TREATING RURAL EDUCATIONAL AND SOCIO-ECONOMIC DISADVANTAGE BY BETTER REGIONAL PLANNING AND INVESTMENT FOR GREENER DEVELOPMENT

A SUBMISSION ON THE PRODUCTIVITY COMMISSION (PC) DRAFT RESEARCH REPORT ENTITLED 'VOCATIONAL EDUCATION AND TRAINING WORKFORCE' (2010)

This submission on the Productivity Commission (PC) draft research report entitled 'Vocational Education and Training (VET) Workforce (2010)' provides the solution for a key equity issue which is addressed in chapter three of the report but ignored in the report draft findings. In the light of the history of Australian government concern about the effects of educational disadvantage in rural and poor communities, one wonders how the PC could have found the following example of its own advice so unremarkable:

> The distribution of VET trainers and assessors, however, does not align with the distribution of VET students, at least based on enrolments in the publicly-funded VET system. In more remote areas, the ratio of trainers and assessors to students tends to be lower. For every 100 students in major cities, there are 26 TAFE and 80 non-TAFE trainers and assessors (data not shown). These ratios are roughly halved in remote and very remote locations (p. 3.6).

The PC does not explain 'data not shown'. However, draft finding 7.1 is that consistent national data about the size and characteristics of the VET workforce is lacking. It is also noted that lack of quality data hinders effective policy making and workforce planning at any level and undermines efforts to improve the capacity and capability of the workforce.

It is vitally important that comparative rural and socio-economic disadvantage and data driven management to remove this are addressed in the light of consideration of the most effective relationships between rural and urban life and between VET and research. The VET sector also requires consideration in the light of developments in universities, where students also seek careers in health, construction, education, environment protection and other areas vital for social, environmental and economic improvement. The related World Heath Organization (WHO) direction is addressed later in related regional contexts.

VET should support this open educational direction which is crucial to improve the comparative quality of life in rural areas generally and particularly for teachers and students needing more effective support.

The National Tertiary Education Union policy of seeking a fixed ratio between insecure and secure academic jobs hinders the growth of quality education. This union policy compares unfavorably with the struggle of NSW nurses calling for more clearly defined ratios of nurses to patients, to promote higher quality of care. This submission makes the following recommendations, among others, which ideally apply nationally:

1. Make education managers manage rationally to grow the business and to cheapen and improve the quality of education and research for sustainable development

2. Put subject content on-line and administer subjects to maximize economies of teaching and related administrative scale and jobs for PG students and others

3. Maximize student choice in regard to subjects they are allowed to undertake

The above direction is consistent with the current PC draft recommendation 7.3 which states, among other things, that technical and further education institutes should be able to select the mix of employment arrangements, supported by contemporary human resource management practices that best suits their business goals.

Open education and maximising student choice are vital to encourage more students to enter more easily into all areas where there are skill shortages, as well as being necessary to produce greener development effectively, rather than trendier versions of the past. For example, an Australian Financial Review article 'Engineers demand to see a plan' (8.12.2010, Business 8) states the National Engineering Taskforce seeks implementation of a student demand driven system to alleviate engineering skills shortages. Later discussion of the WHO direction demonstrates the problem of capture by old producers.

Planning developments in the Sydney suburb of Glebe and student work in the Master of Architecture, Bachelor of Design in Architecture and Bachelor of Design Computing at Sydney University. At their recent exhibition, students produced many beautiful drawings and models, supported by comparatively lyrical writings to address concepts they presented. However, this gave the viewer little idea of their capacity to serve government regulatory requirements; to address engineering and construction constraints; related materials and labour availability; or any other commercial realities necessary to make their projects attractive to potential investors. Students and residents of the City of Sydney could benefit greatly if students assisted the Council in solving many practical problems which exist in our surrounding environment. The recommended management partnerships are even more urgent in rural areas because skilled labour shortages are often more acute, which increases the cost of development.

The PC noted the paucity of reliable data that is available on spending across the rural R&D framework. It made excellent recommendations for better and fairer management and data capture by governments on one hand and by the business sector on the other, to clarify their respective research funding sources, aims, performance outcomes and accountabilities. The PC argues the primary aim of government funding is ideally to enhance the productivity, competitiveness and social and environmental performance of the rural sector and the welfare of the wider community by inducing socially valuable R&D (p. xxxvi). VET is ideally considered in related contexts.

Crucially, the PC finds it would not be appropriate to establish a target level for overall spending on rural R&D – nor a target for rural R&D intensity. Rather, it expects funding and investment should emerge from assessment of all the various programs through which governments currently contribute funding to rural R&D, to judge them against the primary aim of government funding. Superficially, this PC direction appears to challenge the old 'efficient markets hypothesis' which has traditionally driven development. It reflects instead the new global paradigm where all social and environmental goals are not assumed to be automatically achieved best in market operations.   This regional planning approach also has implications for discussion of how risk is ideally to be treated. VET development may be ideally understood in related regional contexts in which comparative rural disadvantage is also recognised and treated.

The WHO Declaration of Alma-Ata, primary health care 'involves, in addition to the health sector, all related sectors and aspects of community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications and other sectors; and demands the coordinated efforts of all those sectors'. The WHO approach to healthy action sees all work, play and related living as located in regional communities and environments from which risks and many related environmental challenges arise and are accordingly prioritized for preventive and remedial action. The identification and control of the major risks to health are ideally conducted in these regional contexts. The approach to handling environmental risk and other social risks are ideally treated in coordinated ways - in relation to rural educational disadvantage, for example. Think globally, act locally and address the VET workforce in supporting regional contexts to serve VET consumers and all related communities better.

Overview: Instead of requiring Certificate IV in Training and Assessment for the VET workforce, certify the capacity to openly demonstrate specified industry skills and related key quality and risk management requirements of law and contract.

As a teacher I demonstrate these capacities now and on www.Carolodonnell.com.au from a theoretical and disciplinary position most keenly influenced by Marx, Weber and Freud.

From broader perspectives many 'disciplines' are increasingly ridiculous closed shops.

The submission from TVET Australia states that practitioners require three sets of skills in VET – '**currency of industry knowledge, adult learning capabilities and integration of technology into learning'**. There is good reason to be highly sceptical that the Certificate IV sets good direction for this practical achievement. Why not directly and honestly appraise the performance of people claiming they have current industry knowledge they want to teach and an ability to communicate effectively via computer, instead of requiring them to have the Certificate IV qualification?

Preliminary discussion of PC recommendations on Certificate IV (TAE 40110)

In its draft report entitled the 'Vocational Education and Training (VET) Workforce' the Productivity Commission (PC) states the Australian Quality Training Framework (AQTF) requires trainers or assessors employed in a Registered Training Organization (RTO) to have '*a vocational qualification at least equivalent to that which is potentially to be taught, and current industry skills relevant to the area of delivery*'. There is also a minimum requirement for such trainers and assessors (unless supervised) to hold a Certificate IV in Training and Assessment (TAE). This limits the number of trainers and assessors available.   It is common for VET providers to recruit candidates who do not hold this qualification and assist them in gaining it over two years (p. 7.29).

As I understand it, an RTO is a training college which primarily operates either in the public or the private sector. In the former case, such organizations have historically been known as technical and further education colleges (TAFEs). One guesses introduction of the Certificate IV in Training and Assessment was presented as a government attempt to gain better, more equal standards in the quality of training and assessment in the government and private sectors, but has little idea of why this would result.

The PC seeks input on whether vocational education and training (VET) teachers in schools should be required to have the Certification IV in Education and Training

(p. 7.30). This submission answers in the negative and also questions the following PC recommendations as they address the Certificate IV in Training and Education:

Draft Recommendation 8.1 The Certificate IV in Training and Education (TAE 40110) should maintain its status as a high risk qualification. Auditing by state and

territory regulators of Registered Training Organizations (RTOs) with this qualification on their scope needs to be more frequent and more intensive. *(**Get rid of the qualification.**)*

Draft Recommendation 8.2 State and territory regulators should publish information on audit outcomes and performance indicators for RTOs to further incentivise providers to focus on quality training and assessment.

Draft Recommendation 8.3 Industry and Business Skills Australia should amend the Evidence Guide for TAEDEL 401A to require those seeking to demonstrate competence at the Certificate IV level to prepare and deliver at least four consecutive supervised training sessions. An assessor from outside an RTO delivering the unit should evaluate a student's competency through observation of these sessions. *(**Say no to tick and flick?**)*

Draft Recommendation 8.4 Within two years of commencing employment, VET practitioners should have completed the Certificate IV from TAE10. Industry experts, working under supervision, should be encouraged but not required to obtain a Certificate IV in TAE. Within two years of commencing delivery of training or assessment, enterprise trainers and assessors working under the supervision of someone with the Certificate IV, should have completed the Skill Set relevant to their role.

This submission argues the PC presents too little information about Certificate IV (TAE 40110) for one to accept the above recommendations with any confidence. From the scant information on the internet about the Certificate IV contents and related assessments which ideally should test achievement of course aims, it certainly looks like a 'high risk' qualification in regard to assuring the industry based performance competence of trainers, assessors and students. The PC recommendations do nothing to correct the problems of the Certificate requirements addressed later. Such problems are difficult to discuss in part because of the apparent secrecy of the Certificate contents and assessments. One does not buy a car unseen, on the basis of ratings by self-interested car makers. One must see the full Certificate curriculum and assessment process to judge whether the outlined learning process, teaching support and assessment leading to certification are worth paying for.

Social attitudes about whether the job of teaching requires a special qualification are variable. One does not normally require a qualification like the Certificate IV to teach one's subject in a university. Any PhD requirement for the university teacher usually relates only to confirmation of her expertise in the subject area she will teach. However, the training and certification of teachers for children at the early childhood, primary and secondary ages are carried out in universities and colleges. The charge made later is that Certificate IV lacks value for the Australian community because of its overly theoretical approach to teaching and assessment. A more practical industry and community focus is discussed as the ideal foundation for any professional performer and his/her teacher and assessor. Essential communication requirements for literacy and computer usage are ideally also addressed in relevant industry and community contexts. If one required a teaching qualification to teach a subject (e.g. anatomy) in a university, it would greatly reduce the pool of experts available to teach it, without any clear social gain. The PC must convince us that a Certificate IV is worth the trouble and cost of its undertaking but does not do so. My informed guess is the Certificate is far from useful.

According to the EE-Oz Training Standards submission the Certificate IV TAE qualification, 'which is the current requirement for VET trainers, provides a preliminary basis in pedagogical theory' although few industry representatives considered this an ideal level of training and many express concern at the declining proportion of VET trainers that have access to high level vocational teacher education programs (p. 8.5). The NSW Teachers Federation strongly supports the need for TAFE teachers as VET professionals to have university level teaching/educational qualifications, as does the teaching profession in schools (p. 8.5). This submission argues against these positions on the grounds that what goes on in tertiary education institutions is often too theoretical and detached from what goes on in 'real life' in the societies teachers are supposed to serve.

The charge is that the value of the Certificate IV appears to lie primarily for those currently working in vocational training and/or assessment, through giving them an inappropriate industrial capacity to inflate the apparent worth of their work while protecting their own jobs from all outside competition. Certificate IV manufactures skills shortages by certifying the apparent absorption of secret theoretical assumptions instead of the practical capacities necessary to achieve more specific work aims in education and other industries. A better approach to certification of the VET workforce would rely upon the VET candidate's capacity to openly demonstrate specific industry based skills to a required standard and to meet key quality management requirements of the work contract and risk management.

The Council of Australian Governments (COAG) endorsement of the Green Skills Agreement requires the VET sector to include competencies in environmental sustainability and to adopt national standards in sustainability in its training packages and practices (p. 6.5). My earlier submission discussed the related questions of how best to treat rural educational and socio-economic disadvantage through better regional planning and investment for greener development. It outlined regional governance directions necessary for governments to take in partnerships with industries and other communities to implement a comprehensive strategy for effectively securing Australia's place in the emerging digital economy and greener development. VET teachers should support this open, industry based approach to learning through open curriculum on the internet, TV and with videos, books, etc. Certification is ideally based on the outcomes of practice in the field, not on multiple choice tests which may pose as scientific when reduced to numbers, but which may have little to do with practical achievement of wider community aims. The recommended open education direction is crucial to improve quality of life in rural areas and particularly for teachers and students who need more effective support.

PC draft findings damn the Certificate IV with faint praise and appear wrong

The following PC findings leading to the above PC recommendations are unconvincing:

(**8.1**) 'On balance' the Commission concludes 'the Certificate IV, when well taught, is an appropriate qualification for the development of essential foundation competencies for VET practitioners'. *(What competencies? On the evidence presented later, I disagree.)*

(**8.2**) 'Many people actively engaged in the VET sector as trainers and assessors do not have the necessary minimum education qualification of the Certificate IV in TAE or an equivalent qualification *(Why this is so and whether it matters is not clearly discussed.)*

(**8.3**) 'There is little evidence of the VET workforce currently having capability gaps in delivering training and assessment to students who may experience disadvantage. *(This is untrue. Consider the following PC statement and subject of my last submission):*

The distribution of VET trainers and assessors, however, does not align with the distribution of VET students, at least based on enrolments in the publicly-funded VET system. In more remote areas, the ratio of trainers and assessors to students tends to be lower. For every 100 students in major cities, there are 26 TAFE and 80 non-TAFE trainers and assessors (data not shown). These ratios are roughly halved in remote and very remote locations (p. 3.6).

In **(8.3)** the PC goes on to note 'capability gaps' may be a problem in future because 'the workforce is ageing and there is an anticipated increase in VET delivery to disadvantaged students. There is evidence of a significant capability gap in ICT skills among the VET workforce and in the ability of some VET practitioners and enterprise trainers and assessors to assess recognition of prior learning (RPL) and recognition of current competency (RCC). There is evidence of capability gaps among VET managers and leaders'. *(One wonders why any more broadly mandated attainment of Certificate IV would reduce these skill problems in future, rather than greatly increase them.)*

(8.4) 'Industry currency is not well-researched or understood. While currency is often equated with industry release, or work in industry, maintenance of currency can occur through a variety of activities. There is evidence of currency gaps in the current workforce, particularly among those who have worked full-time in the VET sector for more than ten years. Continuing professional development systems need to identify and address these gaps. *(Understanding and being able to apply the skill requirements of industry appropriately in their surrounding contexts are the most important qualities for teaching and for passing on and assessing the acquisition of similar skills by others. One guesses that brain surgeons, electricians and others like them would agree on this, so one naturally questions the value of Certificate IV.)*

The Certificate IV in Training and Assessment (TAE40110) is opaque and probably counter productive

Various websites state that 'the TAE40110 is the latest Australian Train the Trainer qualification, which is essential for anyone who wishes to become a teacher at an Australian technical and further education college (TAFE)'. The aim of the qualification according to the Inspire Education website is '**to enable you to develop the competencies required to perform the role of a skilled trainer, facilitator and assessor in the workplace as well as in a VET environment** (my emphasis). This is a nationally recognised qualification for anyone operating in a training and/or assessment capacity within their organization, or anyone wishing to become a lecturer in TAFE'.

RTOs appear to be tightly closed shops. The Australian Nursing Federation points out nurse educators holding post-graduate qualifications in education are forced to undertake the Certificate IV to enable them to deliver nursing education in the VET sector, which is a deterrent (p. 7.29). The nurse educators will also have to get a reply first.   After a life-time of teaching at secondary and tertiary levels, as well as having worked in government, and with a PhD, BA and two teaching qualifications, I got no reply to my emails to many RTOs. When I emailed Bill Gates, a few years earlier, I had an exchange with his representatives and my curriculum offer was rejected with the reason, from memory, that I was too small to bother with. I was nevertheless grateful for the attention, which is more than I have ever got from any RTO to which I made a similar request.

However, what exactly are the 'competencies' **required to perform the role of a skilled trainer, facilitator and assessor in the workplace as well as in a VET environment**? This should be crystal clear, but remains vague. The submission from TVET Australia states that practitioners require three sets of skills in VET – '**currency of industry knowledge, adult learning capabilities and integration of technology into learning'**.

I am very sceptical that the Certificate IV sets good direction for practical work. Why not look directly at the performance of people claiming currency of industry knowledge they want to teach and the ability to communicate via computer? Would that be too obvious?

In regard to the contents serving the above aims Inspire Education states the Training and Assessment course will 'teach a myriad of training and assessment activities, including:

- How to design and develop learning programs, use training packages and accredited courses to meet client needs
- How to plan, organise and deliver group-based learning, as well as how to facilitate learning in the workplace
- Many facets of assessment activities and processes'

There are no formal prerequisites to the Certificate IV in Training and Assessment. However, it requires '**sound language and literacy skills and basic word processing**'.

People who have such skills may nevertheless struggle, in my experience, to negotiate the comparatively more complex requirements of the computer based templates through which their teaching often seems unnaturally and undesirably forced. The teacher may master this for herself, with assistance, but the problem comes when

students on computers at the other end of their communication call upon her for advice about what to do about a related problem of the computer or template, which does not work for them. Fortunately, teaching post-graduate students is much more straightforward in that one may simply email them material or put it on a website and discuss by email their implementation of its project based assessment requirements to meet the clearly outlined aims of teaching. See an example of this more practical learning approach, which may be the easiest and best one to use with students of any age on www.Carolodonnell.com.au

To consider the costs and benefits of multiple choice assessments is vital in this educational context where sound language, literacy and word processing skills are also key foundations of the proposed teaching role, yet the PC does not address this. The Inspire Site states the Certificate IV is offered either as a 'blended-delivery' course of 5 day face-to-face workshops in many major Australian cities throughout the year, or through distance learning at the learner's own pace. From the Seek Learning site and my experience of working at Sydney University, I guess the following educational content is provided in the Certificate and that its absorption tested by multiple choice questions:

(My comments are in italics).

1. Plan and organise assessment (*Assessments must support and test clear aims*)
2. Assess competence (*Competence is best demonstrated in practice, not theory*)
3. Develop assessment tools *(What are they?)*
4. Participate in assessment *(Of what kind?)*
5. Plan and organize group-based delivery
6. Facilitate individual learning
7. Facilitate work based learning
8. Use training packages to meet client needs (*What is in them?*)
9. Design and develop learning programs
10. Work effectively in VET
11. Foster and promote an inclusive learning culture
12. Ensure a healthy and safe learning environment
13. Facilitate group based learning
14. Develop teams and individuals with expert teacher and on-line support *(How?)*

Without understanding more about such apparently repetitive course content and related assessments it is impossible to say if Certificate IV will improve **the work of a skilled trainer, facilitator and assessor in the workplace as well as in a VET environment'** or inappropriately make these fields much harder to enter, which seems far more likely.

Such concerns are increased by the Australian Education Union statement that 'E-learning, and specifically on-line teaching, is different to traditional classroom teaching and is more demanding, more complex and requires greater effort to teach'. John Mitchell and Associates states 'our research shows how e-learning is a specialist learning and assessment skill. This means that to master e-learning, a VET practitioner must have previously mastered a set of core teaching and assessment skills'. There seems to be agreement that the lack of these technical skills is limiting the uptake of online delivery in the VET sector. (p. 8.21-8.22). This appears to be building the worst of all worlds.

The PC states that assessing students by recognition of prior learning and current competency requires a different skill set from VET trainers and assessors (p. 6.15). Why on earth is this so? Whether teachers or not, we will increasingly require **currency of industry knowledge, adult learning capabilities and integration of technology into learning'** which are built on '**sound language and literacy skills and basic word processing**', if history is to guide us. According to the Department of Education, Employment and Workplace Relations, assessment of competence is against the requirements of the core unit entitled '**Plan, Organise and Deliver Group Based Learning**'. Apparently this 'demands among other things (what other things?) that a student demonstrates:

Evidence of the ability to facilitate group-based learning by preparing and delivering a series of training sessions, including:

At least two consecutive sessions of duration commensurate with a substantive training session (e.g. 40-60 minutes), that follow one of the learning program designs (***This may be fair enough but the time spent in the field may be better***)

At least one session delivered to a different learner group, with evidence of how the characteristics and needs of this group were addressed

Identify and respond to diversity and individual needs

Access and use documented resources and support personnel to guide inclusive practices (p. 8.8). (***What does this mysterious statement mean and entail?***)

In my experience, the direct use of observation as a means of teacher assessment happens more often in the breach than the observance and I do not think that when it does it should be linked to undertaking the Certificate IV. Apparently there is no current standard system of data collection for the VET workforce nationally. In the non-TAFE sector (sic.) however, there is roughly one worker employed as an 'other VET professional or general staff member' for every assessor or trainer (p. 3.5) Why this apparently higher level of support to teaching staff is a feature of the non-TAFE sector is not discussed. (Presumably the term 'non-TAFE' sector refers to private sector RTOs).

Plan for an ageing workforce and community which ideally seek to be greener

The OECD report, 'Learning for Jobs' (2010) apparently identified the following problems (p. F.2):

- A shortage of teachers and trainers in vocational programs as the current workforce approaches retirement age
- Some trainers have insufficient workplace preparation
- In-company trainers have insufficient preparation including educational preparation
- Effective trainers need both educational capability and workforce experience

On the other hand, the PC states there do not appear to be widespread shortages affecting the VET sector, although 'some deficiencies' have been identified in regard to:

- Trainers and assessors with skills in high demand in industry (mining, building, construction, electrical engineering) and population ageing (nursing, aged care)

- Specialised skills (Indigenous education, literacy, numeracy and e-learning)

- Non-teaching staff with suitable managerial, human resources, information and communication technologies or VET compliance systems expertise

- Trainers and assessors in some regional and remote locations (p. XLI)

The above concept of 'specialised' skills is bizarre in relation to literacy, numeracy and computer based skills, which almost everybody has increasingly needed to negotiate the world of work effectively, since I was a small child. How different should the education of an Aboriginal child be to that of everybody else if similar outcomes are expected to those gathered on all populations in the national statistics? What different skills, if any, do Aborigines seek? This needs openly connected discussion in urban, rural and remote areas in the light of general concern about inequality of education and work opportunity because of rural location and socio-economic status. To what extent are those who specifically claim Aboriginal heritage to be conceptualised as custodians of the land or heritage in ways different to the rest of us?

If government and individuals openly seek greener directions but also have respect for differences in interests and related aims and evidence, fighting over the size of particular pots of money may appear a lot less important in future than in the past. I learned this in the public service at the end of each financial year when the four other managers I worked with had often under-spent their budgets for various reasons related to being slow and the money was often passed to our new arena. However, if the PC thinks Australian tradesmen and engineers are prepared for a greener future they are smoking the product.

In my experience of the last fifteen years on a Glebe body corporate, few plumbers, electricians, builders, or others brought onto the property by the strata manager have shown much inclination to conceptualise greener solutions to anybody's problems. The typical response to most concerns is that any trouble is likely to be caused by the nearest tree, which needs to be ripped out. Their analysis and solutions have been depressingly lacking, from the perspective of the ignorant consumer who seeks greener, let alone cheaper, solutions based on good evidence. I think that I shall never see a brick wall lovely as a tree. Ideally they belong to us all and what happens to them should be considered broadly as distinct from on narrower prejudice without better information.

In a similar spirit, perhaps, Lord Mayor Clover Moore recently said in a speech:

> I am proud to be part of a City of Sydney Council that has increased the quality and quantity of public open space, including taking steps to reverse the Australian municipal tradition of plonking buildings in our parks.

Hear hear! Many of us see Upsy Daisy, Iggle Piggle and the others as living the ideal life in the Night Garden on SBS TV. Are our views to be ignored again? Did the art gallery of Victoria's walls need to be so huge? What is this obsession with concrete and freezing space? Bamboo is more beautiful. It is mature in five years. Pandas may live in it.

Top marks to Tokyo for being a concrete jungle where buildings at least aren't freezing. I have no idea how Japan sweeps away all its rubbish in its amazingly clean and highly packaged environment and I wonder how Australian asbestos removal compares to their disposal of US atomic fall-out and current removal of waste. Why all the expensively weird Western toilets that no Westerner has at home? The movie 'Charlie Wilson's War' has wider educational and cautionary application as one moves from oil, guns, bombs and wiping out innocents to concrete construction where men have a commercial interest in ripping out trees and none in protecting them. We require open, new jobs not more of the same, forced down our necks by secret money and stealthy menace. As shown on SBS TV the reasons to lead Lagos urban development with parks were impressive. I hope it works. Why not try harder? The British could lead the lot by turning over the grounds of Buckingham Palace to Kew Gardens and the public and then all the Royals and embassies in Tokyo could follow suit. The tourists and other animals would love it.

But gee, don't let any stupid old woman be impractical with money. With the rise of the American and international financial relations that led to the global financial crisis and that also privilege numerical presentation on the pretence that it is scientifically superior to other inquiry, this is paramount. Just consider the research. For example, in a paper for Treasury's current inquiry into Australia's future tax system entitled 'The impact of the tax-transfer system on education and skills in Australia', Andrew Leigh quotes US data:

> 'In trying to set optimal education taxes and subsidies, it is useful to have regard to the literature on social returns to education. This suggests that social returns are present, particularly in the areas of crime (from higher school completion rates) and productivity (from higher university completion rates). However, the best estimates of the size of social returns suggest that in the main they should not be a key driver of policy. By contrast, there is robust evidence that private returns to education are large and significant. Completing year 12 raises gross income by 30% (relative to completing year 10) and completing a bachelor's degree raises gross earnings by 49% (relative to completing year 12). Taking taxes and transfers into account lowers these estimates by 11-15%, but the private gain from human capital acquisition is still substantial.' (p. 5)

The above seems to suggest education is not very functional for society, so governments should not waste much money on it. However, it is good for individuals able to last out the lengthening and costly education race. The current direction appears anti-democratic, unfair, distinctly stupid, and unnecessary from any ideal technical or greener perspectives. 'Working smarter not harder' needs to be encouraged but it is not.

In education, better ways for promoting equality of opportunity, like the British Open University (OU), have been available but forgotten even by the OU since video and computer technologies arrived to join radio and TV potentially to achieve the goals of all. Just as we naturally enter the democratic age of communication by email and related logical methods, strangely enough, we are told that writing will matter less in future, not more. The collective academic memory of economic perspectives like those of JK Galbraith and other dual and segmented labour market theorists, that were also related to human capital and screening theories and attitudes towards discrimination, have strangely been erased. Ironically, as the computer arrives, the discussion of 'networks', 'tools of conviviality' and concerns about the effects of professional domination put forward by Illich have gone. So has Freire's discussion of liberation of the poor through education on the job. Nobody mentions Mao's views on education which often entailed a version of human rights in the sense of speaking truth to power, as the Americans call it. The numbers men now drive the lot. This is not a meritocracy or serving the industry, client, individual or the public. It is more like many lawyers and friends' picnics.

We are all professionals now and need to improve our environment through greener directions and open risk management which depends on comparative evidence

The nature of the relationship between education and work was addressed in post-war debates between those economists interested in education conceptualised as an investment in 'human capital' and those interested in discrimination who saw education mainly as a social screening process. Human capital theories assume a direct, causal relationship exists between education, productivity and wages. Screening theories, on the other hand, assume that comparatively privileged social groups use the education system to their own advantage by being in a position to narrow the channels of entry to education for their work by setting specific entry criteria, and by lengthening the time and cost of the education required for entering related jobs. Specific requirements in state registration acts may also help protect the groups' jobs from competition by outsiders, thus increasing their industrial bargaining power by manufactured labour shortages.

Historically, the professional was often also distinguished from the worker who must follow orders. The professional is ideally expected to exercise independent judgment and decision making powers autonomously, on the basis of the evidence related to a particular situation, and the authority vested in him or her as a result of being judged expert by professional peers in a particular field of study and its application. From a public interest perspective, the autonomy of the professional is most useful when it promotes his or her ability to increasingly meet the requirements of clients and the community in evidence based ways. Professionals ideally act in evidence-based ways, normally guided by education, experience and codes of ethics, which stress the goals of service to others. They need to think more broadly and take more account of their surroundings, because to the man whose only tool is a hammer everything either looks flat or like a nail. My experience of life has often been of meeting exceptionally clever people at surprisingly low levels, and the reverse. Their skills were often far too narrowly recognized.

In the past century there has been rapid expansion of industrial production, government regulation and related services, plus development of education to support a widening range of linked professional 'disciplines' (i.e. niches) and related interests in public and private sector operations. Ideally, there does not appear to be a rational distinction between an occupation and a profession today. The mutual recognition acts which supported the COAG call in 1990 for national standards for health and environment protection, related occupations and supporting education, used the term 'occupation' to describe all work. Today, however, the term 'professional' is often applied to many people whose work may not require their approval to practice guaranteed under a state professional registration act. They nevertheless require increasingly high levels of education before they can take up work. The capacity for some professional associations to pursue members' interests through legalized control of the service market is far more comprehensive than trade unions ever had to pursue their members' interests. (On the other hand, no sane person should upset an electrician after a global financial crisis.)

Lawyers are the ancient profession ironically topping the lot. We are driven daily by many pre-scientific and pre-democratic assumptions which are also reflected in state and Commonwealth law, and in monopoly control of legal services and courts. One assumes the power of lawyers is also reflected in their state professional registration acts. It seems the practicing certificates for lawyers may be extended, not unlike the Certificate IV, but at an infinitely higher, more protective level. Will similar nasty feudal games for mugs go on eternally?

Link testing to quality contract management and risk management capacities

Job knowledge, quality management to meet environmental need which may be highly variable and basic risk management understanding are often vital in industries and occupations. The best way to identify the skill needs in any Australian industry and to create the situation that allows for the best match between skills and job opportunities is likely to be to create more opportunities for key on-the-job learning and for related curriculum and accreditation. This is ideally provided as openly, flexibly and cheaply as possible to ensure its relevance and quality for associated business and community actions which also lead to greener futures. This work and education process may be led in major resource, infrastructure and service projects in consultation with government and communities. It is also discussed later in regard to home building, where the contract clearly lends itself to the establishment of sensible systems for work guidance, approval of task completion, payment and valuation towards accreditation.   There is great scope for better practice through better related communication and record keeping.

The essence of the quality management approach is perhaps most easily found in state occupational health and safety act requirements for a general duty of care towards workers, clients and related communities supported by risk management. Quality management in regard to project management involves the consultative establishment of work aims and supporting work systems and processes to achieve aims. Work outcome evaluation ideally ensures work practice is increasingly governed by data driven management to achieve consumer, community and professional aims more effectively in future.   The risk management process also underpins quality management. One needs to know and have experienced enough to proceed as follows, depending on the complexity and apparent level of risk or unfamiliarity of the tasks:

1. Establish the work context
2. Identify the major risks
3. Analyse and prioritize them
4. Treat the risks to reduce them

This is ideally done in consultation and/or with the aid of Google or other sources to find relevant supporting standards or other guidance, prior to action and evaluation of results.

Quality management on building sites and in hospitals with patients or in the community with clients often involves similar management concerns. Work and administrative systems are ideally focused broadly on the site and client's needs for best project results and for related project comparisons. This may also form a key basis for research. The individual project manager ideally ensures an administrative system which enables all the people who will contribute to the total work or treatment

process to understand their place in it. The more workers and clients understand the relationship of their contribution to the ideal result of all the work necessary for the joint undertaking, the more they will also understand their role and contribute better while learning further. Open operation reduces anxiety levels for everyone. Secretive operation, on the other hand, increases worry about what will happen next and causes mistakes, delays and costs because of ignorance.

Consumer driven management and quality management are integrally related but difficult to achieve wherever business management is narrowly focused on maintaining contractor secrecy to achieve short-term commercial goals, as distinct from openness to achieve the broadly identified project goals which are often social and environmental as well as economic. To understand what any people want or need, in order to meet it effectively, all involved in any process are ideally able to understand and express what it seems to be. Plain and honest English information and recording is thus central to the quality management process and to the contract and its effective carriage.

In this context, the NSW Office of Fair Trading Home Building Contract seems a clear, informative and helpful product. It must be filled in properly for quality management. Ideally, the people who originally called for the contract must see that it clearly reflects what they wanted most. If additional minutes or other documents have to be signed again and added to the contract to achieve it, this is an extra confusing waste of time. Clause 11 of the contract is the **prime cost items schedule**. When filled in it should clearly display the required inputs and amounts related to the step by step achievement of the key conditions which originally led to the contract agreement and its expected production outcomes. Clause 12 provides the **progress payments schedule** which is also related to the staged and approved completion of the work. This may also relate to the later **schedule for inspections**. This may ideally ensure work quality, the resulting periodic payment and any related accreditation of skills development on the job.

The contract must be filled in clearly in regard to all the above and to reflect the original minutes of meeting which clinched the deal. If this does not occur, quality management has broken down and the contract rules in court. The **prime cost items schedule** is an ideal reference for the nominated project manager to use for project management purposes and also to post on site, so that everybody who lives or arrives there has a reasonable idea of what is expected to go on and when, as well as how to contact the project manager. The **prime cost items schedule** may also be compared with a cake recipe. Ideally it provides a list of the key inputs (human and material) and steps on the way to satisfaction of all parties. Work approval, payment, mediation and related quality management concerns are ideally handled in related industry and government contexts.

Going forward

The NSW Environmental Planning and Assessment Act (1979) states it aims to achieve openly consultative and integrated approaches to economic, social and environmental issues in land use planning, (which includes construction). One assumes the ideal industry direction is in a context where all are increasingly concerned about preserving land and water quality, reducing carbon pollution, reversing deforestation and loss of biodiversity, avoiding rural and urban over-population and fixing the related lack of sufficient employment, education and access to many other basic services that avoid disorder, so that everybody can have a better situation. Better communication, energy and public transport systems are crucial to support these aims. Many funds which government and industry have built up since the 1980s now appear ideally to be managed more openly in regional public, private and related community partnerships to try to balance and help achieve their key economic, social and environmental goals for current and future generations.

The global computer network has also massively expanded opportunities for all to gain appropriate information to guide their actions. In democracies, many workers should be able to claim to be experts and be tested in their field. The Skills for Sustainable Growth strategy which will provide $661 million to develop workforce skills was announced in the budget speech (11.5.2010). The suggested way forward may produce faster and better results than traditional training and education channels. Construction workers have difficult lives with early starts and much job uncertainty and travel. They should not also have to travel large distances to classrooms. They need accreditation on the job.

In this context quality management and education may best be envisaged as human rights which depends on clearer and more openly informed scientific approaches to work and environment development, rather than on more narrowly channeled, secretive and costly approaches to the contract, education and all related matters. An Open University approach to teaching and learning on the job, supported by open curriculum for key skills development and related education, identified in key industry and regional settings and disseminated via videos, TV or other media is necessary to manage the key social, environmental, risk and related investment needs which have been identified in regional communities, together with government and other profit or non-profit investment sources, such as industry superannuation funds. Lead the nation in quality management approaches to industry development in cooperation with others, such as the COAG.

Elected representatives should now help identify and try to achieve the prioritized social, environmental and economic goals of regional communities in a way which also preserves natural and other resources for future generations, not merely current

voters. These goals ideally reflect national aims and minimum standards and freedoms in United Nations (UN) instruments as well. Julia Gillard and Robert McClelland, the Attorney-General, want to address human rights education.   See more research, teaching and policy direction at www.Carolodonnell.com.au , plus project style assessments.

Thank you for the opportunity to make this submission. Yours truly

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