20 Organisation of Education and Training in Australia: Possible Lessons for Third World Countries

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1 Abstract
The world today is changing significantly faster than before due to the availability and the use of IT. The click of a mouse is enough to have shared information between two extreme ends of the world. This fact calls for a responsive system of education that is able to cope with the impulses that arise. The issues of educational relevance, flexibility, and the variations in the nature of the learners are impacting on the design and organisation of most responsive educational systems. This paper analyses the key factors that are driving the organisation of VET in Australia with the aim of drawing possible lessons for a developing country. The Australian case will be viewed against the background of the rest of the developed world and the general world trends. In particular, the paper will draw lessons based on the teaching and learning of VET in Kenya. Some of the issues to be analysed are the teaching, learning, qualification and the responsiveness to the changes in technology especially at the workplace. This paper is an analysis of the Australian education with emphasis on the VET system with a view of drawing possible lessons for Kenya and other developing countries.

2 Introduction

2.1 Background Description of Australia
The Commonwealth of Australia covers an entire continent and its outlying islands. It lies between the Indian and Pacific Oceans with about one-third of the mainland north of the Tropic of Capricorn. It is an Oceania continent between the Indian Ocean and the South Pacific Ocean at the geographic coordinates: 27 00 S, 133 00 E (CIA, 2001). It is the sixth largest nation in land area with about eight million square kilometres. Australia encompasses a range of climatic conditions, from the Tropical North to the Temperate South. Much of the inland is arid and the population is concentrated on the comparatively narrow coastal plains of the east, southeast and southwest. Separating the arid inland regions and the coastal plains in eastern Australia is the Great Dividing Range, which stretches from the North to the South of the continent (DEST, 2000).

The Aborigines and Torres Strait Islanders, are the Australia’s indigenous peoples. Aboriginal groups inhabited most areas of the continent, each speaking one or more of hundreds of separate languages and developing distinct styles of living and cultural traditions. Aboriginal society was a complex network of intricate kinship relationships with a sophisticated system of beliefs called the dreaming, which found expression in song, art, and dance. DEST (2000) reports that European explorers from Holland, Portugal, Spain and France made contact with the Australian continent during the sixteenth and seventeenth centuries.
The Commonwealth of Australia comprises six States and the two internal territories. These are New South Wales, Queensland, South Australia, Tasmania, Victoria, Western Australia, The Australian Capital Territory and The Northern Territory. Australia also has a number of small external territories located in the region. Australia’s government is a parliamentary democracy. There are three levels of government: Federal or the Australian Commonwealth Government headed by the Prime Minister, State/Territory Government headed by the Premier, and the Local Government headed by the Mayor. The Australian or Federal Government is based on a popularly elected Parliament with two chambers, the House of Representatives and the Senate. The Australian Constitution defines the responsibilities of the Federal Government, which include foreign relations and trade, defence and immigration. Governments of the States and Territories are responsible for all matters not assigned to the Commonwealth and each has its own elected legislature.

The total population of Australia is slightly over 19.3 million people (July 2001 estimates), most of who live in the major coastal cities and regional centres. It is expected that the population will be 23 million by the year 2025. Although the density is low, Australia is a highly urbanized society with 2/3 of the population living in the cities of more than 100,000 people. The two largest cities are Sydney in New South Wales with a population of 3.9 million inhabitants and Melbourne in Victoria with 3.3 million. The two cities hold 40 percent of the total Australia’s population (Ainley et al, 1997). The capital city Canberra is located in the Australian Capital Territory inland between the two largest cities – Sydney, and Melbourne. Australia’s population is diverse, with some 23 percent of the population being born outside Australia, and a further 27 percent having at least one parent born outside Australia.

Australia has a prosperous Western-style capitalist economy (Ainley et al, 1997). The World Bank classifies Australia as a high-income country. There is a general political consensus in Australia that participation in the education and training needs to increase, curricula need to be more relevant to national priorities, and that individuals and employers should finance an increasing share of the cost of educational expansion. The Government is pushing for increased exports of manufactured goods, but competition in international markets continues to be severe. The Government’s emphasis on reforms is a key factor behind the economy’s resilience to the regional crisis and its stronger than expected growth rate. Australia is now developing new strengths as a supplier of advanced goods and services. High value-added goods include computer equipment, transport equipment, industrial machinery, glass and clay goods, scientific and medical equipment, dyes, pharmaceuticals, and high-technology engineering exports in telecommunications and aerospace. Growth in the services sector includes tourism, international education, music and computer software. Tourism has overtaken coal production as Australia’s largest single industry (CIA, 2001).

### 2.2 Overview of the Australian Education System

The Australian education can be grouped into five major categories. These are the Preschool, Primary School, Lower Secondary, Senior Secondary and Higher Education. Under Higher Education too, there is Vocational Education and Training and University Education.

Preschool and school education has a similar structure across Australia with only slight variations amongst the States and Territories. Preschool education is commonly one year in length and is not compulsory. School education is thirteen years with some variations in Queensland and Western Australia. It is divided into a preparatory year, primary schooling and secondary schooling. The preparatory year is not compulsory but is almost universally undertaken. Children usually start in the preparatory year at around five years of age although in some States the starting age is closer to four years. Primary schooling is six or seven years 1-6 or 1-7, and secondary schooling is five or six years, 7-12 or 8-12. School education is compulsory until the age of 15 except in Tasmania where it is compulsory until age 16. Retention rates vary between states with the highest 91 percent at the Australian Capital Territory and the lowest being 53 percent in the northern territory (DEST, 2000).

Tertiary Education programmes can be divided into two main types: those offered by institutions and industry within VET sector and higher education programmes which universities
and other Higher Education Institutions mainly offer. VET is competency-based and offers a wide variety of programmes under the National Training Framework (NTF). Higher Education offers programmes leading to Bachelor degrees and a range of postgraduate awards. Universities also offer some shorter undergraduate programmes.

While the VET and higher education sectors in Australia remain largely distinct, there are an increasing number of connections being forged between the two. A few universities offer programmes under the NTF and some Bachelor programmes are offered by mainly VET institutions. Articulation from VET programmes into specific degree-level programmes at universities or vice versa is now well developed with the granting of credit in one sector for studies undertaken in the other.

Australia has a well developed education system with participation rates and secondary school completion rates among the highest in the world. Australian Governments at all levels are continually reviewing and reforming education and training to address the issues that arise from social and economic change. In many cases, Australian models attract international attention and Australia is involved in cooperating with the development of educational programmes in a number of overseas countries (DEST, 2000). School education is the responsibility of the individual States and Territories, although influence of the Federal Government exists. The State education departments recruit and appoint teachers in the Government Schools, supply building, equipment, and materials, and provide discretionary funding for use by the schools (Ainley et al, 1997). There also exist some Non-government Schools most of which have some religious affiliations. 67 percent of the Non-government schools, students are enrolled in Catholic Schools. The State and the Federal taxation revenues provide almost all the financial resources for the operation of the Government Schools.

There is no common school curriculum across the country, although almost all the students are exposed to a curriculum that provides for coverage of English Language, Arts, Mathematics, Science, Social Studies, Humanities, Creative and Performing Arts, Physical Education, and less frequently, a foreign language. The schools have considerable autonomy in deciding the curriculum detail, textbooks and the teaching methodology. However, at the senior secondary level, the curriculum is more likely to be specified in detail by the State authority responsible for examining and certifying the student achievement. The retention rate in Australia is high. This is explained by the policy initiatives taken by the education authorities to improve education completion rates (Ainley et al, 1997).

2.3 Vocational Education and Training in General

VET today can be defined as education and training for work. Vocational Education and Training is an international term that describes the development and improvement of skills and knowledge for specific purpose of improvement in an individual’s capacity in productive work. It develops and recognises the competencies or the skills for learners. There are overlaps between VET and General Education (DEST, 2000).

Some of the features commonly associated with VET, as Smith and Keating (1997) put, it are:

1. **An association with industry**: A primary objective in VET is to improve the capacity of the people to do a job. Industry therefore is a beneficiary of VET and also a major stakeholder.

2. **An association with a job or a task**: VET courses tend to be associated with particular areas of employment or task.

3. **Learning on and off the job**: VET courses often combine elements of learning on or off the job. They can also be provided in a range of contexts. Some courses are totally job or work-based and others are totally college or provider-based.

4. **Skills-based**: The essential purpose of VET is to improve the individual’s capacity to perform specified jobs or tasks. VET courses are designed for particular areas of employment that are identified by their skills base. These are the specific skills that are needed for the area of work.
Abstract learning is not a strong feature in VET and underpinning knowledge is included in the courses for the purpose of improving a person’s capacity to work better and to transfer the skills or competencies from the course to work situation or from one work situation to another.

2.4 **VET in Australia**

VET is the term used in Australia for the education and training system designed to prepare Australians of all ages for employment and to improve the knowledge and skills of people already in employment. Since the late 1990s, VET has been available in all three sectors of education: School, Postsecondary, and Higher Education. The development of the VET system has brought about substantial change to technical and vocational education in Australia in response to the need for lifelong learning and skills acquisition.

VET is competency-based and is a flexible system that can be undertaken through multiple pathways allowing people to move between different levels of education including school, post-secondary and higher education and the workplace. It is provided as institution-based training or workplace-based training or a combination of both and results in qualifications, which are nationally recognised. Programmes and assessment can be undertaken on full-time basis in preparation for employment, part-time basis or in conjunction with employment. Entry is based on the skills required to undertake the programme or assessment. VET includes para-professional and professional level education across a wide spectrum of occupations, a broad range of employment – specific skills and craft or trade training associated with the traditional apprenticeships.

The statutory responsibility on VET rests with the State and the territory governments. Employers and unions are represented on the state training authorities and through the state industry training boards where they can more specifically influence training arrangements in an industry. A federal statutory authority, the Australian National Training Authority (ANTA) provides coordination of and support for policy initiatives in the area. At the federal level, there are the Industry Training Advisory Boards (ITABs) that develop training plans for industry. The ITABs in consultation with the education experts decide on the learning competencies to be included in the curriculum. Government representatives also attend the deliberation meeting.

In each state, institutes of Technical and Further Education (TAFE) are major providers of VET. However, VET is also through private providers. TAFE institutes provide a wide variety of courses including pre-employment programmes, apprenticeships, training and updating programmes, paraprofessional and liberal adult education. TAFE is the most accessible part of the tertiary education sector. Participation in TAFE is characterised by part-time attendance and a wide range among the participants.

One of the most important traditional components of VET in Australia is the apprenticeship system. The duration of apprenticeship is four years during which the apprentice works for an employer and attends training for part of the time. Arrangements for the attendance vary between industry and states. There are the day release and the block release. Sweet (1996) cited in Ainley et al (1997) highlights some of the problems of the apprenticeships. They are the extent of regulation, the limited flexibility, and the linkage to traditional occupation, lack of response to modern technology and lack of access for women. Traineeships were introduced to provide a shorter and more flexible approach to entry-level training. They involve a one-year programme (some two years) with an employer incorporating on-the-job and off-the-job training.

The national VET system in Australia continues to respond to industry individual and community needs, focussing on capturing the best advice possible from industry, meeting clients’ needs, and clearer higher quality standards, all within nationally consistent, quality VET system. This is in response to the fact that in the rapid changing global work and social environment, improvement must be continuous and the VET system will continue to change to equip Australia and Australians for the future (ANTA, 2002). Thus VET is seen as a means of addressing broader social aims rather than being an end of its own. Some on the broader issues are unemployment, competition policy, industry skill shortage and concerns about an aging workforce.
Currently, the VET system in Australia has developed in the wider context of changing economic and political philosophies. The preparation of people for employment is recognised as one in which Government has significant interest in although the focus of interest has begun varying. Hawke et al (2000) state that in the early 1990s, Government interest was primarily economic in the sense that VET was regarded as a powerful tool for economic reform. A key feature throughout is the instrumental nature of the present interests in the Government.

In Australia, VET is now offered in both secondary schools and at the universities. The VET providers and assessment services are registered by the system and regularly audited for service quality. The system enables providers to operate anywhere and their qualification is nationally recognised. Training packages specify the competencies that must result from the provision of the learning services; industry requirements for the assessment and the qualification that result from the competence. Where there are no training packages developed so far, accredited courses are offered.

The Commonwealth, State and Territory governments provide the policy and regulatory frameworks for VET system. The governments implement the national training frameworks to enable consistency, and national recognition of provider services. Governments also provide about half the funds required for the system, while the learners and the system provide the other half.

The mode of assessment and qualification within the Australian VET is known as the competence-based training (CBT). The definition of CBT as given by the Vocational Education, Employment and Training Advisory Committee in 1992 is “training that is geared towards the attainment and demonstration of skills to meet industry specified standards rather than to an individual’s achievement relative to that of others in a group.” The characteristics of this particular form of training are summarised by Smith and Keating (1997) as being:

1. based on competency standards,
2. focused on outcomes not inputs,
3. involving industry,
4. taking account and recognition of prior learning,
5. modularised,
6. self paced,
7. assessment based on demonstration of skills rather than knowledge,
8. assessment being criterion referenced and un-graded,
9. flexible delivery, and
10. competencies widely recognised.

CBT was introduced in the late 1980s as a part of the wider economic policy measures to improve the skill levels of the Australian workforce. In addition, it was aimed at enabling the Australian industry to be more competitive in the global markets and establishing new career structures for the Australian workforce. The implementation of CBT was neither smooth nor rapid but the commitment by the VET participants, particularly the industry and Governments, has remained steadily strong and substantial (NCVER, 2002).

Most VET in Australia is provided in Government-administered colleges. In some States and Territories these are referred to as Colleges or TAFE institutes. To a lesser extent, VET may also be provided by: Institutes of Technology; some higher education institutions; schools and agricultural colleges; adult and community education authorities; private providers of education (such as business colleges); and employers.

VET institutions offer a wide range of programmes, ranging from recreation and leisure, through basic employment and educational preparation, to trades training, and para-professional and professional levels. In 2000 there were 86 TAFE and other Government institutes with 1,322 provider locations delivering VET training. A further 1,139 community education providers and 3,388 other providers delivering VET were at least partly publicly funded (ABS: Labour Force Survey, 2000).
2.5 The Apprenticeship Training

Nearly all training for trade occupations in Australia is taken through apprenticeship. Apprenticeship is a system of employment and training involving a contract between an apprentice and an employer. As a system of training, apprenticeship involves a systematic combination of work and education, which normally takes one of the following forms:

1. On the job training combined with prescribed technical education, usually in TAFE colleges.
2. On the job training combined with prescribed technical education and approved off the job training.
3. On the job training only

The general conditions of apprenticeship training are similar across the states and territories. The typical period of the apprenticeship is four years although the period can be reduced depending on the entry behaviour. The legislation governing apprenticeship does not discriminate on the basis of sex. Apprentice wages vary depending upon the age, stage, and trade of the apprenticeship.

2.6 Some Notable VET Reforms

The drive to establish a national system of training came from three issues of the 1970s. The first one was the concern about the adequacy of the structure of the skills and skills training within Australia to meet the then perceived challenges of internationally competitive markets and of the emerging new technologies. The second one was the growing awareness (then) about the rising levels of poverty in Australia and the possible impact of education in providing access to jobs and income. The third one was the awareness in the international terms that the Australian provision for school completion or further education other than the university was well below that of other developed countries (Ainley et al, 1997).

The Kangan Report of 1975 provided conceptual and philosophical underpinnings for TAFE. It defined the purposes of TAFE and placed it within the context of the wider context of education (Hawke et al, 2000). In 1996, the Australian Government reviewed and reoriented the provision of labour market programmes for the long employed and those at risk. The changes introduced were intended to improve the quality of assistance to the unemployed people, achieve more sustainable employment outcomes and address structural weaknesses in the arrangements for labour market assistance. Key changes were identified as:

1. Changes to the delivery of the commonwealth services to job seekers, by integrating key functions performed by a separate commonwealth employment service and department of social security networks into a single national network of offices.
2. The development of a fully contestable market for publicly funded employment placement services, in which assistance will be provided by a diverse group of employment placements enterprises including private firms, community organisations and corporative public provider.
3. New arrangements for the delivery of assistance to the job seekers, including new and more flexible forms of assistance, new approaches to the targeting of that assistance and significant reforms to payments and incentive arrangements (Ainley et al, 1997).

Another reform of the 1996 was the establishment of the Modern Australian Apprenticeship and Traineeship System (MAATS). The important contextualised issues for this reform were the need for the MAATS to reflect and strengthen the enterprise based training, the neglect of the traditional apprentice system in meeting the emergent skill needs of small to medium enterprises. Others were the complexity and cost in the provision of off the job training by traditional training providers to enterprises, the decline in apprentice numbers and the industrial control of the apprenticeship concept, which prevented the application of emerging occupation in the areas such as the communications technologies. Finally the role of the State Governments in the administration of training systems was a force too.
2.7 New Apprenticeships

New Apprenticeships combine practical work with structured training to provide a nationally recognised qualification. In Australia, New Apprenticeships include both apprenticeships and traineeships. This is an initiative of the Government to encourage employers to offer more jobs to young Australians. This New Apprenticeship is a flexible arrangement of combining work and vocational training. New Apprenticeships encompass existing apprenticeship and traineeships to provide young people with training options (ATA, 2002) which:

1. Involve paid job opportunities combined with a mix of on and/or off the training,
2. Lead to nationally recognised and portable qualification that is valued in the labour market,
3. Link too higher qualifications to provide career opportunities,
4. Will make apprenticeship and traineeships available on a part time basis in schools, and
5. Provide jobs and careers opportunities in the wider range of industries.

Apprenticeship and traineeships provide an opportunity to enter the workforce while still receiving formal training. May be conducted as off the job training at an approved training provider with on the job and practical experience or may be conducted entirely on the job. The new apprentice is now being conducted using competency-based assessment hence students need not take the four years for apprenticeship and one year for the traineeship. The off the job training is offered at either a TAFE institutes or at a Registered Training Organisation (RTO).

New Apprenticeships build on the strengths of the previous system of apprenticeships and traineeships but provide greater flexibility and relevance to the workplace. They may be undertaken full-time or part-time, and may also be undertaken through VET in schools arrangements. New apprenticeships operate through cooperation between the Federal and State and Territory Governments and industry. State and Territory training authorities have responsibility for the implementation of New Apprenticeships.

New Apprenticeships involve a training agreement between an employer and an individual, referred to as a new apprentice, under which the employer provides employment and training to the new apprentice to achieve an agreed competency level in a particular occupation or trade. The training component is undertaken in conjunction with an RTO. The training agreements are registered with the relevant State or Territory training authority. New Apprentices may also be hired through Group Training Companies, which take primary responsibility for the employment and training arrangements but place the new apprentice with one or more host employers over the period of the new apprenticeship. Financial incentives are available to employers from both the Federal and State and Territory Governments. Assistance is also offered to new apprentices in certain circumstances. (DEST, 2000; ANTA, 2001; ATA, 2002).

New Apprenticeship training programmes are based on the Training Packages under the National Training Framework and lead to skills that are recognised nationally by the relevant industry and qualifications awarded under the Australian Qualifications Framework (AQF). The training programme may be totally in the workplace or combine workplace and institution-based training programmes. The employer negotiates the training programme with an RTO and the New Apprentice. Usually the new apprentices are withdrawn from routine work to undertake structured learning. In many cases it is possible to specify the content and sequencing of units of competencies, as well as the timing, location and mode of delivery of the training. Because the training is competency-based, the length of time to complete the new apprenticeship varies depending on the length of time taken to achieve the required skill level and they lead to nationally recognised qualifications. They cover traditional trades such as automotive, building, electrical, fabrication, food preparation and hairdressing as well as a range of occupations in non-trade areas such as business administration, community services, information technology, food processing, retail operations and tourism.
2.8 Some Research Bodies
There are several bodies which work towards establishment of a sound VET in Australia. The National Training Framework (NTF) was introduced in 1997 to rationalise and improve previous policies that had been developed and implemented during the late 1980s and early 1990s. The intention of the policy framework is to produce a high-quality VET system that is nationally consistent, meets the labour market needs of industry and addresses the needs of those who are disadvantaged in the labour market. NTF clearly defines the roles of industry, industry organisations, providers and governments in the VET system. There are two main components of the NTF, namely the Australian Quality Training Framework and the Training Packages.

AQTF is designed to provide the quality assurance and recognition arrangements underpinning the NTF. The key elements include: nationally recognised competency standards that are developed by industry and comprise the basic unit against which assessment can be made nationally recognised. The qualifications of national RTOs meet guidelines established by Government. All RTOs operate across State and Territory boundaries, and qualifications accepted by one RTO must be accepted by all other RTOs. Other significant bodies include Australian National Training Authority (ANTA), Australian Vocational Education and Training Research Association (AVETRA), National Centre for Vocational Education and Research (NCVER) and research centres at various universities, among others.

2.9 Industry Training Advisory Bodies
Industry Training Advisory Bodies (ITABs) provide links between industry and VET. They provide Governments with advice from industry and develop industry-training plans. They develop and maintain Training Packages to meet the needs of industry. There are some 23 national ITABs recognised by ANTA as well as six industry-representative recognised bodies, and about 130 State and Territory ITABs. The national ITABs work closely with the networks of State and Territory ITABs (DEST, 2000). A good example of the industry training bodies is the Automotive Training Australia (ATA) which focuses solely on the automotive industry. It was established with ITAB in 1990. It facilitates the training of highly skilled workforce, consistently able to meet the professional, production, service and competitive practice of the ATA (Braddy, 2002). ATA is owned by the industry. The shareholders are the Federal Chamber of the Automotive Industry (FCAI) the Motor Trades Association of Australia (MTAA) and the Australian Council of Trade Unions (ACTU). Board members include FCAI, MTAA, the truck industry council, and the federation of automotive products manufacturers.

3 Possible Lessons for Developing Countries
Lessons can be drawn on varying aspects of the Australian education and training. On the transition from school to work, a comparative report issued by OECD defines eight features that appear to contribute to successful transition from initial education to working life. The features are:

1. Learning pathways and qualifications frameworks.
2. Learning in real work settings.
3. Provision of a broad range of general and vocational skills.
4. Safety nets and reintegration.
5. Youth friendly labour markets.
6. Information and guidance.
7. Effective institutional frameworks.
8. Monitoring tools.

ANTA on its part on the post compulsory education analysed the Australia’s position in terms of the eight aspects. The evaluation commended Australia for the achievements so far giving credit to the changes in attitudes and having structures and frameworks in place for Australia to move to the next phase of development. Some of the notable achievements are:
1. The establishment of AQF, which provides seamless transitions for learners throughout their lifetime.
2. The collective commitment by the Australian governments in partnerships with industry, to the development of a coherent framework policy and programmes that has been achieved through the establishment of ANTA, NTFs and the national strategy for VET.
3. Active engagement of industry in developing competency standards to be used in training packages.
4. The increased participation in the real work settings through New Apprenticeships and VET in schools.
5. Refinement of the data systems to help in monitoring the performance of the system.

Other lessons can be based on the attributes of the CBT as outlined by Smith and Keating (1997). The attributes are:
1. Based on competency standards.
2. Focused on outcomes not inputs.
3. Involving industry.
5. Modularised.
7. Assessment based on demonstration of skills rather than knowledge.
8. Assessment being criterion referenced and ungraded.
10. Competencies widely recognised.

Finally there are general issues that may improve on the training of the developing countries. The increase in the participation at all levels would go along way in improving the training and education in general. Another issue is the need for participation of all the stakeholders especially the industry in the VET aspects of the nation. There is no way some of the goals like industrialisation by 2020 will be achieved with the training and work being so separate.

4 Conclusion
The paper has discussed some of the training aspects that are found in Australia. This does not imply that Australia is the best in the world because it is still reforming its systems to make them more responsive to the main forces that are impacting on education and training. Developing countries should not just look at a model of training and imagine that all is well. Education and training are dynamic aspects that are driven by the world forces such as globalisation, lifelong learning and the culture of the people whom the education and training are aimed for. There is also a need for the update of the personal skills to match the demands at the workplace for all the people. This calls for the appreciation of the fact that we should all be learners, and design our systems and programmes with the local conditions at hand being guided by the international perspectives.

5 References

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