to 10 - 12 hours *total* learning time.

A set of objectives or 'goals' for a framework appear in this document with the somewhat strange acknowledgement that they were "suggested by the NZ University Students' Association ... and are endorsed by the Qualification Authority" (NZQA, 1991a:36). These goals, which include reference to clarity of structure and purpose, excellence of teaching and assessment methods, flexibility of access points and of transfer between courses and institutions, and recognition of

achievement, appear to have been accepted without further consultation or debate. As shown below, the Framework has been modified several times since it was first drafted:

Figure 1: National Framework Models: evolution over time:

a) October 1990:

Basic education	NATIONAL CERTIFICATE						National degree
	Level One	Level Two	Level Three	Level Four	Level Five	Level Six	

Source: NZQA (1990) *Towards a National Qualifications Framework*, NZQA consultation document

b) March 1991:

School Certificate	Bursaries		Degrees				
		Scholarships					
	New National Qualifications: Levels						
	1	2	3	4	5	6	7	8

Source: NZQA (1991a), *Designing the Framework*
NZQA consultation publication

c) June 1994:

Levels							
1	2	3	4	5	6	7	8
National Certificate				National Diploma			
						Initial Degrees	Other Degrees*

* Other degrees: Honours, Masters, Doctoral degrees and also including Higher Certificates and Diplomas

Note 1: Initially degrees were shown as starting at Level 7, but from the June 1994 model, level 7 is shown as "completion of initial degree".

Note 2: The educational levels are defined as follows:
Level 1: secondary school years 2 / 3 or their equivalent at polytechnic, college or other post school provider
Level 2: secondary school years 3 / 4 or their equivalent at polytechnic, college or other post school provider
Level 3: secondary school years 4 / 5 or their equivalent at polytechnic, college or other post school provider
Level 4: elementary 100-level units
Level 5: 100-level units
Level 6: 200-level units
Level 7: 300-level units
Level 8: Honours and post-graduate degrees, diplomas and certificates

Note 3: National Certificates are defined as requiring a minimum of 40 credits at or above the registered level of the certificate.
National Diplomas are defined as requiring 120 credits of which 80 must be at the registered level of the Diploma. 120 credits is specified as a normal full year's work.

Source: NZQA (1994)

THE SCOTVEC MODEL

The search for an alternative system appears to go back to at least the early 1980s, although it is difficult to trace the exact point at which the decision was made, or when and why the decision to focus on the SCOTVEC structure was made.

J. Ross, former chairman of Quest Rapuara, confirms that he visited Scotland in 1981 and in 1984. "Those two visits were primarily concerned with investigating the developments that were being undertaken by the Scottish Education Department to provide a wider range of opportunities and qualifications for the 16+ age group .... At about that time, as a member of the previous Vocational Training Council, I reported on the value of the Scottish developments and I also used that information when I chaired the Committee of inquiry in to Curriculum, Assessment and Qualifications in Forms 5 - 7." (personal communication, 1993, p.1). A number of senior polytechnic staff visited a number of overseas institutions in 1986 and appear to have viewed the concept of SCOTVEC favourably at the time, as indicated by the statement that "The Scottish 16+ Action Plan should be carefully examined with a view to implementing a similar system in New Zealand" (Willyams, 1985:10). Probine Fargber (1987:29) state that "Scotland's 16+ Action plan ... has much to

recommend it". There is no evidence of a comparison having been made between SCOTVEC and any other models which were in operation in other countries.

In the NZQA document *Designing the Framework: A Discussion Document about restructuring National Qualifications* (1991a:12), it is stressed that it was important to establish levels that relate both to overseas structures and to existing national qualifications, and to ensure the levels are based logically on occupational and educational patterns. "Developments in vocational education in Britain, the European Community and Australia have been closely studied". However, I have been unable to locate any comparative analysis of these developments.

On page 45 of the above document is a reference to the use of overseas models, under that beading. It reads as follows:

> The Scottish Vocational Education Council (SCOTVEC) has developed a centralised qualification system with all unit and unit results held on an EDP database in Glasgow. There is excellent subject moderation, effective administration, and a strong interest in the learning process. Field officers monitor provision and subject assessors ensure consistency of standards. The qualification is solely dependent upon assessing competence and not the acquisition of such competence. Such an approach can, however, have considerable advantage. Because of the wider educational focus of the New Zealand Qualifications Authority and its responsibility for course approval, accreditation and certification, New Zealand may need to seek the middle ground. SCOTVEC and NCVQ have recently reached agreement on the development of qualifications capitalising on the best of both approaches. This has influenced the unit of learning proposals in this document.

There is no reference to any other 'overseas models' in any of the NZQA material from this period of time. No record can be found to indicate that a critical analysis of the strengths and weaknesses of SCOTVEC was ever made, or of the appropriateness of its application to New Zealand reviewed prior to the decision to use the Scotvec system as a model on which to base our own system.

Support for the Framework concept was not universal, as demonstrated by correspondence with the Director of the Christchurch Polytechnic, who states: "I am not a supporter of the development of the national framework and, more particularly, the similarity between our framework as it has emerged and that of the British including Scotland." (Hercus, 1993). Concern centred on the intention to apply the Framework and its associated competency based assessment philosophy to all levels of qualifications, up to and including degree programmes, including university degrees. This would have put New Zealand at variance with the structure of similar vocational qualification frameworks overseas. We have been unable to locate any overseas systems that apply competency based assessment beyond vocational certificate level (level four on the New Zealand Framework) (e.g. Pennington, 1994).

Of greater concern, with the central role expected of industry in developing and maintaining the Framework, is the statement in the N.Z. Herald from the Industrial Relations Manager of Fletcher Challenge (one of New Zealand's largest employers) who states that industry's only interest in training was to enhance the value of its business to customers. "The point is not to provide portable qualifications, not to enhance the education of the workforce or to do the myriad things I often see put forward by the training industry to enhance their business" (Jones, 1993). Such comments must call into question the overall commitment and level of support likely to be given to the new structures.

The NZ Engineers Union (NZEU) indicate that research which led to the Australian reforms was more wide ranging and critical, in that:

> Both Australian employers and unions ... have looked wider than just next door ... and have looked for the best possible international benchmark models of trade and industry skill development and training. They looked at what different countries do, and what works best, not as in this country, experimenting with supposedly ideal behaviour (NZEU, 1991:5).

One criticism of our tendency to make major decisions without critical comparative analysis (made almost a decade prior to the initial developments of the Framework) is as follows:

> Are our NZ institutions 'an uncritical borrowing, the importation of other people's solutions before we have formulated the questions for which a New Zealand answer is needed'. Or are they authentic conceptions that borrow from abroad for no other reason than that common problems can lead to similar solutions in countries with similar educational traditions? (Williams, 1978:227.)

It would appear that this question was not answered before the Framework development began. It would also appear that the 'solution' may not be the answer for Scotland, let alone New Zealand. Recent literature from Britain suggests that the SCOTVEC system is not in fact performing as expected and is meeting with increasing resistance from industry (e.g. Evans, 1995; Merrick, 1996; Hyland, 1996).

The situation is even more curious when, as late as April 1993, a senior NZQA executive acknowledged that much of the problems of the separation of New Zealand academic and vocational education and training, and many subsequent problems, are primarily due to the fact that "New Zealand inherited its education system from the United Kingdom ... New Zealand inherited that dualism and all the others that go with it" (Barker, 1993:1). As the NZEU state somewhat bluntly, "there is no question that here in New Zealand we see repeated many of the failures of the acknowledged crisis-ridden British education system" (1991: 6). Comments such as these appear to have been ignored by both policy makers and policy implementation bodies.

Proposed development: Structures and partnerships

Considerable industry involvement in the development and maintenance of the Framework and its component units was envisaged from the inception of the Framework concept. This is evident in an early statement from NZQA:

> course development requires decisions which are most effectively made by industry. These include the balance of on and off job provision. While course development is an industry-led process, it operates on a partnership principle with providers and the Qualifications Authority (NZQA, 1991b:70).

In the same document, NZQA outlines the division of responsibility which they envisage in course development (NZQA, 1991b: 73). They list these as follows:

Normally industry would be responsible for:

- developing industry-wide plans (industry audit);

- identifying industry skills (skills audit);

- directing the training needs analysis which identifies the training required to attain such skills;

- deciding (in conjunction with the other partners) the appropriate place of provision;

- advising (again as a partner) on the development of the training needs into a learning course;

- assessing the on-job component of the course;

- moderating the assessment (in partnership with providers); and,

- revising and reviewing procedures for the course (again as a partner).

Providers, including employers delivering on-job training, are responsible for:

- development of identified training needs into a learning course;

- providing the training;

- assessing the off-job provision (of training);

- assessing on-job training in partnership with industry if required;

- moderating assessment (in partnership with industry); and,

- revising and reviewing procedures for the course (as a partner);

NZQA (itself or by delegation) responsible for:

- establishing principles and concepts which comprise the national framework for qualifications (including principles for unit writing, principles governing statements of competence, principles governing standards and assessment);

- establishing nomenclature for qualifications;

- advising providers (on and off-job) on methodology for statements of competence, standards and assessment;

- maintaining the national catalogue and units of learning and qualifications;

- providing the channel for industry and provider involvement in course approval and accreditation procedures;

- regulating the framework for qualifications (levels, standards, nomenclature and appropriateness of assessment);

- approving courses and accrediting learning providers; and,

- monitoring processes designed to achieve and maintain consistency of assessment.

They then illustrate the process with the following model (NZQA, 1991b: 75):

Figure 2: A model for the Process of Course Development

PROCESS		ROLES
Broad Skills Projection	Fields of Learning Forum	Horizon scanning, identifying future needs across the broad field of work and learning, advising the Qualifications Authority and other agencies
Industry Plan	Industry Training Organisations	Co-ordinating vocational education and training. Serviced by the tertiary Education Commission and The Qualifications Authority
Industry Skills Audit		
Apprenticeships / ACCESS / Primary Industry Cadets / Other training schemes		Working with Industry Training Organisations, industry and providers for such tasks as course development and revision, resource production, etc.

Training Needs Identification
UNITS OF LEARNING
Course development, including assessment, moderation of assessment and course revision
Course approval and accreditation
Course review

The area enclosed by double lines denotes tripartite course development by industry and providers in consultation with the NZQA. Learning was envisaged as both on job and off-job.

'Provider Capture' versus Industry Dominance

The foundation of the NZ National Qualification Framework on a model selected without adequate critical comparison relative to other possible models is of concern. The increased role of industry in course development issues for the Framework development was seen as unproblematic and necessary in order to make education more accountable and responsive to changing industry needs (as signalled in the NZ Government's *Learning for Life,* 1989). Criticisms of the education sector's relative isolation from effective accountability were raised in Treasury's *Economic Management* (1984:268) which states that "educational suppliers are relatively independent of the need to satisfy consumers in order to obtain funding and so incentives to respond to consumer monitoring are relatively weak".

While the Framework was seen as a major step towards making education more responsive to the needs of industry, there has been an apparent shift in government policy away from what was cited in government reports in the late 1980s as a partnership model between industry and educators in the development of vocational education.

The vision for industry involvement was originally stated as:

> A partnership between industry and the providers in which there is joint responsibility for developing courses, course objectives, performance criteria etc, and for monitoring standards at both local and national level which would help to ensure accountability and confidence in what is provided (Dept Ed,. 1987a:4).

This view was supported by industry, with the NZ Employers' Federation (NZEF) stating that:

> there must be a continuing and close relationship between education and industry to enable national co-ordination at all stages of the curriculum process (1988:6).

NZEF acknowledged the role of unions in this partnership, in that "there bas been and should continue to be, a recognised tripartite involvement in the vocational education and training system" (op cit). More recent publications, for example those emanating from senior NZQA personnel, have shown the shift away from a power sharing model towards different functions in the process:

> It is industry, or the users of particular skills and knowledge who should set the standards, that is define the outcomes and the performance criteria. The providers of education and training should not be excluded from that process, but neither should they be the primary participants in it. (Barker, 1993:7).

Some more recent writings suggest a move towards a model which assumes the requirement for dominance of the relationship by industry: "Industry control of training is essential if New Zealand is to develop the high skills economy it needs to compete successfully in world markets" (Kerr, 1992).

This would appear to conflict with the NZEF's perception of the relative roles of educators and industry:

> It is the responsibility of industry to determine the WHAT of training and for the education system to determine HOW it should be done ... (NZEF, 1985: 16) ... Only those currently involved on the job are in a position to identify present and future needs ... (NZEF, 1985: 18) ... however translation of needs into education objectives requires the professional expertise of tutors (NZEF, 1985:19).

The NZEF (1985:19) acknowledge that industry has not in fact been totally effective in carrying out their role, acknowledging that:

> We would be the first to admit that employers have not been very concerned or diligent in the past about identifying their training needs and that the education system bas done the job by default.

Winning (1993:110) questions the use of *existing* industry standards as a standard to write into curriculum as (Australian) industry "bas failed to excel".

A senior NZQA Executive acknowledges that international experience indicates the partnership model can be effective:

> If we look to the German system and ask why it is so successful, the answer is not in the structures which is our usual answer, but in what those structures promote and represent; a co-ordinated and interactive system built on a partnership between industry, providers and government (Barker, 1993:7)

While there are several references to alternative overseas systems such as those which operate in Germany and Sweden, there does not appear to have been a major analysis of them, nor an attempt to assess their suitability for inclusion into the New Zealand reforms.

Competency based learning – A Critique

NZQA signalled their intention to move towards competency based assessment from the earliest stages of the development of the Framework:

> in recent years world wide, there has been growing support for basing assessment of students on clearly defined performance criteria. This bas resulted in a shift from norm referenced assessment (measurement of a person's achievement against others being assesses) to performance based assessment (measurement of a person's achievement against previously established standards (NZQA, 1990: 10).

NZQA cites the endorsement of government policy makers for this approach, i.e.: "(NZQA) will be based on a student-centred approach to learning and assessment which stresses the competency of students to understand and apply their acquired knowledge" *(Leaming for Life,* 1989, 4.2.4).

> The assessment philosophy was spelt out in more detail in a subsequent publication, i.e.:

> competency-based assessment measures the learner's skills and knowledge against predetermined standards (that is, the learner can or cannot demonstrate the competence), bas no grades or ranking, is most appropriate for courses which have a comparatively large number of discrete skills (NZQA, 1991b:54).

There are two interesting aspects to this statement: the first is the implicit acknowledgement that competency based assessment may not be universally applicable to all subject areas. The second is that skills and knowledge at this point were still linked. By 1993, skills and knowledge appear to have become separated, e.g. in the NZEF's "Assessing Competencies" guide prepared in conjunction with NZQA, assessment does not include direct assessment of knowledge, only of a candidate's ability "to perform activities and achieve the outcomes described by the elements of the competence in a unit" (NZEF, 1993b:12) It must be questioned whether a focus on assessing individual elements rather than on the integration of a number of elements so as to demonstrate the ability to analyse and synthesise information in order to make often complex decisions and recommendations is desirable at all levels of education. "Many of the most important aspects of (vocational) education are not directly measurable" (Gleeson & Hodkinson, 1995: 11). The criterion-referencing of assessments assumes that there is only one correct way to perform a task. Critics (e.g. Winning, 1993:110) have warned that this emphasises current competencies, not those likely to be needed in future and that the essentially behaviourist nature of competency based assessment also presents potential problems.

The ability to perform a specific task is taken, for assessment purposes, as an indicator that the required knowledge, understandings and skills must have been acquired. Jessup (1990:21) suggests that "it is simply concerned with performance in a particular job .. for example, one would expect a plumber to fit or mend pipes in a wide variety of situations, including those he or she had never before come across".

Initial experience within the polytechnic sector (with simple visual display training at the second lowest level on the Framework) indicates that students, while able to demonstrate

'competency' according to the criteria laid out in the relevant unit standards, were unable to apply the principles assumed to have been learned (but not tested for) to the building of different displays under different conditions (Gyde, 1995). At the higher levels of the Framework, where emphasis is on higher cognitive abilities, analysis and critical thinking, the ability of units written under competency based criteria to accurately measure the underlying knowledge must be questioned.

Additional questions are raised regarding the recording of results. Framework units are recorded only in terms of whether a learner is or is not yet competent, although NZQA (1994:5) suggests that "there is also the possibility of awarding merit where applicable". Hotere (1996:9) cites educationalists' concerns with this simple competent / not yet competent approach, suggesting that there is no longer an incentive for "someone to do a superb piece of work when a mediocre piece of work will still get them the unit".

Discussions with industry leaders suggest that industry appears to have only recently understood this aspect of competency based assessment and that they do not support it. What they support is the integration of theoretical knowledge with the ability to apply it in real world situations to the standards expected by industry. They appear to believe that gradings are valuable indicators of a prospective student's underlying abilities (e.g. Innes, 1997).

An additional and related problem is that students (in theory at least) may attempt an assessment task an unlimited number of times until they gain competency. Potential employers have no way of distinguishing between students who achieve competency at their first attempt and those who need several attempts. The need for students to successfully complete each element of a unit before being credited with the unit, in tandem with the 'resit' philosophy, means that a number of separate assessment instruments are required for each element (unless the same assessment is re-administered each time). The workload for teaching staff is considerable. Evans (1995:5) provides warnings from the British experience of National Vocational Qualifications (NVQs), citing large amounts of paperwork required for recording assessments of "numerous desegregated tasks" and further warns of the accompanying bureaucracy that has been generated.

Implementation of the Framework as intended by NZQA would raise a number of questions regarding:

  a. the resources required to implement it, and:
  b. educational soundness of some aspects of the system.

The application of Competency-Based Assessment (CBA) would appear to be at odds with the stated intention of maintaining international comparability (Education Act, 1990, Section 253). Some measure of competence in conjunction with underlying academic knowledge is frequently used in programmes with an applied emphasis (including teaching and engineering qualifications) (e.g. Pennington, 1994). However, assessment of academic performances based solely on CBA methods is not common for higher level (diploma and above) programmes. We have been unable to locate any overseas examples of degree programmes based on this exclusive CBA philosophy. Given the requirement of maintaining international comparability clearly stated in the NZ Government's *Learning for Life* (1989), the mandate for an all-encompassing application of CBA principles seems without strong foundation.

Links between intentions and implementation

There would appear to be extremely weak links between the intentions of the reforms and the actuality that has emerged. Three of the principal objectives set for the reforms are now examined to illustrate this.

1. To make education:

a) more efficient, and b) more responsive to industry (in order for industry to be able to be more competitive within the global economy).

It is difficult to find hard evidence of efficiencies being achieved, particularly when substantial resources are being diverted into the development and administration of the new system. In addition, the industry infrastructure which was expected to support the Framework appears to have been based on an assumption that industry would support the reforms with ongoing expertise and funding. In the business sector at least, industry commitment is weak. Without ongoing industry commitment, the Framework administration will be severely compromised.

2. To fix greater proportion of the costs of non-compulsory education and training on those who are perceived to directly benefit from it.

Higher costs have been fixed only on students - ignoring other potential beneficiaries, such as employers - or society at large. This second objective in itself mitigates against the chances of the third objective being achieved.

3. To address the historically low participation in tertiary education by low socioeconomic groups and some ethnic groups - particularly Maori and Pacific Islanders.

The substantial fee increases may act as disincentives for these groups to participate in tertiary education and there have been no initiatives to overcome this. The Nelson Polytechnic court case cited by Eagle & deBruin (2000) in this issue has led to polytechnics being very cautious about offering affirmative action programmes.

There is no evidence of serious attempts to identify the barriers which have caused low participation by Maori and Pacific Islanders - or to investigate strategies which might help to overcome the problem. Longitudinal data are required to examine this aspect of educational policy.

Study Right - A Further Internal inconsistency: Treasury Recommendations versus Education Policies

There is an additional conflict between the reform recommendations and the policies and practices which have emerged from them in terms of the concept of 'learning for life' and the operation of the government's subsidy programme.

The fee structure introduced as part of the reform implementation divided students into Study Right and Non Study Right groupings. This enabled students who commenced studies before the age of 22 to gain up to three years of fees subsidies at a level of 95% of the total tuition cost. Boston (1992: 191) notes that:

> this favouring of school leavers at the expense of mature students is discriminatory, inequitable, and inefficient, 'and represents one of the most unsatisfactory aspects of the new policy framework.

In 1992 Non Study Right students were subsidised for 85% of their tuition costs. The subsidy level was progressively reduced - to 80% in 1993 and to 75% in 1994 (and future years). In addition, for 1993, the Government announced that, in order to provide for additional places in tertiary education without incurring significant extra costs, the base funding levels to educational providers per equivalent full time students (EFTS) would be reduced by 1 %. This was followed by a further I .4% reduction in 1994 and 1 % per year in subsequent years. Institutions have simply opted to recoup the shortfall through increased student fees.

For example, if Manukau Polytechnic (now Manukau Institute of Technology) had achieved the same number of EFTS in 1994 as in 1992 (i.e. an assumption of zero growth) without increasing student fees, the net loss in income to the polytechnic would have been $1,295,302. For subsequent years, the net loss per year would have been approximately $400,000 (Source: Manukau Polytechnic Legal and Finance Committee). Other providers would incur similar effects. With no other major income source other than student fees, most polytechnics, as noted above, have opted to increase fees to students.

Fees for 1994 were set differently by various providers. For example, The Auckland Institute of Technology decided to establish a flat fee which did not discriminate between the Study Right and Non-Study Right groups. This resulted in all full time students paying $1,755, compared to $1,200 for Study Right in 1993 (+46.2%) and $2,000 for Non-Study Right (-12.2%), in effect reducing the impact on more mature students. Manukau Institute of Technology has retained a two tier structure, with the following:

Figure 3: Manukau Institute of Technology student fee structure 1993 - 2000 (Business courses):

Year	Study Right $	Non-Study Right $
1993	1156	2058
1994	1305	2280
1995	1530	2250
1996	2022	2562
1997	2250	2745
1998	2471	2966
1999	2709	3204
2000	3087	3312

Source: Manukau Institute of Technology

Given the Manukau Institute of Technology's substantial low socio-economic catchment area, this policy may disadvantage mature age students who are likely to have low levels of discretionary income relative to students drawn from more affluent areas. There is a widespread belief (e.g. Maani, 1997) that ongoing increases in fees, especially for those not entitled to Study Right, will adversely affect the number of student enrolments. This belief gains support from the results of an analysis of university student profiles. Between 1994 and 1997, university enrolments of students from the three lowest socio-economic decile schools declined almost 23%. Over the same period, enrolments of students from the top three decile schools increased by almost 25% (Bullen, 1999).

In Auckland, at least, this aspect of the debate has been confused by an increase in enrolment numbers overall at most tertiary institutes up until the late 1990s. The increase at the Manukau Institute of Technology (and, anecdotally at other polytechnics) was in fact made up by substantial increases in the number of recent permanent residents, primarily from Asian countries, the numbers having more than doubled for 1995 compared to 1994, and then having doubled again for 1996 compared to 1995. 1997 and 1998 figures indicate continuing increases in Asian student numbers, but at slower rates than in previous years. Within Manukau Institute of Technology's business programmes, for the 1997 academic year, approximately 14% of enrolments were for students of Asian origin. For 1998, the figure was almost 20%. Within Computing programmes, the figure has been over 20% since 1997 (Source: Manukau Institute of Technology Student Management System, 1997 and 1998).

An enrolment downturn occurred in business programmes at Manukau Institute of Technology in 1999. There was no single reason for this downturn, rather there were several factors contributing to it. These included fewer 18 year olds exiting from high schools, continuing cost increases, the

perceived advantage of university education and a changing employment situation resulting in more students electing to study part time while holding a full time job. The effect on the Manukau Business School has been highlighted by the significant number of part time students who are often reluctant to take time off work particularly during the day, and who for family reasons may not be able to attend evening classes.

At the very least, the continued fee increases to students has the potential to compromise the stated aim in the Ministry of Education's (1993) *Education for the 21st Century* of "equality of educational opportunity for all to reach their potential and take their full place in society" (1993:34) as the high cost may result in tertiary education being perceived as being beyond the financial reach of the disadvantaged (e.g. Istance, 1997). Unfortunately, the Manukau Institute of Technology collects no socio-economic data from its student body, making analysis over time impossible.

Boston points out that the reforms in effect rejects the concept of recurrent education, making it more difficult for people to retrain or to switch areas. He suggests that the current structure lacks economic logic "given the current high level of unemployment and the widely recognised need to improve the skills and adaptability of the New Zealand workforce" (Boston, 1992:192). Boston highlights contradictions in policy such as the Tertiary Review Group's Report which states that "the critical requirements for producing an educated and adaptable population are those of learning, flexibility and productive participation throughout the entire life of an individual" (1991: 26). In the Reports of the Tertiary Review Group (April 1991), the Study Right programme receives severe criticism, including that:

> it is unfair in the sense that those most in need of assistance are not necessarily eligible. It would create inefficiencies in terms of the mix of education delivered. The change in profile of participation would be to the detriment of the skills base of the workforce. In particular, it would increase barriers to mature students seeking to upskill and retrain, (1991: 6).

Ashenden's critique of similar educational reforms in Australia (1992:246 - 247) should signal a clear warning that the current New Zealand reforms, even taking into account the inequities and inconsistencies, may fail. He suggests that "in the longer term it is at least possible that the skills recognition agenda will produce the opposite of what was intended". He further suggests that:

> by drawing so much attention to the problem of skills definition, production and distribution, the skills recognition agenda may inadvertently help to distract from the real challenge, which is not in skills supply but in skills use - that is, in organising, equipping and managing workplaces in ways which both employees and employers find more productive (Ashenden, 1992:24 7).

Impact of marketization on polytechnics: Likely future developments

The previous articles have indicated that the impact of the introduction of market forces on tertiary education may not result in the outcomes intended. They also identified a number of fundamental contradictions between moves towards greater competition and commercialisation - and a high level of government intervention. There are substantial costs incurred by education providers in 'buying into' the Framework and there is additional uncertainty generated by the competitive tendering processes now in use by the Education and Training Support Agency. It is not apparent how the marketization moves have improved the efficiency or effectiveness of education delivery.

In early 1996, Manukau Institute of Technology completed a substantial analysis of the costs of offering individual programmes, with a view to identifying courses and programmes which incurred substantially higher costs than other offerings, and to eliminating those which 'lost money'. As a result of this analysis, the institution announced in mid 1998 that it would discontinue motor mechanic training, as it was no longer economic, given funding levels offered by the Industry Training Organisation (ITO). There is now no provider of such training in the greater Auckland area. The Manukau approach is consistent with the new business philosophy espoused for education - but is likely to cause conflict between economic and social objectives.

New courses and initiatives are likely to be subject to much tighter return on investment analysis in the future - thus probably stifling risk taking and forcing concentration on 'safe' investments. In addition, courses deemed 'worthy' (on social grounds) but which are uneconomic will be unlikely to be considered, let alone funded, on an ongoing basis.

The increasing interest by educational providers in strategic alliances and mergers may also see student choices curtailed, in terms of the type of programmes they study, where they study and the way in which such programmes are delivered. The implications for choice, diversity and the encouragement of participation by under represented groups appear to be open to question.

Doyle (2000: 6) notes that the Labour Government that took office in late 1999 does not favour a free market approach. While he applauds the move away from intense interinstitution competition, he cautions that Labour's proposed "new collaborative era", will not be easy:

> So what of the strategic direction? That the sector should have one is an entirely new concept. At no time in the past ten years were institutions expected to have regard for either a sector or a national interest. To put anything above the interest of your particular institution was highly dangerous. Now, for the first time since 1990, they are being asked to consider a wider interest. By definition, such a consideration poses a threat to institutional autonomy, and some institutions will resist this. What will happen if some institutions move in the collaborative direction and others do not? Will those institutions which see the new direction as a positive move be safe in assuming that everybody will play the collaborative game and that nobody will take advantage of the situation?

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