

Submission to the Senate Inquiry into Current and Future Skill Needs

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This submission specifically addresses the following two areas:

- (a) areas of skill shortage and labour demands in different areas and locations, with particular emphasis on projecting future skill requirements
- (b) the effectiveness of current Commonwealth, state and territory education, training and employment policies and programs and mechanisms for meeting current and future skills needs, and any recommended improvements.

Summary: This submission considers the very real failures to date to anticipate the potentially very serious shortfalls in both university academics and vocational education teachers in TAFE and related sectors. It then addresses some of the major policy inadequacies, specifically relating to competency based training (CBT) as a underpinning framework, the training packages which have destroyed conventional curriculum and have fragmented knowledge, and the inadequacy of the Certificate IV in Assessment and Workplace Training as a minimum and maximum vocational education and training (VET) teaching qualification. It concludes that there is a need for as radical overhauling of VET policies and that these new policies need to be based on existing theory and research in the areas of skill learning and the development of expertise.

Introduction

Evaluations of the effectiveness of Australian government policies formulated circa 1989-1998 under the influence of economic rationalism are now starting to emerge. The recent Committee for Economic Development of Australia's report, *Privatisation: A review of the Australian experience* (Mead & Withers, 2002), clearly indicates that, not only is there deep suspicion on the part of the Australian public, but that very many of the intended outcomes from privatisation have not occurred. The mess created by the collapse of HIH has demonstrated, not only that private business incompetence can greatly exceed the inefficiencies of the public sector, but also that in matters of social and national interest only governments have the authority, economic resources and legislative power to ensure the smooth functioning of the society. Medical services and many community events have been adversely affected by the failure of HIH and the full fall-out probably has not been realised. The focus upon terrorism and preparations for war at the time of writing illustrates only too clearly the central role that only a strong central government can play in effective national governance.

In the VET area, the effects of policies influenced by economic rationalist theory, such as those relating to competency-based training, training packages, the focus of training upon workplaces to satisfy the training needs of business and industry and the exclusion of teachers

and the more general community from decision making, and the attempts to more significantly involve business and industry are all starting to be evaluated. What is emerging is not unexpectedly relatively complex but overall indicates that many of the policies have adversely affected the quality of skill and occupational learning and are resulting in, not just lowered standards, but also skill shortages. (See below for specific reports and areas. It should be noted that in a relatively brief submission overall trends have been the focus of concern. It is recognised that there will be instances of success demonstrated with any training initiative but whether these are broadly based enough to justify the cost and effort is another matter.)

Skills here are defined as not just performance skills but also cognitive skills that are the source of problem solving and critical analysis. This definition thus means that the provision and quality of university education needs to be considered since so many university courses have become directly linked to occupational training. My main focus in relations to university education will be vocational teacher education, but the general picture of university education must be considered.

Specific Shortages in Skills Areas and the Critical Nature of these Shortages

The critical shortage of nurses and particularly secondary school teachers is now well publicised. However, in the very near future, because of the demographics of an aging population, there will be major shortages of university academics and also TAFE teachers. For example, in NSW data for TAFE teachers indicated that from early January when a pay increment became effective approximately 24% of permanent teachers would have been eligible to retire. This needs to be placed into context: the NSW government has agreed to a return to 55% of permanent TAFE staff from the (claimed) current 40%. This is not just a result of sudden altruism on the part of the NSW government and conversion to quality education on the road to Damascus (read election) but a result of an inability to fill TAFE promotion positions and the fact that number of those in promotion positions are relinquishing them to return to lower stress, non-promotion positions. What I have been claiming for some time is that NSW TAFE, the largest and most effective TAFE system in Australia, is in crisis because of flawed policies and their implementation, combined with too little money to carry out its brief effectively.

Many university academics are part of the aging population demographic. There has not been recruitment of significant numbers of younger lecturers to permanent positions for probably fifteen years. There are probably two generations of younger academic who have not become part of the system and mentored into the complex roles undertaken by senior academics. The university sector is acutely aware that it, the third highest earner of foreign currency and thus a major industry, has been starved of funding as economic rationalist policies centred upon user pays principles have been implemented and universities forced to act as businesses, a role which universities are singularly unsuited to. Not only are university staff exhausted with battles over lack of resources and the internal politics which are a natural consequence of fights over distribution of limited resources, poor management, etc, etc they are desperate to retire because the job has become so unrewarding and very stressful. Any illusion that politicians and policy makers may have that many academics will continue beyond retirement age to prop up the university system will be rudely shattered I feel.

The reason that I am concentrating upon TAFE teachers and university academic staff, rather than specific professional/trade areas where certain shortfalls are evident, is because these are the highly skilled people who disseminate knowledge and skills needed throughout the

society via teaching/training to enable the society to function effectively in routine and creative ways. Lester Thurow indicated very clearly in the early nineties that skills were the only source of sustainable competitive advantage. Human capital theory has recently become better developed in economic circles to acknowledge this reality. Currently there is general agreement that this is now a knowledge society and that lifelong learning is highly desirable if not essential. Yet as examination of the existing vocational education policies and their histories will reveal that serious consideration of the processes of learning and teaching have been absent from Australian VET policy for a decade (eg see Cornford, 1999c, Hawke & Cornford, 1998).

The exclusion of vocational teachers and academics with knowledge of learning/teaching in the vocational area from policy-making is now returning to haunt both politicians and bureaucrats. No amount of subtle policy 'tweaking' will disguise the serious inherent flaws in the policies and systems that have been implemented. This is a real vocational education policy mess that needs a major overhaul and a return to first principles of effective learning and teaching.

No doubt it will be claimed that it is impossible to predict all shortages and therefore no politician or bureaucrat should be held responsible. It is largely a specious argument. An important consideration in all of this is that many shortages in teaching, as with school teachers, are fairly predictable, although it is acknowledged that certain trends such as the number of computer programmers required in a developing industry may be very hard to predict. There are in fact very clear patterns of births, school starting ages, school retention data and ages of teachers known along with the previous patterns of retention in the teaching service in times of economic upturn. I remember very distinctly a paper presented by Barbara Preston at an Australian Teacher Education Association Conference circa 1996 that accurately forecast a major shortage of teachers if the economy picked up in the 1999-2001 period. That such data was widely available and known (from memory the research was commissioned by the Australian Council of Deans of Education) suggests that even readily available and accurate forecasts are of absolutely no use when there is nor political will to engage in good governance to manage the whole society effectively for the future. Far too much crisis management is evident in existing education policies.

Competency-based Training as the Underpinning Framework: Some Major Limitations

The revolution in vocational education and training has been based upon a highly contentious set of beliefs concerning competencies. Competency-based training in vocational education was not new as there has always been performance-based assessment in the area. What was new was the belief that all time-based training should be eliminated, that the important elements in training should only be performance outcomes linked to industry standards and that preferentially training should take place in the workplace. The performance outcomes needed be linked to industry standards particularly since the objective was to enhance skill levels and international competitiveness. This had usually been the practice prior to the official introduction of CBT anyway. While the logic seems simple and straight forward in establishing the CBT policies there are very many practical problems not least is the fact that competency standards are statements of end goals and give no indication of means to achieve these goals. That is to say, competency standards do not give any real assistance in formative teaching and learning leading to summative assessment of competency (see Cornford, 2000).

Also a major problem is that there is no one industry standard that is agreed upon. In practice there are different standards in business and industry depending on the organization and the quality of the work expected. There is also the major problem of defining elements of performance in written statements to ensure reliability and validity in assessment. The key to effective assessment lies in teachers'/trainers' understandings and industrial experience and thus this key lies in people's heads since words on paper have to be interpreted. The initial efforts at uniform national standards soon floundered as not only were there different standards within the same occupational area but there were also industrial relations issues (especially increased wages for higher levels of demonstrated capability) and differences between the states and what the states could provide in public colleges/systems.

In the absence of any major government funded evaluation of CBT policy effectiveness, I stick to my earlier evaluation conclusions (see Cornford, 2000) that the evidence reveals that competency-based training has not achieved the desired outcomes. As a witness at the Senate Inquiry into the Quality of Vocational Education and Training in Australia I was questioned about the evidence that standards had fallen but at that point could not produce hard empirical evidence that this was so. The earlier Senate inquiry did not tackle the difficult issue of the flawed underpinning CBT policy in its report. The results from more recent research (Mills & Cornford, 2001) clearly reveal that there has been a fall in standards of skills and knowledge since the introduction of CBT at least in some important areas such as the metal trades area.

Harry Mills and I have attempted to gather more data to support the findings of the initial study but this has been relatively unsuccessful. The reasons for this in brief are that there has been a lack of cooperation, although the research was supported by the Head of Division in NSW TAFE, with a few more honest teachers ringing Harry to tell him that in essence it would not be worth their jobs to forward the test papers to him. What in part this illustrates is the way the casualisation of the TAFE teaching service and more general politicisation of the public service has created undesirable pressures. Recently a project involving evaluation of CBT proposed by the NSW Board of Vocational Education and Training (BVET) did not eventuate having reached the NSW Minister for Education's desk even though it had reached the submission stage. I suspect that it was considered too politically sensitive as it would strain NSW state and federal government arrangements in the VET area given the probable nature of its findings. 'Public interest' and 'accountability' are political buzz words but political sensitivities appear to be more important than information for the voting, tax paying public. That the immense costs of implementing CBT have never been revealed or a major evaluation of CBT project undertaken is reprehensible in the extreme and in itself constitutes evidence of lack of good governance.

One of the major problems with CBT policy formulation was the exclusion of teachers and knowledgeable experts in the area of vocational education from the policy making process and the failure to take into account the existing theory and research in the areas of skill learning and the development of expertise. Teachers and others were excluded because policy makers did not want to be told that their dreams for social engineering were practically unattainable. The relevant theory and research on skill learning and the development of expertise were excluded from consideration because they clearly indicate that human learning occurs over extended periods of time, that is cannot be separated from time intervals despite wishful thinking to the contrary, and that the trainers or teachers, who had been excluded from consideration, play an exceptionally important role in the whole process of effective skill learning and development of occupational expertise. (See Cornford 1999a for information on observational learning and the importance of the teacher as a role model in

skill learning and Cornford 1999b for what is involved in skill learning and the development of expertise.) Frankly, unless the theory and research on skill learning and the development of expertise is taken into consideration and form a substantial basis for Australian VET policy, policies will continue to be ineffective.

Training Packages: The Destruction of Curriculum and the Fragmentation of Knowledge

Training packages became the mechanism to ensure the dissemination of CBT standards through the workplaces, schools and TAFE and to ensure training in discrete clusters of skills meeting employers' short-term needs. The development of expertise research clearly indicates that skilled performance in identified specialty occupational areas consists of hundreds and maybe many thousands of skills that are developed according to the specialisation and integrated in truly expert or proficient performance (see Cornford, 1999b). Apart from the limited content of training packages it is also necessary to consider what is included in them as packages. There are two separate elements: endorsed and unendorsed components. The endorsed components of a training package only include the competency standards, the assessment of the package and how the qualification fits into the qualification framework for the small cluster of skills selected. Non-endorsed components could be suggestions for effective teaching and teaching resources. What this means is that traditional curriculum/program documents were dispensed with in the official policies to develop training packages and secure their wide-spread adoption in the various VET systems in Australia.

Those who developed the training package concept have shown total disregard for the development of traditional curriculum, that is to say the outline program that is the guide necessary for effective teaching and learning (see Cornford, 1999c). The policy makers, through the stipulation of endorsed training package components, have indicated that such guidance is unnecessary and the each teacher should be able to develop a program to attain the stated competencies to the required standards. In practical terms curriculum has been destroyed as a basis for teaching except in those supposedly old fashioned, reactionary states like NSW that have refused to abandon curriculum (for very good reasons). The removal of standard curricula through the training package regime assumes that all teachers/trainers have (1) the required teaching and learning knowledge and skills to promote effective learning for the package in their subject specialisation and (2) also specific program development skills to develop programs from the competency standards and forms of assessment in a training package.

Many trainers and teachers have only minimal teaching qualifications in the required Certificate IV in Assessment and Workplace Training, with this qualification grossly inadequate as judged from the perspective of effective, longer duration teacher education (see Cornford & Beven, 1999). Thus many vocational education teachers/trainers have an inadequate knowledge of effective teaching and learning, ie do not have the requisite knowledge and skills to be effective teachers regardless of how knowledgeable they are in their trade/professional area (see Cornford, 1999c). Also long experience has demonstrated to the author that many teachers are not good at program planning and development and need standard curricula to assist them. Standard curricula are also necessary to ensure consistency and degrees of uniformity across different colleges and locations within states if equity is a desired social/educational objective. The prospect of older workers being retrained in the not

too distant future and the general objective to increase skill levels indicate the need for more highly trained VET teachers, not minimally trained ones.

Recent research indicates that there are major problems with training packages (ANTA, 2002). Despite coy assertions that: 'It is not the Training Packages, per se that are the problem...' (ANTA, 2002, p.1) any knowledgeable researcher would know from reading between the lines and the list of problems identified in the ANTA document that the basic conceptualisation of these packages is the very problem. More importantly for the credibility and continued viability of training packages, many businesses are ignoring training packages and the bureaucratic requirements for assessment. Instead organizations are identifying their own individual skill needs, training to their own standards and ignoring a widely recognised qualification.

Training packages have also resulted in the fragmentation of skills and knowledge as different occupational areas are divided up into (supposedly) logically self contained skill units. Any occupational area and set of skills will be divided up into a number of different training packages. What results is modularisation of knowledge and in essence a fragmentation as the modules or training packages are taught in isolation from other packages (see Cornford 1997). While the buzz words have been choice for learners and employers, what the training packages fail to do is to integrate the different skills as used to happen with older style VET training. The result in some areas is individuals who have handfuls of different competencies and qualifications but are unable to integrate all the different skills in the ways in which a truly proficient or expert worker is able to do (see Cornford, 1999b). This outcome may be satisfactory if we wish employees to have limited skill to just meet employer demands. This means severely limited career aspirations and mobility of employment for many workers. If our training objective is really a highly skilled and creative workforce we must ensure that full occupational training is provided as an option to workers as it used to be in traditional apprenticeship training. Just-in-time training fails to anticipate future problems and developments. Those who have been exposed to such minimal training require additional training each time there is a significant change with new technology or workplace practices.

Particularly alarming is that, while training packages are hugely flawed, the federal government has used financial incentives to achieve their widespread adoption. In effect many states have been bribed to eliminate their old TAFE curriculum development units. In states like Queensland there is little doubt that this has proved very unsatisfactory to say the very least. The problem now facing policy makers is that, although training packages are unsatisfactory and need to be replaced, there will need to be a redevelopment of curriculum development units or otherwise a complete curriculum vacuum will exist in most states if training packages are eliminated immediately in those states that have removed conventional TAFE curriculum development units.

Traineeships and the new apprenticeships which, while in name sound impressive, involve less than impressive training of limited duration via training packages. The previous Senate Inquiry into the Quality of Vocational Education and Training in Australia clearly identified many of the major problems with the quality of training presented (or often not presented at all) to many of these people. The volume of those involved in training under the new apprenticeship categorisation looks impressive, but it a case of looking at the length of the fabric rather than considering the quality. Serious consideration needs to be given to the question of whether Australian society really values lengthy and thorough occupational training. From a skill learning-development of expertise perspective I know that the ideal of a

more creative, innovate Australian society cannot develop with present policies since many of those who are currently being trained in such short courses are given such incomplete training that genuine creativity and problem solving in their professional areas will not be possible since their knowledge and skill bases are so inadequate.

Quality of Teaching /Training Qualifications

If high quality tradespersons/professionals are desired to ensure greater productivity and creativity in the society, then there is a need for these people to be exposed to the best role models and the most capable teachers in that specialisation in their initial training. For too long it has been assumed that vocational education is for the less capable and therefore quality of instruction is probably not too important. In fact the VET trades and professional areas supply the skilled workers who ensure that the society functions effectively, that buildings are constructed to approved standards, lifts are maintained and work, that electricity supplies are correctly generated and connected, the mechanical vehicles run efficiently, that safe gas, sewerage and water connections are made, etc, etc. A lot of these things are taken for granted but you only need a strike by garbage collectors to start to appreciate essential services.

While some credit must be given to policy makers in attempting to ensure a minimum teaching/training qualification, the establishment of the Certificate IV in Assessment and Workplace Training as being the chief requirement for being a VET teacher has substantially debased the quality of the vocational education system. Prior to the introduction of the certificates (in various forms at various stages) there were well-recognised vocational teacher education courses. In many states, for cost saving reasons, along with a disregard for the importance of highly qualified vocational educators, the Certificate IV has become the minimum and maximum required qualification. Not only has this amounted to a cost saving but is also a convenient mechanism for state and federal governments to avoid having to face up to the shortage of properly trained VET teachers. The result also, probably unintended, is that some universities with genuine expertise in vocational education like UTS, have seen at least two waves of retrenchments (euphemistically 'voluntary separation') of vocational teacher educators on account of the diminished number of VET teachers enrolling for a proper post-graduate diploma in VET or the Bachelor of Education in Adult Education (Vocational Education Major). A vast reservoir of vocational teacher education knowledge and skill has been lost permanently as result of this process.

In Queensland the existing award structure for TAFE teachers effectively recognises three levels of teaching. These are in ascending order tutor, teacher with a Certificate IV and teachers with a degree/full teacher training qualifications. I have been reliably informed that in one college an additional category has been created with industry trainers given an administrative classification. This saves on award wages and non-teaching periods. A proposal for two categories of VET teacher has been advanced in Victoria. Such proposals assume that people with more lowly teaching qualifications can be employed without harm to those that they teach. In practice this means that such people are employed to teach the lowest levels, eg first year students. While the assumption is made that high-level teaching skills are not required with such novices, I strongly challenge the logic. What are being laid down in this initial learning are the foundations for possibly a whole lifetime of learning in a profession. In terms of skill learning and the stages in the development of expertise, it is essential that correct knowledge and skills are developed initially, since these will need to be relearned if they are not correct. Restructuring of mental schemas or models is problematic

and replacing incorrect skills a very difficult undertaking that may take many years and, in some cases, effective relearning may never occur (see Cornford 1999b).

The quality of the Certificate IV in Assessment and Workplace Training has been very varied depending on the source of training, but the legal requirements to recognise all of these certificates as equivalent regardless of their source has debased the system even further. The tightening of RTO registration and quality control since the Senate Inquiry into the Quality of Vocational Education and Training in Australia (2000), both necessary and welcome, did nothing to rectify the problem of poor quality Cert IVs issued before the tightening-up still being recognised. The revised Certificate IV, that is supposed to be implemented this year, may not mean any real improvement in a practical sense since there are so many older qualifications extant and in any case a Certificate IV is at best equivalent to first aid in teacher preparation.

Also of major concern is the fact that some financially pressed universities are trying to establish specialist vocational education and training qualifications that will clearly further undermine the quality of teacher training qualifications in the area. One university is advertising a year of advanced standing for a Certificate IV in Assessment and Workplace Training and only one additional full year of study for a Bachelors degree. Traditionally, Bachelors degrees have required an equivalent of three years full time study.

Conclusion

Major problems exist with the VET policies that provide a framework in the area. The policies that exist have almost certainly led to a decline in standards rather than the real objective of an increase. Apart from the actual flawed policies, attempts to cut costs and get more from less have plagued the VET system for many years. It is highly probable that many of the flaws in the policies that were developed are a result of the cost-cutting, economic rationalist attitudes that predominated. In most instances it would be recognised that additional funding would be required for in-service education, etc when major policy changes are introduced, but this rarely occurred in the VET area, and there has been not just one but a series of major policy changes over the past decade.

Even more drastic skill shortages will occur in the future unless drastic steps are taken to change policies and inject additional funding into VET and the universities. The old fall-back position of importing skilled workers via immigration is unlikely to be effective this time. There is an international shortage of teachers and nurses in the English speaking world. America's economic development in the mid to late nineties was a result of massive skilled migration thus a vast number of potential immigrants in many occupations have already been drained from the supply of such possible people. There is also an ethical issue here of whether less developed countries should have their skilled labour poached. Also an important consideration is the fact that the major growth in Australia as in many developed western countries has been in the service industries. This means that high level English language level skills are required in many areas with shortages.

Another reality that needs to be faced is that good VET teachers and trainers have to be attracted to TAFE, etc. At present TAFE teachers' wages are below what many would earn as professionals in industry. Also unlike school teachers, TAFE teachers have many more potential opportunities and employers than exist the private or public schooling systems when they are dissatisfied with their conditions of employment in TAFE. Only in economic

downturns are sizable numbers of VET teachers in areas like plumbing, and IT for example attracted into teaching. VET teaching will need to be made attractive enough in terms of both pay and conditions to attract the highly skilled individuals who are desirable as both role models for and teachers of future generations of professionals in the workforce.

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