

VOCAL

The Australian Journal of Vocational Education and Training in Schools

Volume 6, 2006–2007

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Message from Raelene Fysh Chair VETnetwork Australia

As you are now in receipt of VETnetwork Australia's 4th academic journal VOCAL The Australian Journal of Vocational Education & Training in Schools, and have read the interesting articles, you will be aware of the diversity and growth of vocational education programs both in Australia and worldwide.

This VOCAL illustrates the challenges and successes when communities work with governments to provide opportunities for young people moving from school-to-work.

As well, the case studies that reflect the journeys made by young people to be successful and productive citizens are inspiring. It is pleasing to see the difference that schools, training providers, and local community groups make to ensure that our future workforce is well-skilled and employable.

It is reassuring to read of the research conducted nationally and in the States and Territories to guide future planning for vocational and technical education in Australia.

I am pleased to note that previous editions of VOCAL have been used by lecturers at universities to prepare teachers to deliver *VET in Schools* programs. We are very grateful to the contributing authors and the members of the editorial committee.

I believe the common thread for all articles is the passion inherent in all programs and the keenness to make a difference in young people's lives.



Raelene Fysh

Chair, VETnetwork Australia



Bobby Harreveld



Patrick Danaher

Editorial: Transitions in senior phase learning

Throughout the world, practices and policies of technical training, career and vocational education are enacted in many and different types of senior secondary schooling environments. Within these differences, there are many similarities (European Commission, 2006). There is much to be learned through sharing the stories of senior phase education and training reform, the relationships among people involved, and the ways in which young people's resilience may be fostered during the critical transition period from school-to-work and life in a civil society. Reform is occurring at system levels as well as in curriculum planning and pedagogical practices. Relationships among young people, their teachers, parents/guardians and employers are as important as they ever were. The resilience of students, school staff and systems to cope with ever changing challenges to education and training in a globalised knowledge economy is to be celebrated and cherished.

This edition of VOCAL examines the issue of transitions in the senior phase of learning, from initial education to the world of work. It begins with two stories about *VET in Schools* in Australia. The first article is a personal story of a student's learning journey. Chris Jeffery reminds us that Vocational Education and Training (VET) in schools is about young people wanting to learn and do interesting work with teachers dedicated to sharing with them their knowledge and experience of the world.

The second article by Sandra Harrington is a story of the VETnetwork journey and its magazine, *VETnetworker*, over the last decade. VETnetwork's mission at its inception in 1995 was 'to provide quality leadership,

professional support and a national focus to facilitate vocational education and training in schools'. This mission was later extended to encompass career and enterprise education. The articles from around Australia that follow in this journal are testament to the successful achievement of that mission.

Mike Frost is a well-known advocate of *VET in Schools*. He reports on its considerable impact on the new certification of post-compulsory education and training in Australia. The robustness of VET certification processes is reflected in its recognition for tertiary entrance throughout the country.

Rebecca Sherman presents results from an analysis of outcomes for a cohort of students two years after they completed their training at a Technical and Further Education (TAFE) institute. Down the track, the transition processes experienced by this group of young people show that the years immediately after training are particularly important for future work success.

An overview of policies and research-based findings from around Australia strengthens the call for meaningful transitions that lead to real life-work options for young people. This is reflected in the Tasmanian government's efforts to develop comprehensive strategies to progress lifelong learning for all. Nick Evans' article investigates that State's integrated systemic approach to the development of young people in *Tasmania: A State of Learning*.

From Queensland, the Department of Education Training and the Arts

Queensland Skills Plan provides a blueprint for that State's VET sector as it seeks to meet the skills challenges of the future.

Louise Morrison's story of VET in Western Australia illustrates the challenges faced by both schools and the system as they grapple with the new paradigms for post-compulsory curriculum and enhancement of pathways to post-school destinations.

Successful pathways from one learning and/or earning environment to another require successful partnerships between individuals and organisations. Michael Taylor reports on new directions for Local Community Partnerships (LCP) in Australia. He identifies three core roles for successful LCPs: coordination of Structured Workplace Learning; provision of career and transition support; and expansion of industry-led Adopt a School initiatives. Such challenges to VET provision are evident at local, national and global levels.

Leanne Dalley-Trim and Angela Hill interrogate research findings presented at a recent conference of the Australian Vocational Education Training Research Association (AVETRA). Here the mind-boggling complexity of systems controlled, socio-economically and culturally framed technical training, professional and vocational education, is never more evident than at the compulsory/post-compulsory interface.

In the transition from school-to-work, gender issues do not feature prominently in research. Elaine Butler and Robyn Woolley found that despite the rhetoric of the last twenty years, the data show the potential for gendered inequalities to be perpetuated in the education, training and labour market opportunities for young people. They argue that *VET in Schools* policies, pedagogies and curriculum practices

should assist young people to make informed career choices.

In Greece, it was not only gender differences, but also school achievement, grades and the occupations/jobs of their parents that influenced the vocational interests of young people. Grigoris Mouladoudis provides these outcomes from research with boys and girls aged between 16 and 17 years in an urban area of northern Greece. Implications emerging from this research highlight the capacity for school counsellors to: minimise stereotyping work as either 'male' or 'female'; contribute to students resilience in the face of economic and social disadvantages; and facilitate positive relationships between students and teachers.

Internationally, VET in Schools comes in many guises. Some countries have a comprehensive secondary schools system while others have separate schools for specific learning purposes (OECD, 2000). Colleagues from Africa, Asia, Europe and North America provide valuable insights into the different ways in which *VET in Schools* is named and enacted in their countries. As you read their articles, the similarities between the transition issues faced will become evident. It is still the case that the 'gritty realities in the economy and the state' (Apple, 1996, p. xii) are shaping young people's responses to their changing worlds of learning and work.

In the Nigerian VET sector, Muhammad S. Abubakar reports on various quality assurance initiatives that will enhance the perception of technical and vocational education and enable it to play a key role in modern industrial development in that country.

Éva Berde's analysis found that practical vocational training has had to face many problems since the

Successful pathways from one learning and/or earning environment to another require successful partnerships between individuals and organisations.

political and economic transformation in Hungary in recent years. She too recounts her country's moves to improve the prestige of vocational training and stimulate the labour market supply of qualified blue-collar workers in Hungary.

Botswana is a country in which work-integrated learning options are also being positively supported with both policy and legislative commitment from the government. Martin Kapfumvuti explores the potential for a cooperative training model that incorporates both academic and experiential learning components, to deliver a quality outcomes-focused learning for technical college students in Botswana.

Katherine Hughes and Melinda Karp engage with the issue of transition from initial secondary-level studies to postsecondary community colleges in the United States. In their article, issues of career pathways and dual enrolment in career and technical education are examined through federal and state level jurisdictions.

From Taiwan, Kuo-Shu and Chien-Pen report on their country's promotion of quality postsecondary school education through community-based senior high schools. They present an overview of the rationale and structure of these community-based senior high schools, then analyse findings from an evaluation of the initial implementation phase.

A Canadian perspective on school-to-work transitions is provided by Jo-Anne Willment who argues for a personal tool-box of skills that will prepare young people for their transitions among future work environments. At this critical period in young people's lives, she argues that online communication opportunities, currently utilised by adults, could usefully be employed with

secondary or internship students within VET systems.

Peter Rudd, Sarah Golden, Lisa O'Donnell and Tom Benton evaluate the United Kingdom's Increased Flexibility Program which aims to provide enhanced vocational and work-related learning opportunities for 14 to 16 year-olds. They identify two common denominators of generally successful changes to the senior phase of learning: more flexibility in choice of vocational pathways; and encouragement of partnerships among schools, colleges and other institutions involved in the provision of VET.

Australia's contribution to VET reform in the People's Republic of China is explained in the final article by Antoine Barnaart. He reports on two projects that illustrate the ways in which local and national VET policies, practices and pedagogies can also be use to 'build and enhance economic and cultural ties between countries'.

Conclusion

Throughout these articles, VET, career and enterprise education are framed within a socio-cultural view of learning that, while encompassing economic imperatives, is inclusive of both individual and collective needs. From an OECD sponsored evaluation of countries' educational and social policies aimed at limiting social exclusion and facilitating the impact of social policies at later stages of individuals' life trajectories, Mechin (2006, p. 8) noted that:

In addition to economic returns (in the form of labour market advantage), learning experiences – both in and outside school setting – bring other types of benefits. Some of these benefits accrue to individuals, as in the case of better health conditions; others may affect the broader community in which

individuals live, as in the case of better parenting practices, greater involvement in community life and lower crime.

Young people's school-to-work transitions have changed structurally as they are forced to adapt to the changing demands of their work and learning environments (OECD, 2000; Barabasch & Lakes, 2005; Australian Government, House of Representatives, 2004). Changes in local and global labour markets, and in the nature of work itself, have posed a threat to the welfare and livelihood of young people, especially those alienated from school-based learning (Bauman, 2004).

The notion of transitions now encompasses a range of elements such as education, employment, training, housing, family, income, consumption, relationships and the management of risk (Thomson, Bell, Holland, Henderson, McGrellis, & Sharpe, 2002). Transition from school-to-work and/or further education and training is often the crucial point in young people's lives when decisions have to be made that involve risk, or that are perceived as risky, because it is believed that they have long lasting effects on employment opportunities, lifestyle, social and professional mobility.

In high risk societies of the twenty-first century, individuals may have greater freedom of choice, but they are also held accountable for the consequences of those choices (Christmas-Best & Schmitt-Rodermund, 2001). Helping young people manage these complex transitions is the work of teachers, parents/guardians, employers, youth workers and so on. All participate with the goodwill and intent of engaging young people in worthwhile learning – and eventual earning – as knowledge workers of the twenty-first century.

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Christopher Jeffery

Christopher Jeffery, who was a student of St Joseph's Nudgee College, recently graduated with a Bachelor of Business/ Bachelor of Information Systems dual-degree at Australian Catholic University. Christopher is currently employed as a Business Systems graduate at CITEC and manages CyberGuru, his computer solutions business.

A student's learning journey

I have had an interest in computers for as long as I can recall. In a different sense to my peers at school and university, I was almost certain I wanted to study and work in the Information Technology (IT) field, even from my earliest years. However, I took a different pathway to my peers to achieve this. Following some challenges at school while completing senior, I undertook a school-based traineeship in multimedia. I attended university the following year. It was through the advice and guidance of a teacher who identified this pathway, and encouragement from my family and friends, that I am fortunate today to have that opportunity. I gained valuable experiences while studying and operating my own computer solutions business. Working with clients and colleagues enabled me to succeed at full-time work.

During my junior years of secondary school, I was taking two computer subjects a semester as I enjoyed it very much. Whether it was creating databases or designing PowerPoint presentations, I was constantly building my knowledge. I was involved in the multimedia club from my first days at secondary school, where I assisted in the design development of the school's website. To this date, some elements are still present on the website.

In 1997, I was in year nine. I was fixing computers and designing websites and a range of publications for several organisations, which led to the commencement of CyberGuru. I was also invited to participate in the Brisbane Internet Games, where I placed in the semi-finals. By the end of the year, I had a number of clients for whom I completed a range of IT tasks. I worked at a nearby school performing a range of computer maintenance tasks across approximately 40 computers throughout the school. It was my

responsibility to install, set up, upgrade, troubleshoot and maintain hardware and software, undertake inventory of equipment and provide staff training.

In Year 10, my interest in website design continued and I was awarded first place in the Intel Australia On-line Awards Web-Site Competition for the development of a Nudgee College interactive website.

My senior years were ones of both success and disappointment. I was successful in achieving high grades in most of my subjects, in particular in Business Communication and Technologies, and Business Organisation and Management. I was given the opportunity to prepare and receive numerous industry qualifications, namely Certificate II in Business (Office Administration), and Certificate III in Business (Administration). These provided me with a strong basis for completing further Vocational Education and Training (VET) qualifications over the following years.

However during the end of Year 11 and the beginning of Year 12, difficulties arose in Information Processing and Technology (IPT) which I was undertaking. Many of my experiences at this time were not positive. I needed to make a difficult decision by dropping out of the subject. However I was concerned that I would miss out on keeping up to date and building on my knowledge within IT to prepare for university.

It was fortunate that one of my teachers recognised my talent and informed me of the possibility of taking a different pathway into university. I was unaware at the time of such a possibility, and she suggested I undertake a traineeship where I was able to learn and earn at the same time. Taking on her advice,

I decided to unenrol from IPT and commence a multimedia traineeship.

Throughout Year 12, I studied four days at week at school and one day a week at QANTM College, where I studied various industry programs such as 3D Studio Max, Dreamweaver, Flash and Director. In addition to these studies, I worked part-time for the school within the Public Relations Office until completion of my traineeship in September 2001. In addition to completing the traineeship and being awarded the Certificate II in Arts (Multimedia), I was successful in attaining Certificate III in Information Technology (Software Applications) and Certificate IV in Assessment and Workplace Training.

In the following year, I commenced at the Australian Catholic University, where I studied for the Bachelor of Business/ Bachelor of Information Systems dual-degree. During this time, I completed a Cisco Certified Network Associate 1 and 2 within the Cisco Network Academy Program.

Throughout my university studies, I was involved with a range of student committees and activities. My final year of university was particularly hectic. In addition to completing my subjects, and applying for graduate recruitment opportunities, I became involved in the student association as editor and designer of the association's newsletter. I was also appointed Database Application Developer and Database Coordinator for the Australian Student Christian Movement.

One of my most significant achievements is setting up my own business while at school and continuing with the business to this day. I have been operating and managing my own computer solutions business, CyberGuru as 'proprietor/chief guru' for the past nine years. I provide services in consulting, design, support and training to individuals, small businesses

and not-for-profit organisations. Through CyberGuru, I also develop and maintain businesses' IT infrastructure, such as computers and websites. The success of my business has been partly due to the valuable skills I learned while studying. I would like to recognise the contribution of the teacher who helped me develop valuable networks among a range of educational institutions and associates, assisting me to develop a strong base of contacts, several of whom are clients today.

Earlier this year, I commenced a position as a business systems graduate at CITEC, a Queensland government owned provider of ICT services.

My learning hasn't stopped there. I am currently preparing to sit the Microsoft Desktop Support Technician exams to become a Microsoft Certified Professional and eventually a Microsoft Certified Systems Engineer.

My future career goal is to manage an ICT team or department, whether that is in CITEC, CyberGuru or another organisation. Wherever my interest may lead me, I am looking to use the valuable skills I have gained through my studies and my work experience. I am grateful and indebted to my family, particularly my parents and girlfriend Jessie for their support and motivation throughout.

I am mindful too of the teachers who have provided me with their knowledge and guidance. In doing so, I would also like to recognise the contribution of teachers who provided their valuable insight and are dedicated to assisting their students to aspire and achieve their goals. I was fortunate to have had such a teacher and I was able to acquire a substantial amount of knowledge and skills while gaining valuable qualifications.

It is due to the support of both my teachers and family that I have been fortunate to have this success.

A teacher helped me develop valuable networks among a range of educational institutions and associates, assisting me to develop a strong base of contacts, several of whom are clients today.



Sandra Harrington

Sandra Harrington is currently a casual lecturer at the Australian Catholic University (Brisbane campus), a VET consultant to schools, and a regular writer for VETnetworker. Sandra attended the original conference in Canberra in 1995 and is a past Queensland representative on the VETnetwork committee, past president of the Association of Post Compulsory Educators, Queensland (APCEQ), and past president of Sunvet (an organisation for workplace learning coordinators). Sandra was made a life member of APCEQ in 2003. She is probably the only person in Australia who has filed, in a spare bedroom cupboard, a complete set of ten years of VETnetworker.

VETnetworker 1995–2005

Introduction

This article is a compilation of some of the items appearing in the magazine VETnetworker over the past ten years; featuring people, schools, organisations and events that made the news.

VETnetwork

A national coordinating conference was held in July 1995 in Canberra to initiate an effective national network for secondary vocational education teachers. An interim steering committee was established at the conference to oversee the establishment of a national network made possible through the National Professional Development Program.

VETnetwork became an incorporated association on October 9, 1995. The mission of the association was to facilitate Vocational Education and Training (VET) in schools by providing quality leadership, professional support, and a national focus.

The chairperson was Jenny Haddrell from Queensland and the following people represented the states and territories – Pam Peelgrane (NSW), Pam Glover (Vic.), Ros Rangott (ACT), Paul Wilson and Janette Scott (SA), Stuart Harvey (Tas.), Jim Maguire (WA), Cathy Pickering (NT). Wendy McDowell was the project officer.

VETnetworker 1996

The May 1996 edition of VETnetworker introduced the executive officer, Mike Frost, who ran the national office from Rosny College in Hobart, Tasmania. A web address and home page were established.

TRAC (NSW) was awarded the Global Best Award for education-industry partnerships. The partnerships involved

2000 students, 2 500 businesses and 200 schools.

Industry and enterprise studies were introduced in Victoria.

The MAATS/AVTS Teacher Support Kit was developed to promote the new Modern Australian Apprenticeship and Traineeship System (MAATS) and Australian Vocational Training System (AVTS).

Online initiatives included OZJAC, to assist students to access information on courses and jobs and Voc Ed Coordinators Online (VECO), an email discussion list for VET coordinators.

VETnetworker 1997

By 1997, VETnetwork had 700 members and Jim Maguire (WA) was the national chairperson.

Commonwealth government initiatives included the introduction of:

- key competencies
- job pathway programs
- regional skill centres
- group training companies
- VET curriculum
- a national commitment to enterprise education.

State Training Authorities were funded to develop school-based apprenticeships and traineeships and the Australian Student Traineeship Foundation (ASTF), which had been established in 1994, continued to play a vital role in developing school and enterprise partnerships.

VETnetworker 1998

The first national journal, VOCAL, was printed. VETnetwork membership was \$20 for individuals and the inaugural VETnetwork Conference was held in

Adelaide with 600 people attending. Jenny Haddrell was made a life member.

Visionworks (Qld) was established with the late Joanne Nolan coordinating the cluster. Janine Bowes was project officer for VECO, which had 400 subscribers. The South Coast Industry Schools' Co-ordinating Organisation (SCISCO) (Qld) won the Learning Community Award for their exemplary school-industry program. ASTF developed the 'quality achievement matrix' to be used by workplace learning clusters.

The editorial, in the March 1998 magazine, focused on introducing vocational education to Years 9 and 10 students.

VETnetworker 1999

Jim Maguire farewelled some long-standing members of the VETnetwork steering committee – Bernie Fitzsimons (SA), Kathy Melsom (WA), Ron Miles (NSW), Sandra Harrington and Leah Richards (Qld), Stuart Harvey and Robyn Storey (Tas.), and Helen Boardman (NT).

The Curriculum Corporation published training package resources to support *VET in Schools*.

A report from Andrea Meredith at SCISCO warned that VET coordinators were facing unique challenges. She listed some tips, gained from VECO, to assist coordinators cope with their work load. They were:

- develop a good support network
- don't try to keep everything in your head
- set aside half a day per week for reading
- keep focused on your role – don't add to your responsibilities

- learn to say 'no' to requests outside defined parameters.

VETnetworker 2000

VETnetwork launched the GST Start Up project. The VETnetwork National Conference was held in Victoria, and Mike Frost was farewelled as VETnetwork executive officer.

The Ministerial Council on Education, Employment, Training and Youth Affairs (MCEETYA) *VET in Schools* taskforce, recommended a national framework to improve the transition of young people from school-to-work and further study. The framework had six key elements – VET; enterprise and vocational learning; student support services; community and business partnerships; effective institutional and funding arrangements; monitoring and evaluation.

The Multimedia Pathways project was launched in South Australia with seven clusters of schools (37 schools). The project aimed to integrate the vocational certificate with the Certificate of Education.

The Certificate II in Workplace Practices (30064QLD) was accredited in December 1999 and made available to schools in 2000.

VETnetworker 2001

The VETnetwork national office moved to Canberra and Julie Samuels-Green became the executive officer. Jim Maguire stayed on as national chairperson until mid-year when Margaret Stewart took over. Both Mike Frost and Jim Maguire were awarded life membership for their contribution to VETnetwork. During this year the format of the magazine changed.

The Quality Teacher Initiative was funded by the Commonwealth government and the Australian National Training Authority (ANTA) provided

***1999
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VETnetworker magazine continues to report rich and diverse VET activities undertaken by school communities across Australia.

schools with a resource, Take Off, to help teachers give advice on vocational education and training options.

The Australian Recognition Framework (ARF) was revised and renamed the Australian Quality Training Framework (AQTF).

VETnetworker 2002

The 3rd biennial VETnetwork Australia National Conference was held at the Brisbane Convention Centre. The Enterprise and Career Education Foundation (ECECF), previously ASTF, sponsored excellence awards to be presented at the conference.

Bill Healey was appointed as the CEO of ECECF. Dr Brendan Nelson became Minister for Education, Science and Training (DEST) and Raelene Fysh (Qld) became national vice-chairperson of VETnetwork.

The Australian Chamber of Commerce and Industry and the Business Council of Australia completed a project to identify employability skills. The House of Representatives Standing Committee on Education and Training conducted an inquiry into vocational education in schools.

Myfuture was released and Manufacturing Learning Centres were established in South Australia.

VETnetworker 2003–2004

Raelene Fysh (Qld) became the new chairperson of VETnetwork. Sandra Kenman became the Australian manager and the national office moved to Brisbane. VETnetworker was redesigned.

In 2004, The VETnetwork Conference was held in Hobart and Judi Buckley (Qld) was named a Fulbright Scholar.

VETnetworker 2005

ANTA was abolished in July and functions transferred to DEST.

ANTA was formed in 1992 and was responsible for establishing a national VET system based on a large number of national training packages.

DEST launched The Australian Career Development Studies package and established the Australian Network of Industry Career Advisers.

AQTF standards were revised and the new Certificate IV in Training and Assessment was released. The successful applicants for the 24 Australian Technical Colleges were announced.

VETnetwork Australia commissioned the development of a business plan to investigate the future management structures of the association and to ensure its sustainability.

Schools in the news

Over the past ten years, the following schools were reported in VETnetworker. They reflect the rich and diverse VET activities undertaken by school communities across Australia.

Schools	Activities
Willunga High School (SA)	Viticulture
Swinburne University of Technology and Elwood College (Vic.)	Hospitality partnership with Novotel hotel
Dickson College (ACT)	Girls only automotive class
Nudgee College (Qld)	Range of vocational courses and its computer-based student competency mapping package
Illawarra Senior College (NSW)	Embedding competencies across the curriculum and school-based trainees
Golden Grove High School (SA)	Workplace learning program and on-the-job assessment
Hellyer College (Tas.)	AVTS programs in engineering, retail, office skills, hospitality and work education
Katherine High School (NT)	Pathways program for 16-18 year-old Indigenous students
Phillip College (ACT)	Building and Construction-Fitout and Finish course
North Lake Senior Campus (WA)	Seven vocational programs offered across three subject areas
Methodist Ladies College (Vic.)	Hospitality program combining on- and off-the-job activities and links with TAFE
Urrbrae Agricultural High School (SA)	Certificate III in Horticulture
Upwey High School (Vic.)	Certificate I in Basic Electronics
Marsden State High School (Qld)	Jobs Pathways Program
Rosny College (Tas.)	Building and Construction program
Claremont College (Tas.)	Best practice as a Tasmanian training provider
Toolooa State High School (Qld)	Part-time apprenticeships
Salisbury High School (SA)	Enterprising activities
Launceston College (Tas.)	Photographic Services Certificate II
Box Hill Senior Secondary College (Vic.)	School-based apprenticeships
Pine Rivers State High School (Qld)	Part-time traineeships in Office Administration
Helensvale State High School (Qld)	Boat Building apprenticeships
Hobart College (Tas.)	Aquaculture program
St Edmund's and St Mary's (Qld)	School-based traineeships in Hospitality, Engineering, Retail and Plant Operation
The Ballarat <i>VET in Schools</i> cluster (Vic.)	Partnership between local government and non-government schools, the Ballarat Community Education Centre, Group Training, the University and the local TAFE
Mabel Park High School (Qld)	Community-based learning for students in Years 9 and 10
Margaret River Senior High School (WA)	Community ownership model
CASILS (Qld)	Skills Centre
Berkeley Vale Community High School (NSW)	School-to-work-plans for students in Years 9 and 10

Bradfield College (NSW)	Design Fundamentals Certificate II
Rosny College (Tas.)	Schools Excellence Award
Nhulunbuy High School (NT)	Links with Nabalco Pty Ltd
The South West Independent Schools cluster (WA)	Automotive scholarships
Elizabeth College (Tas.)	Aged Care Certificate III
Lilydale DHS (Tas.)	Links with local wineries
The Woden School (ACT)	Special education and hospitality entry units of competency
Deniliquin School Education Area (NSW)	Strong partnerships and links with industry
Dickson College (ACT)	Performing Arts skill centre
St James College (Qld)	'Adopt a School' partnerships
Warnbro Community High School (WA) and Casino High School (NSW)	Curriculum organisation
Lake Ginninderra College (ACT)	Marine studies
Heathfield High School (SA)	Murraylands Commercial Kitchen

Conclusion

VETnetwork Australia has managed to achieve the objectives stated in its mission statement in 1995, and also broaden its goals to include career and enterprise education. Links between the national executive and the various state bodies have been instrumental in achieving a national focus and a national understanding of *VET in Schools*.

This article has highlighted some of the key people who have led the association and the committed VET teachers, school communities and organisations within the association. May VETnetwork Australia respond to the challenges of the future and continue to support VET teachers in schools, and act as a national spokesperson on issues of importance to VET teachers and students.

If you, or your school, or your organisation, have been mentioned in this article, I would like to hear from you. I will endeavour to write a series of articles for VETnetworker on 'Where are they now'. Please forward details to my email: sandraharr@ozemail.com.au

The impact of *VET in Schools* on new certification of post-compulsory education and training in Australia

Introduction

The development of *VET in Schools* programs, beginning in the early 1990s, has contributed to a range of changes across education. While expansion of school curriculum has been a major outcome, there have been shifts in approaches to teaching (pedagogy), to school organisation (timetabling, class arrangements) and to formal recognition of learning that frequently occurs outside school.

The formal recognition of this learning has been at the heart of major changes to senior secondary certification in most states. Senior secondary certification, historically constrained by the predominance of tertiary entrance requirements, has begun to respond to the demands to recognise Vocational Education and Training (VET), including recognition of VET for the purposes of university entrance. In most states in the last few years, there have been serious efforts to modify certification so that VET-related learning is both recognised, and in some cases, embraced to contribute to tertiary entrance scores.

Up to a point, this has been an outcome of Commonwealth driven efforts to establish a national training system. With the creation of the Australian Quality Training Framework (AQTF), with its responsibility for overseeing the delivery of training under the Australian Qualifications Framework, a nationally recognised VET qualifications system was in place. The progressive adoption of school-based VET programs, recognised under the National Training Framework as legitimate, has undoubtedly contributed to an

increasing willingness on the part of state Boards of Study and qualifications authorities to move to recognise VET within state certification systems. There have, however, been some significant challenges, not least those associated with reconciling the competency-based assessment system that characterises VET with the assessment regimes of the Australian Curriculum Assessment and Certification Authorities (ACACA).

Impact of school-based VET

Beginning in the early 1990s a diverse range of school-based vocational programs was developed around the country. These ranged from the carefully-structured TRAC programs that began in NSW, and expanded rapidly in other states, particularly Tasmania, to the JSSST programs in NSW, and the dual accreditation programs of Victoria. Most of these involved some notion of learning in the workplace, later termed Structured Workplace Learning, with assessment of this learning increasingly being recognised in school-based certification. State accreditation bodies at this stage were reluctant to move quickly to incorporate such learning in their credentials. By 1999, at the Commonwealth's instigation, the ACACA group released a set of principles for the 'integrity, quality and long-term credibility of certificates of achievement'. These had implications for the recognition of both key competencies and the integration of VET into senior secondary certificates (ACACA, 1999, p. 4). This was likely an outcome of uncertainty about the long-term sustainability of *VET in Schools*; the challenge to recognise it



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The perceived success of VET in Schools almost certainly influenced some of the major initiatives towards the end of the 1990s whose aim was to improve participation and achievement and successful transition from school to adult life.

within certification; and, the enduring dominance of tertiary entrance as the primary purpose of certification.

There was also a growing recognition that for many young people existing senior secondary certification did not adequately or appropriately recognise what learning had actually been achieved. In most states significant proportions of young people were leaving school, often without any kind of qualification. The Kirby report (DEET, 2000) into post-compulsory education and training in Victoria estimated that over 20% of young people left school without any kind of formal qualification. Pitman (2002, p. 24), in his comprehensive review and recommendations for a new deal in senior certification in Queensland, estimated a similar proportion were seriously at risk of not completing senior schooling.

VET in Schools showed a remarkable growth through the 1990s, from 60 000 in 1996 to 211 000 in 2004, as young people showed a willingness to continue with senior schooling when VET programs were provided (MCEETYA, 2004, p. 4). There is now convincing evidence of how significant VET programs have been in improving student participation and achievement. For example, the report, *Strategic Evaluation of Vocational Education and Training in Schools in NSW*, released in 2005, strongly signaled the success of VET by noting that:

The hard evidence is now there for all to see. VET in schools is clearly making a difference to NSW students, adding value to their school participation, their HSC achievement and their preparation for the transition to post school education, training and work (DET, 2005, p. 3).

Thus the perceived success of *VET in Schools* almost certainly influenced some of the major initiatives towards

the end of the 1990s whose aim was to improve participation and achievement and successful transition from school to adult life. The Kirby report (2000) of post-compulsory education and training pathways in Victoria included a range of ambitious recommendations designed to:

- increase participation in education and training
- improve the skills base of the workforce
- enhance local community responsibility for effective transition
- improved educational participation.

The Eldridge report (Prime Minister's Taskforce 2001) *Footprints to the Future*, provided a national review that highlighted significant weaknesses in youth transition and support, with recommendations for Commonwealth government intervention.

Among a number of states complementary policy developments occurred. The *Tasmania: A State of Learning* policy released in 2003 recommended a range of strategies to improve participation and outcomes in senior secondary education and training, including the development of a new senior secondary completion or graduation certificate. Queensland's *Education and Training Reforms for the Future*, released in 2002, recommended a new Queensland Certificate of Education (QCE). It also recommended a broadening of a 'senior phase of learning' to include a much wider array of recognised learning, including learning through VET programs, Structured Workplace Learning and individualised programs of learning.

However, the Australian government also responded to the growth in *VET in Schools*. Through its Ministerial Council on Education, Employment,

Training and Youth Affairs (MCEETYA) it released National Goals for Schooling in 1999, identifying vocational learning among its goals. It also released its National Framework for *VET in Schools* which intended to further expand vocational learning in schools in ways that were more direct and responsive to industry needs.

New certification to support participation

The need for changes in existing senior secondary certification emerged as school-based VET programs grew, demanding more formal recognition of achievement. In NSW the McGaw (1997) review of the Higher School Certificate led to a new standards-based assessment system as well as VET related curriculum development, including recognition for VET in meeting requirements for tertiary entrance. In Victoria, the Kirby recommendations led the government to establish, among other things, a new Victorian Qualifications Authority (VQA) aimed at improving access to qualifications and breaking down barriers particularly between VET and senior secondary. By 2003 Tasmania had established a qualifications authority with similar aims.

Other states adapted to the challenges provided by both the needs to recognise VET within senior school qualifications and to broaden the range of studies which could contribute to certification. In the process participation and achievement were improved.

Concern about retention in the senior secondary years was also a motivating factor, driven in part by research by the Dusseldorp Skills Forum's Australia's Youth: Reality and Risk (1998) and How Young People are Faring (2003, 2004). The work of Richard Teese and others at Melbourne University also

confirmed the relatively bleak prospects for young people leaving school without qualifications (Teese et al., 2000, 2002, 2003).

The research suggested that for a significant proportion of young people aged 15-24:

- disengagement from education and training was frequent
- the successful transition-to-work was fragmented
- poverty was a reality
- there was a significant social and economic cost to the community.

It was against this background that most states began to review senior secondary curriculum provision. The opportunities were expanded to include VET, school-based apprenticeships and traineeships, and with it reforms to certification that would recognise such 'new' learning. Significant reform of support structures also occurred with a greater focus on pathway planning and support for successful transition. In Tasmania the significant overhaul of post-compulsory education and training was reflected in the policy *Tasmania: A State of Learning*. It was implemented immediately and in full. Like wise, the release of *Queensland the Smart State: Education and Training Reforms for the Future (2002)* focused attention on:

- pathway planning
- support for young people through the senior phase of learning with systemic overhaul
- a new qualification
- significant legislative change supporting required participation in education, training or full-time employment immediately concluding the compulsory years of schooling.

The new certificates

New certificates in various stages of development and implementation

The need for changes in existing senior secondary certification emerged as school-based VET programs grew, demanding more formal recognition of achievement.

While the new certificates all involve notions of levels of achievement, they vary in terms of how this will be attained.

in five states share a number of common features which confirm the place for VET related study and the importance of vocational learning. All share a central and important capacity to formally recognise both nationally endorsed training qualifications as well as more generic work-related and industry-based programs for certification. In all cases there is clear provision for learning through structured workplacement and on-the-job experience, as well as for undertaking school-based traineeships and apprenticeships. In the case of Tasmania's proposed Senior Secondary Graduation Certificate, full-time apprenticeship studies are likely to contribute substantially to meeting the requirements for obtaining the certificate.

All the proposed certificates will impose requirements related to literacy and numeracy skills, although all are characterised by flexibility in what can be used to meet these requirements. The Queensland Certificate of Education (QCE), for example, will recognise:

- literacy and numeracy achievement from conventional English and mathematics subjects
- specifically developed courses which will deliver against the required standards, from school-developed and Queensland Studies Authority (QSA) approved short courses
- VET based literacy and numeracy
- literacy and numeracy in Year 9.

Most include requirements that relate to the development of personal effectiveness. The Victorian Certificate of Applied Learning (VCAL) includes personal development which involves school and community-based activities that will help develop teamwork skills, self-confidence and other life and work relevant skills. The QCE

will require successful completion of studies involving negotiated workplace, community or self-directed project based activities: community, cultural and sporting activities: and/or advanced studies in university: and/or VET diploma and advanced diploma. The new South Australian Certificate of Education (SACE) will require both personal learning plans and extended learning initiatives as part of the certificate's core learning units (State of SA, 2006). The Tasmanian certificate is also likely to include a personal pathway planning requirement that derives from a legislated mandate that all Year 10 students beginning in 2007 will lodge a pathway plan with the Tasmanian Qualifications Authority (TQA).

The proposed Tasmanian certificate, however, is the only one that will specify minimum requirements in information and communication technology (ICT). In other jurisdictions this may well be addressed within the prescribed learning areas, or as they are described in the new SACE 'learning spaces'. There is also a trend toward making computer literacy part of the general literacies.

Of course all certificates retain, as a central feature, the recognition of what might be termed 'conventional' or 'traditional' study with entrance to university study still an important consideration. Even the VCAL makes clear provision for students to change to the Victorian Certificate of Education (VCE) if university emerges as a preference.

While the new certificates all involve notions of levels of achievement, they vary in terms of how this will be attained. Queensland, South Australia and Tasmania propose credit points systems which allow a wide range of learning to be counted within

particular requirement frameworks. Tasmania is likely to use a credit matrix system which is built on measures for course size, complexity, and robustness (an estimate of reliability). The VCAL actually specifies three grades – foundation, intermediate and senior – reflecting skill levels from basic to reasonably challenging Year 12 programs. The WACE proposes 50 courses of study progressively developed, within them semester units, with different levels of achievement. All systems will retain some notion of external assessment, including examinations. Some will use general standardised tests, like the General Achievement Test or GAT in Victoria.

An Australian Certificate of Education

In 2006, the Australian Council for Educational Research released its report, *Australian Certificate of Education: Exploring a Way Forward* which proposes a single national certificate for the senior years of school. Responding to concerns expressed by the then Federal Minister, Dr Brendan Nelson, to inconsistencies and a lack of comparability between senior secondary qualifications across state jurisdictions, the report recommended a single national certificate, issued by existing state authorities, and awarded on the basis that candidates successfully meet a set of nationally consistent standards (ACER, 2006, p. iii). In addition, ‘curriculum essentials’ would spell out a core of curriculum content with appropriate national achievement standards set against them. Interestingly, the report recommends a national testing of ‘employability skills’ under a key capabilities assessment regime.

In the current climate of states-developed senior secondary qualifications, in most cases developed

in a climate of significant and major education and training reform intended to improve participation and achievement as well as completion and the smooth transition to further education and working life, the ACE is probably badly timed. However, it also represents a conservative, traditional and somewhat elitist approach which is sharply at odds with the states’ initiatives aimed at greater inclusivity and enabling more students to succeed.

Nevertheless, it has as something of a precedent, the national training framework which has successfully broken down significant barriers, mainly in the recognition of VET qualifications, across state boundaries. From this there are many similarities which on any count would make the notion of a national certificate appealing.

Conclusion

While the evidence for *VET in Schools* having some real influence on curriculum and pedagogical reform and with it, perhaps inevitably, some direct influence on the emergence of new certification efforts is obvious, the extent to which all of this is positively changing the experience of senior schooling for young people is doubtful. There is growing evidence that *VET in Schools* has had a minimal impact on improving retention, and has not provided clearly aligned pathways from school-to-work (Anlezark, Karmel & Ong, 2006). This is in part compounded by the continuing challenge for policy-makers and managers to implement sustainable and robust programs that are adequately resourced and fit comfortably within school programs.

In this context, the new approaches to certification, however well intentioned, may be limited in the extent to which they can effectively work to encourage participation and achievement in a more diverse range of programs. The

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There is emerging evidence that 'skill sets' are becoming more valuable than qualifications themselves.

ambitious efforts to encourage personal development or improve pathway planning will always be constrained by the practicalities associated with gathering and validating evidence. The default may be to continue to recognise traditional learning assessed in conventional ways, with tertiary entrance scores still the primary objective of senior schooling.

If this view is bleak, it is worth considering the likely place of qualifications in the future, where research evidence is already suggesting that employers give greater weight to factors other than qualifications in recruitment (McDonald & Roberts, 2005, p. 2). As well, there is emerging evidence that 'skill sets' are becoming more valuable than qualifications themselves, particularly where they are accumulated from a number of different industry or enterprise areas.

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Down the track: TAFE outcomes for young people two years on

Introduction

We know in broad terms the labour market benefits of education and training (see for example, the Australian Bureau of Statistics (ABS) Survey of Education and Training). However, we have little information on the process of transition to the labour market other than NCVER's student outcomes survey. This survey obtains information on the transition six months after completion of training, but this time period is too short to fully measure the outcomes of training and gives an incomplete picture of the transition process.

To gain information on outcomes over a longer period of time, NCVER conducted a survey known as Down the Track, in 2004. The survey was a follow up of 15 to 24 year-olds (as at May 2002) who participated in the 2002 Student Outcomes Survey and completed training through a TAFE institute in 2001. The survey was funded by the Australian government.

Method

The Down the Track survey collected information in September 2004, approximately two and a half years after training. The 2002 Student Outcomes Survey collected information relating to employment six months prior to the training (no specific date as students start training at different times and years) and approximately six months after training in May 2002.

The two surveys combined provide information on a cohort of students that allow an examination of employment at these three time points. Other outcomes examined included changes

in wages and skill level, and pathways to further study.

Findings

Change in labour force status

Given that approximately three-quarters of 15 to 24 year-old TAFE graduates stated their main reason for training was employment related, employment outcomes is a key indicator of how well TAFE serves its clients.

Overall, there was a 20% increase in employment from before training to September 2004 for 15 to 24 year-old graduates. Table 1 provides the labour force status at the three time points. It is evident that 15 to 19 year-olds made the largest employment gains. In all likelihood this is due to this group being new entrants into the labour force, as many were school leavers with lower levels of employment prior to training. It follows that the older age group were more likely to be employed prior to training.

On the whole, the proportion of those employed full-time had increased where the proportion of those employed part-time had decreased. This is particularly evident for 15 to 19 year-olds.

Employment differences between the sexes are also evident. Males were more likely than females to be employed full-time at all time points, with females more likely than males to be employed part-time.

What students were doing in 2004, compared with immediately after training in 2002, was examined. While it is not clear whether the changes in labour force status were a direct result of the training, around two-thirds of those unemployed and over half of

those not in the labour force (not working and not actively looking for work) in May 2002 were employed in September 2004. Around nine in ten who were employed in May 2002 were also employed in September 2004. This was similar for 15 to 19 and 20 to 24 year-olds.

Table 2 highlights the change in labour force status from 2002 to September 2004. Of the 15 to 24 year-olds employed full-time at May 2002, 83% were also employed full-time in September 2004, and around one in ten moved to part-time employment. Of those who were employed part-time in May 2002, 44% moved to full-time employment, with 45% remaining in part-time employment. Around a third of those who were unemployed and looking for full-time work in 2002 were employed full-time by 2004, with another quarter working part-time. Around half of those who were unemployed and looking for part-time work in 2002 were working part-time in 2004, with around a quarter working full-time.

Overall there were positive changes in the labour force status from before training to 2002 and from 2002 to 2004. A high proportion of those not employed in 2002 were employed in 2004, along with movements from part-time to full-time employment.

Change in wages

For full-time workers, wages of graduates increased substantially from 2002 to 2004 (Table 3). In 2004, the 20 to 24 year-olds had wages higher than

Table 1: The labour force status of graduates, aged 15-24, prior to training and after training in 2002 and 2004

Age	Labour force status	Six months before training (%)	After training May 2002 (%)	After training Sept. 2004 (%)
15-24	Employed	66	76	86
	Full-time	28	50	63
	Part-time	37	25	23
	Unemployed	16	13	6
	Not in the labour force	17	10	7
	Total	100	100	100
15-19	Employed	57	71	88
	Full-time	14	41	63
	Part-time	42	29	26
	Unemployed	19	16	7
	Not in the labour force	24	12	5
	Total	100	100	100
20-24	Employed	72	79	85
	Full-time	36	56	64
	Part-time	34	22	20
	Unemployed	15	11	6
	Not in the labour force	13	9	9
	Total	100	100	100

Source: NCVET. (2004). Down the Track survey; NCVET. (2002). Student Outcomes Survey. In Sherman 2006, p. 13.

those of the 15 to 19 year-olds, in all likelihood due to their having been in the labour market longer. In addition, many of the 15 to 19 year-olds may have been on youth wages, as they had not reached the age required to obtain adult wages. Due to lower starting salaries, wages had increased more for 15 to 19 year-olds than for 20 to 24 year-olds over the two and a half years.

In 2004, male graduates had higher wages than female graduates. This

Table 2: Change in labour force status of graduates, aged 15-24, between 2002 and 2004

Labour force status –May 2002	Labour force status – September 2004				Total
	Employed full-time	Employed part-time	Unemployed	Not in the labour force	
Employed full-time	83	10	2	4	100
Employed part-time	44	45	5	6	100
Unemployed (looking for full-time)	35	27	27	11	100
Unemployed (looking for part-time)	27	49	8*	16	100
Not in labour force	32	24	15	27	100

Notes: * indicates the estimate has a relative standard error greater than 25% and should be used with caution.

Source: NCVET. (2004). Down the Track survey; NCVET. (2002). Student Outcomes Survey. In Sherman 2006, p. 17.

pattern is consistent with Ryan's (2002) findings that Vocational Education and Training (VET) qualifications provide better wage outcomes for males than females. The choice of training influences salary. Females were more likely to undertake training in services, hospitality and transportation, business

administration, and health and community services. These areas may lead to jobs in industries such as accommodation, cafes and restaurants (population average weekly earnings \$694.70: ABS, 2004), and health and community services (population average weekly earnings \$879.50: ABS, 2004). Males were more likely to chose training in architecture and building, and engineering and surveying, which may lead to jobs

in industries such as mining and construction (population average weekly earnings \$1 527.50 and \$1 084.30 respectively, ABS: 2004).

Change in occupation and skill level

Around a third of graduates were employed prior to training. For these graduates, training is not about getting into the labour market, but about improving their position within the labour market. To complete the picture on employment outcomes, changes in occupation and skill level were examined. The definition of skill level is based on the five categories of skill as outlined in the Australian Standard Classification of Occupations (ABS, 1997).

Movements to higher skill levels can be seen immediately after training, and then again approximately two and a half years after training (Table 4). While many factors, such as further study affect these outcomes, by 2004 nearly half the graduates had moved to a higher skill level, compared with prior to training. The pattern was similar for 15

Table 3: Full-time average annual income at 2002 and 2004, and percent growth, of graduates aged 15-24

Age and gender	2002 (\$)	2004 (\$)	Percent growth (%)
15-24 years	27 577	36 479	32.3
Male	28 606	39 496	38.1
Female	25 633	31 820	24.1
15-19 years	21 495	31 082	44.6
Male	22 375	32 314	44.4
Female	20 189	29 761	47.4
20-24 years	30 410	40 500	33.2
Male	31 155	43 600	39.9
Female	28 824	34 091	18.3

Source: NCVET. (2004). Down the Track survey; NCVET. (2002). Student Outcomes Survey. In Sherman 2006, p. 19.

to 19 year-olds and 20 to 24 year-olds.

The upward mobility of graduates is further illustrated by Figure 1. It is evident there were large movements from lower-skilled to higher-skilled occupations. The pattern of 'upskilling' was more distinct for 15 to 19 year-olds, who were more likely to have lower skilled jobs prior to training, possibly due to part-time employment while completing school.

As well as training enabling students to move into the labour market, training can provide employment benefits for those already in the labour market, namely by 'upskilling'.

Further study outcomes

By September 2004, 76% of graduates had undertaken some form of further education or training that may or may not have led to a completed qualification. This included training at university or TAFE, and training provided by employers or other providers. Further, 43% of all graduates completed an additional qualification.

Table 6 shows the proportion of graduates who completed a qualification at a higher level than that completed in 2001. Twenty-one percent of all graduates completed a qualification at a higher level than the training completed in 2001, indicating that for some, training is being used as a pathway to further study. Graduates who completed a Certificate II in 2001 were more likely than those who completed other qualifications

Table 4: Change in skill of graduates, aged 15-24, from before training to 2002, and to 2004,

Change in skill	Before training to 2002 (%)	Before training to 2004 (%)
Movement to a higher skill level	34	48
Movement to a lower skill level	8	13
No change in skill level	59	38
Total	100	100

Source: NCVET. (2004). Down the Track survey; NCVET. (2002). Student Outcomes Survey. In Sherman 2006, p. 21.

to have completed an additional qualification at a higher level.

The upward movement in the level of qualifications completed is illustrated further in Figure 2, which shows the distribution of highest qualification completed at May 2002 and September 2004.

Summary and conclusions

This article looked at outcomes from training over time in relation to labour

Figure 1: Distribution of occupation of graduates, aged 15-24, six months prior to training and at September 2004 (%)



Source: NCVET. (2004). Down the Track survey; NCVET. (2002). Student Outcomes Survey. In Sherman 2006, p. 23

Table 6: Proportion of graduates, aged 15-24 who completed an additional qualification at a higher level than that completed in 2001

Qualification completed in 2001	Proportion who completed a qualification at a higher level by September 2004 (%)
Diploma or associate diploma	11
Certificate IV	18
Certificate III	18
Certificate II	37
Certificate I	18
Total	21

Source: NCVET. (2004). Down the Track survey; NCVET. (2002). Student Outcomes Survey. In Sherman 2006, p. 26.

Caution needs to be taken in attributing the changes in outcomes directly to the training completed in 2001. Without data on a control group, it is not possible to know if the changes in employment status, wages and occupation are any larger than what would have occurred had the student not undertaken any training. On the other hand, graduates tend to do better than those who leave before completing a full qualification, and this provides direct evidence of the impact of training.

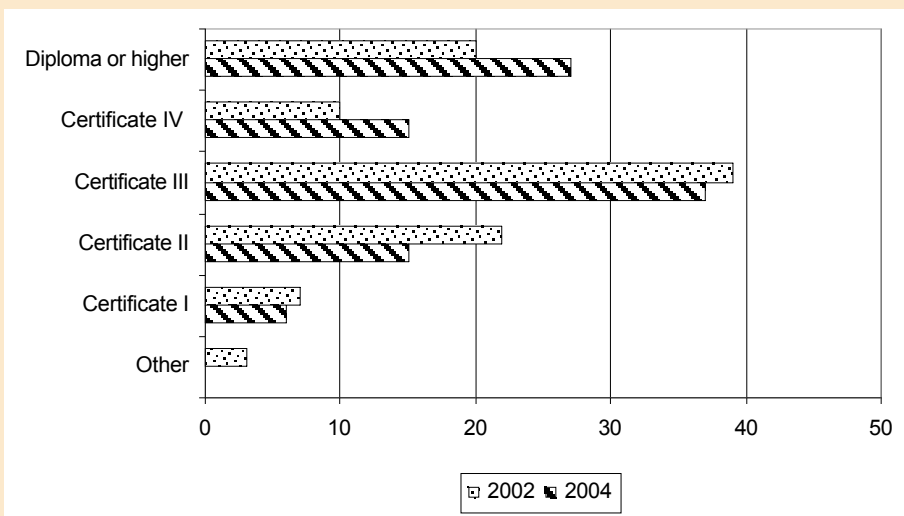
force status, wages, skill level and further study. One conclusion is that the period after training is a period of transition, with the labour market outcomes of individuals improving as they find better jobs. In addition, the number of people undertaking further qualifications is substantial. Certainly, outcomes six months after training understate how well people do after their training.

There are steady increases in employment from before training to six months after training, and again up to two and a half years after training. This trend is strongest for full-time employment. There had been large shifts, both within the labour market, and moving into the labour market.

While an increase in the proportion of students employed is important, many students were already employed prior to training. For these students training is not necessarily about getting a job, and other measures of success are needed. Such measures are changes in wages and occupation, and further study. Young graduates received substantial increases in wages from 2002 to 2004, and there were considerable upward movements in occupation from before training to 2004.

The majority of 15 to 24 year-olds went on to some kind of further training and just under half went on to complete an additional qualification. About one-fifth of all graduates

Figure 2: Distribution of highest qualification of graduates, aged 15-24, completed at May 2002 and September 2004 (%)



Source: NCVET. (2004). Down the Track survey; NCVET. (2002). Student Outcomes Survey. In Sherman 2006, p. 23.

completed an additional qualification at a higher level, especially those with lower level qualifications to begin with.

The importance of life cycle factors is evident in the differences observed between the 15 to 19 year-olds and 20 to 24 year-olds. The former tend to be new entrants into the labour market and so the years immediately after completing training are particularly important. The Down the Track survey is able to describe the transition process for this group.

A copy of the report, *Down the track: TAFE outcomes for young people two years on*, is available from NCVER's website. www.ncver.edu.au/publications/1694.html

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Tasmania is guaranteeing futures for young people

Tasmania: A State of Learning

Tasmania provides an example of a state that has developed comprehensive strategies to progress lifelong learning for all, aligned with overall planning for the development of the state. The centre-piece of this integrated systemic approach to the development of young people is *Tasmania: A State of Learning*.

Developed during 2003, *Tasmania: A State of Learning* is the state's first long-term strategic framework for post Year 10 education and training. The strategy is also the primary vehicle for innovation in the process of skills development. It aims to encourage more Tasmanians to learn throughout life; to ensure the Tasmanian workforce has the capacity to support business and industry in a growing economy; to drive and support social, cultural and economic development; and to shape a fairer, more prosperous and sustainable Tasmania. It contains many tangible initiatives to address the learning needs of both young and adult Tasmanians.

The strategy is an innovative blueprint to better guide education and training in Tasmania. Overall, the strategy seeks to:

- improve young Tasmanians' participation in education and training beyond Year 10
- build a skilled workforce with the capacity to support Tasmanian business and industry
- enable second chance learning opportunities for people of all ages
- create communities that value life-long learning.

Tasmania: A State of Learning has allowed the State government to look at the 'big picture', Tasmania's skills and

training needs and to create outcomes that match these needs. The Tasmanian government has committed more than \$20 million to fund the implementation of 'state of learning', beginning with \$3.6 million in 2004-05 and increasing to \$7.9 million in 2007-08.

Importantly, the strategy aims to strengthen relationships between learners, providers, business and industry, governments, and communities, as well as to build bridges across all fields of learning – including school, senior secondary education, Vocational Education and Training (VET), adult and community education, higher education and informal learning.

Why Tasmania needed a systemic strategy

The bad news is that Tasmania has the lowest uptake of post-compulsory education in the country. In 2004, only 68.6% of Tasmanian students completed Year 12 or the equivalent. The good news is that a number of important indicators of retention, participation and attainment suggest that Tasmania has made progress, and it is now building on these to fully realise the benefits of education and training and to create a more competitive business environment and quality of life for all Tasmanians. For example:

- Tasmania's apparent retention rate of full-time school students from Year 10 to Year 12 is 75%, compared with 77% nationally. Tasmania's retention rate has improved by 23.6% since 1997, compared to 3.4% nationally (ABS, 2002).
- While 17% of 2001 Year 10 leavers did not go on to Year 11 in a school or college, results of the 2001 Year 10 Destination Survey show that one

in every two early leavers was either undertaking VET, or was in some form of employment (Department of Education, 2002).

- VET participation rates increased by 7.4% from 1999 to 2002, compared with 3.5% nationally. In 2002, 10.1% of Tasmania's 15-64 year-olds participated in VET, compared with a national average of 11.8% (ANTA, 2003).

In some areas, though, poor participation in education and training beyond Year 10 has resulted in an overall performance for Tasmania that remains below the national average. For example:

- Tasmania has the second lowest proportion of all people participating in formal education and training (17.6% compared with a national average of 19.7%) (ABS, 2001).
- The state has the lowest proportion of all people who have attained post Year 10 qualifications (52.2% compared with a national average of 67.3%) (ABS, 2001).
- Participation in education by 20-24 year-olds remains well below the national average — 28% compared with 37.2% (ABS, 2003).
- Only 37.9% of Tasmania's 24 year-olds have obtained a skilled vocational qualification or higher, compared with a national average of 49.2% (MCEETYA, 2002).
- Tasmania has by far the lowest proportion of its population with a bachelor degree or higher — 11.4% compared to a national average of 17.8% (ABS, 2003).

Tasmania: A State of Learning is a very important step forward as it guides all education and training after Year 10 and contains many initiatives to address the learning needs of both new and experienced Tasmanian workers. It aims to ensure that both immediate

and longer term learning needs are met and that the education and training environment supports these needs. These initiatives are encompassed in four key elements: guaranteeing futures, ensuring essential literacies, enhancing adult learning, and building learning communities. The remainder of this article provides an overview of guaranteeing futures initiatives. 'Young people in transition need a rich variety of pathways and the right kinds of support.' (Parent)

Guaranteeing futures for young people in transition from compulsory education to independent young adulthood

Guaranteeing futures initiatives provide for the phased development of an integrated support system for young people, parents, schools and communities. The Office of Post-compulsory Education and Training has responsibility for implementing Guaranteeing Futures initiatives, consistent with government policy. Work is well underway on a range of Guaranteeing Futures initiatives including:

Guaranteeing futures teams

Guaranteeing futures initiatives are supported by guaranteeing futures teams in three regional areas across the state. The teams comprise a manager, vocational educational and learning development officers, youth learning officers and pathway planning officers. The guaranteeing futures teams will increase staffing in 2007 to approximately 60 staff. They will be working with students, parents and teachers in all Tasmanian government schools by February 2007.

Vocational Education and Learning Development Officers (VELDOs)

The team of VELDOs provide leadership and support to schools, colleges and

'Young People in Transition need a rich variety of pathways and the right kinds of support.'
(Parent)

Guaranteeing futures initiatives provide for the phased development of an integrated support system for young people, parents, schools and communities.

communities, in the development and implementation of programs and services which support the Vocational Education and Learning (VEL) Framework and the Guaranteeing Futures element of *Tasmania: A State of Learning*. VELDOs also help schools and colleges to develop and implement new initiatives that facilitate vocational education and learning opportunities. Eight VELDOs have been employed and are operational state-wide.

Youth Learning Officers (YLOs) network

The YLOs network is a vital component of the guaranteeing futures initiative. The YLOs work with students who have disengaged, or are at-risk of disengaging from education. Their role is to assist these students to participate in a suitable education or training program or employment. Seven YLOs are employed and are operational state-wide. YLOs work to a single service delivery model in which each YLO works intensively with a case load of 50 Year 10 students. YLOs will continue to work with Year 10 students who experience ongoing challenges/barriers in making a successful transition.

The November 2005 Youth Learning Officers Model Evaluation report, compiled by the University of Melbourne, Centre for Post-Compulsory Education and Lifelong Learning, highlights strong agreement across the broad range of stakeholders. The program of intensive case management by YLOs, implemented during 2004-05, has been highly effective in meeting the needs of the selected at-risk young people. The model delivers significant outcomes for young people. There are significant gains, not only in retention, but also in the value-added areas of self esteem and confidence.

Stakeholders who contributed to the report's contents indicated that the effectiveness of the model was associated with the skills and attributes of the YLOs employed; the way the YLOs formed relationships with selected participants; the intensive way they support the transition of Year 10 at-risk students; their networks; and their breadth of experience.

The comprehensive report details the main destinations of the cohort at the end of the YLO caseload cycle (June 2005). Nearly 40% of the cohort (106 students) was studying Year 11 or equivalent. The main destinations include:

- 16% in training (including apprentices and trainees)
- 8% employed
- 7% in study (other education)
- 39% in study (college/school/ alternative Year 11);
- 19% unemployed
- 2% parenting
- 1% not in study and not in the labour force
- 8% uncontactable and/or withdrawn.

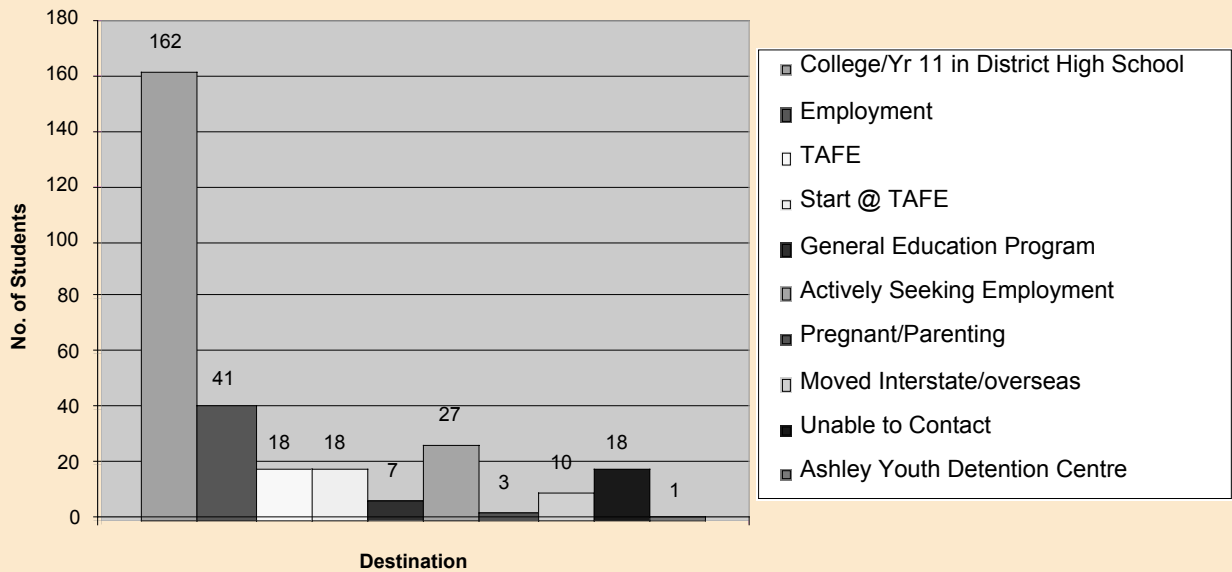
The report highlights three case studies that provide enlightening transcript about the challenges facing YLOs. Some of the comments include:

...her skills are so outstanding that she really needs to train other people in what she does...you need to be able to make sure that those skills are transferred or at least viewed by a whole lot of other people, not just YLOs but school staff. (High School Principal)

I think it's really good for that group of students to have that ongoing support and for it to be outside of the school, not coming from teachers as such. I guess they feel they can relate better and they're not going to get into trouble for anything

Graph 1

Tasmania: Statewide YLO caseload destinations 2005/06



that they say or do. (Employment Agency Staff Member)

Instead of having two administrative staff to call on them, I would go looking for them, these kids were ready and all in a bunch, to see me, first thing, as soon as I walked in through that door. I feel really privileged to have this role, given the opportunities I experience every single day. It's particularly an initiative that I feel really proud to be involved in. (Youth Learning Officer)

The main destinations of the cohort (305 students) at the end of the YLO caseload for 2005-06 include:

- 53% in study (college/school/ alternative Year 11)
- 6% in training (including apprentices and trainees)
- 6% in training (Start @ TAFE)
- 13% employed
- 9% actively seeking employment
- 2% in study (other education, e.g. General Education program)
- 1% parenting
- 3% moved interstate/overseas

- 6% uncontactable and/or withdrawn or in a detention centre.

Graph 1 shows the state-wide YLO caseload destinations 2005-06.

The YLO model and approach is aimed at those young people at risk, whereas the pathway planning model and approach provides something for every student.

Pathway planning

Pathway planning is also a central part of the guaranteeing futures initiatives. Pathway planning is about assisting young people to begin to develop, over an extended period of time, the skills and understandings that will enable them to access the fullest range of education, training and employment options, and to make informed and realistic choices about their future pathways.

Resources for Years 8 and 9 (My Plan for My Future) are available in all Tasmanian government schools. The Year 10 resource will be implemented in 2007. The resource folder includes curriculum materials designed within

This work is strongly linked to the classroom through curriculum which has been specifically developed to support pathway planning.

By 2007 all students in Years 8, 9 and 10 will be participating in the pathway planning process.

the Essential Learnings Framework; a learning pathway plan; and an additional resource section which provides resources (programs, activities, services and support, as well as reports and policies that have informed national and state strategies and frameworks) for schools and others supporting young people planning their future pathways and transitions.

Importantly this work is strongly linked to the classroom through curriculum which has been specifically developed to support pathway planning. Designed within the Essential Learnings Framework, the learning sequences have been developed as a resource for teachers to support the development of the skills, concepts and understandings necessary for students to effectively engage with their learning pathway plan. The learning sequences encourage students to understand more about themselves as a learner and as a person. Teachers help students make connections between school and community learning experiences, and the learning pathway plan, by incorporating the plan in their teaching and learning programs.

Students work with a pathway planning officer to develop a learning pathway plan that lays out their education, training and career goals. Over a three year period, the pathway planning program gets young people to think and reflect on their social situation, as well as what they think about their future. Pathway planning officers assist students in understanding more about themselves and linking these understandings to their future post-school choices. They do this by conducting one-on-one conversations with students each year.

Year 8 students from 2005 have begun the pathway planning process and students will build on their plans in

Years 9 and 10. By 2007 all students in Years 8, 9 and 10 will be participating in the pathway planning process. Young Tasmanians will therefore complete Year 10 with a well considered, informed and resilient plan for their life after high school.

The University of Tasmania has currently been contracted to provide an action research evaluation of the pathway planning model and this evaluation report will be completed by the end of 2006.

Nowhere in Australia or internationally does this intensive approach to engage all Years 8, 9 and 10 students, one-on-one, over a three year period, occur.

Guaranteeing futures legislation

The *Youth Participation in Education and Training (Guaranteeing Futures) Act 2005* is one of the cornerstones of the policy framework provided by *Tasmania: A State of Learning*. This new legislation is making it easier for young Tasmanians to move from school to independent young adulthood.

Young people who have completed Year 10 or have turned 16 will be required to continue with some form of education and training by choosing from a range of 'eligible options'. These will include senior secondary studies, VET programs, and other approved activities, delivered in schools or colleges, at TAFE, or on-the-job. Participation in 'eligible options' will be required for at least one year, or until the completion of a Certificate III vocational qualification, or until the age of 17. Young people in full-time employment can seek exemption.

The legislation is an important part of the new framework supporting youth services that is set to go a long way towards guaranteeing the futures of all young Tasmanians. By

providing extensive pathway planning, intensive support for young people at-risk of disengaging from education, a completely overhauled senior secondary curriculum, and a new senior secondary graduation certificate, young Tasmanians will be better positioned to make the right choices about their careers. These initiatives will also give them every opportunity to build a positive future for themselves.

Summary

Overall, *Tasmania: A State of Learning* and initiatives contained within *Guaranteeing Futures* illustrate a systemic, integrated, comprehensive approach to fostering lifelong learning opportunities with clear linkages to overall planning for development of the state.

Young people need to position themselves in a rapidly changing and competitive world; so policy-makers must continually adapt, improve and make connections between school and community learning.

Guaranteeing Futures will take time and it is no quick fix; but it's an approach where its central concern is the student. As this system evolves and matures, the community is likely to gain in value added outcomes from the wider benefits of learning for individuals, enterprises, and businesses.

Tasmania is, through guaranteeing future initiatives, being proactive in addressing retention through education and training. Other states and territories, and even other Asian countries (e.g. Singapore), are now asking questions about our policy framework.

On present preliminary research findings, there is broad acceptance and support for all the work involved with guaranteeing futures and it appears to be working very well. There appears

to be no reason why that will not be maintained through to 2008 and beyond.

The Department of Education is working to ensure that young people are given greater support in their transitions from school to employment; that there is learning support for those Tasmanians that need it; and that businesses in the state are committed to continuous skill improvement.

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New legislation part of a new framework:

- extensive pathway planning
- intensive support for those at-risk of disengaging
- overhauled senior secondary curriculum
- new senior secondary graduation certificate.

Queensland Skills Plan – securing a better future for Queenslanders

Introduction

Australia's economy is facing major challenges over the coming decades. It must remain competitive in an increasingly technological and international environment while responding to its ageing population and skills shortage issues. Implementing strategies to increase the skills and job readiness of young people is vital to solving these problems.

In March 2006 the Queensland government launched the *Queensland Skills Plan*. It is a comprehensive \$1 billion blueprint to ensure the state's Vocational Education and Training (VET) sector meets the skills challenges of the 21st century. The Queensland Department of Education, Training and the Arts is leading the implementation of the plan, which provides a fresh approach to skills development and recognises the current and future needs of the labour market.

While some of these needs are critical and require immediate action, others are long-term issues requiring incremental shifts in training strategies and workplace culture.

Queensland school-based apprenticeships and traineeships

Queensland leads Australia in providing opportunities for young people to undertake part-time apprenticeships and traineeships as part of their school program. According to the latest statistics from the National Centre for Vocational Education Research (NCVER), Queenslanders are undertaking VET at an increasing rate.

Queensland experienced a 4.2% increase, from 2004 to 2005, in the number of public VET students,

compared to an increase of 2.9% nationally (NCVER, July 2006).

Another recent NCVER report shows 10.9% of Queensland's apprentice and trainee commencements in the December 2005 quarter were school-based apprenticeships and traineeships, compared to only 5.5% nationally (NCVER, June 2006).

One of the most significant increases was for students aged between 15 and 19. In Queensland, from 2004 to 2005, student numbers in this age group jumped by 6.4% compared to a national increase of 4.5% (NCVER, July 2006).

Relevant VET undertaken by school students is a key area to be targeted by the *Queensland Skills Plan*.

Preparing young people for work

The Queensland government is building on the success of recognised VET initiatives with a range of new programs designed to prepare young people for work.

The new Queensland Certificate of Education provides young people with more opportunities to select programs that include a broader range of education and training options – particularly VET pathways. Under these new arrangements, a Queensland Certificate of Education will be issued if a student has gained 20 credits during their Senior Phase of Learning (usually Years 11 and 12). There is no limit to the amount of VET that will count towards the achievement of a Queensland Certificate of Education.

Schools will be encouraged to continue delivering enhanced school-based programs that will allow young people to earn credit towards VET

qualifications. The VET system will complement these school-based programs by giving young people access to higher-level qualifications at the Certificate III level and above. This ensures young people have the best possible chance to move into the economy's highest priority jobs.

Within training and employment priority areas TAFE will grant entry to high school students for Certificate I and II training that offers pathways to higher-level training, and to disadvantaged youth who need greater opportunities to engage with education and training. Schools will also gain access to TAFE facilities and resources, where possible, to help them deliver a broader range of training to their students.

From 2006, young people enrolling at TAFE institutes full-time will have access to concession arrangements. School students, or other young people, who undertake a government-funded nationally recognised VET qualification at TAFE as part of their senior studies, will pay no tuition fees where the qualification is part of, or progresses towards, a Certificate III or higher level qualification.

Regardless of whether a young person is studying nationally recognised VET competencies at school, at TAFE, or combining these arrangements, access to learning will be on equal terms and in as broad a range of offerings as possible.

Incentives for youth training

Access to VET has been expanded for young people in Queensland in the Senior Phase of Learning. The Department of Education, Training and the Arts has developed a resourcing framework which provides all young people with access to their first VET qualification at TAFE.

In accordance with identified local and state priorities and within budget constraints, the department will fund the following programs.

- apprenticeships and traineeships, including school-based apprenticeships and traineeships identified in User Choice contracts
- the first Certificate III or higher level qualification
- Certificate I or II level qualification, or selected competencies identified in a student's Senior Education and Training Plan, or equivalent, that counts towards the achievement of a Queensland Certificate of Education (or Senior Statement)
- a range of new and enhanced pre-vocational and pre-apprenticeship programs.

Significant work has been undertaken by the Department of Education, Training and the Arts and other key stakeholders to maximise the efficient use of public funding for the Senior Phase of Learning by ensuring schools and approved training providers are working together in delivering appropriate programs.

Since December 2000, the number of Queenslanders in apprenticeships and traineeships has sky-rocketed by 52% —from 49 200 to 74 600 (NCVER, June 2006), as at the end of December 2005.

The 2006-07 State budget allocates \$7.1 million for employer incentives to expand school-based apprenticeship and traineeship opportunities under the Education and Training Reforms Pathways Program – Youth Training Incentive. The expanded Youth Training Incentives program replaces the Strategic Employment Development Program. From July 1 2006, employers across Queensland became eligible for a \$4000 government-funded wage subsidy for employing additional school-

School students, or other young people, who undertake a government-funded nationally recognised VET qualification at TAFE as part of their senior studies, will pay no tuition fees where the qualification is part of, or progresses towards, a Certificate III or higher level qualification.

A major concern that employers have expressed is that allowing only one day a week on-site generally does not give apprentices enough work-based experience to consolidate their skills.

based apprentices or trainees in skill-shortage areas.

This will provide 2100 school-based apprenticeship and traineeship places with Queensland public sector agencies, including local government authorities, and with private sector employers in rural and remote areas. Specific trades areas include panel beating, mechanics, diesel fitting, electrical fitting, plumbing, painting and decorating, carpentry, cabinet making, sheet metal working and fitting and turning.

The 2006-07 State budget also includes \$9.8 million to provide 2230 places in the *Education and Training Reforms for the Future Pathways Program – Get Set for Work*. The Get Set for Work program makes employment skills development programs available for 15 to 17 year-olds who have left school before completing Year 12 or are at risk of leaving without engaging in further education, training and employment.

Reviewing workplace time for school-based apprentices

A major concern that employers have expressed is that allowing only one day a week on-site generally does not give apprentices enough work-based experience to consolidate their skills. To address this concern the Department of Education, Training and the Arts is working with the Department of Education and the Arts to ensure that school-based apprentices have sufficient workplace access to develop their skills. The review aims to give school-based apprentices and their employers the option of increasing the number of days spent on-the-job.

Success stories

Expanded hospitality opportunities for Gladstone students

Gladstone high school students are now able to study higher-level hospitality courses at TAFE for school-based apprenticeships and traineeships. The expansion of hospitality training at Gladstone followed an assessment of the future use of the Horizon's training restaurant at the Gladstone campus of Central Queensland TAFE.

In semester one 2006, 55 students from Gladstone high schools were enrolled in the Certificate I in Hospitality (Kitchen Operations). From semester two, the Certificate II in Hospitality (Kitchen Operations) will be offered to senior students at Gladstone TAFE. Beginning semester one 2007, Certificate II in Hospitality (Kitchen Operations) will be available to all students who have completed Certificate I.

Training will be provided at the Horizon's facility with staff from both TAFE and local high schools involved in partnership with Gladstone TAFE and Education Queensland. It is an initiative of *Education and Training Reforms for the Future*. The initiative is increasing training opportunities for high school students in Gladstone, and will also provide the hospitality industry in Gladstone with a greater pool of trained workers in the future.

The facility is a valuable asset for the local community. More than 14 000 hours of training have been delivered in 2005-06 in areas such as bar attendant, and responsible service of alcohol and gaming. An additional 8733 hours were delivered in kitchen operations.

The partnership will ensure that use of the Horizon's training facility will be maximised, and that the general community can continue to access training.

Bricklaying program delivers for construction industry

Increasing numbers of Queensland secondary school students are selecting and remaining in bricklaying apprenticeships. This shows that the Building Better Skills program, conducted by Construction Training Queensland in partnership with the Australian Brick and Blocklaying Training Foundation, is paying dividends. The building and construction industry developed the Building Better Skills program to address critical trade skills shortages and the Queensland government has backed the program with \$680 000.

A major concern about the skills shortages has been the lack of new apprentices – particularly bricklayers. Many school students have not considered bricklaying as a desirable career option, and those who do begin often don't complete their apprenticeships. But Construction Training Queensland, the Australian Brick and Blocklaying Training Foundation, and the Building and Construction Industry Training Fund, are working together to turn those attitudes around.

The Building Better Skills bricklaying program gives students a more hands-on approach to bricklaying so they can make a more informed decision about their apprenticeship.

Before the program started, there was a 57% attrition rate for bricklaying apprenticeships. Now 18 months into the program, 90% of students commencing a bricklaying apprenticeship are expected to complete it. Forty-six people are currently enrolled in the program.

Through the Step Out program component of the initiative, students are given the opportunity to 'try a trade' and

are able to gain exposure to bricklaying as a potential career.

Following this, the Intensive Skills Pre-Employment course provides training for 128 people to lay 200 bricks per day as part of a Certificate I in Construction (Bricklaying). The pre-employment course provides students with a productivity level that is attractive to employers and streamlines their entry into apprenticeships. As a result of the Intensive Skills course and the flexible training approach, apprentices generally will graduate in around three years.

The Building Better Skills program is part of a larger government drive to develop a broad pre-vocational program to give prospective apprentices trades experience before signing an apprentice contract. By better informing youth of career choices, it will increase their chances of completing their qualifications.

The students are receiving training through the Metropolitan South and Barrier Reef Institutes of TAFE as well as the BIGA Academy and the Australian Institute of Technology.

Gaining from diversity: Sunnybank State High School

Over the past 20 years Sunnybank State High School has experienced a growing multicultural student population. This has necessitated the need for a fresh school vision and plan. The school motto 'Many Kinds of Excellence' has spearheaded a complete reassessment of the school's values, processes and VET programs.

The overhaul started in 2002 when a major school review highlighted the serious issues of poor exit results, low tertiary entrance scores, and high truancy and local youth crime rates. Today, the statistics from their revamped VET program paint a very

By better informing youth of career choices, their chances of completing their qualifications will be increased.

The Queensland Skills Plan outlines a policy framework that will better match the supply of skilled labour to industry's needs and the economy's demands.

different picture. Involvement in their school-based apprenticeship and traineeship program has jumped from eight students in 2002, to an estimated 100 students in 2006.

VET participation by senior students has lifted from 55% in 2002 to over 65% this year, and enrolment levels in 'two or more' and 'three or more' VET subjects have risen by almost 15%. A core part of this change has been helping students connect their schoolwork to the 'real' world and presenting modern study pathways that students feel are directly related to their career plans.

VET offerings are now heavily promoted in the school community through a Student Vocational Education Handbook that presents vocational subjects as an equally valued alternative for future and current studies.

Students considered to be 'at risk' of disengaging from learning are given access to individual counselling and courses, as well as specialist work experience programs and traineeships one day a week. Each VET student's preferred learning style is matched to an appropriate delivery mode such as one-on-one, classroom-based, distance education, online learning and industry placement.

By networking with group training companies and employers, the school has also become increasingly involved in their local community, creating a shared model where the school and nearby industries support each other.

All teaching staff has received professional development to improve their understanding and delivery of VET subjects while the school has organised successful Years 10, 11 and 12 student leadership conferences and careers conferences focused on

future employment skills. Sourcing best-practice documents from around the state and country has also allowed the staff to refine and standardise their VET program policies, procedures and content.

In 2004, Sunnybank student, Michael Edmondson, was named the Queensland School-Based Trainee/Apprentice of the Year at the Queensland Training Awards.

Sunnybank State High School was recognised for its VET achievement as a state finalist in the McDonald's Australia Vocational Education and Training in Schools Excellence Award in both the 2004 and 2005 Queensland Training Awards. In 2005, another Sunnybank student, Brian Luckins, was awarded the Education Queensland/ Teen Challenge Vocational Student of the Year Award. He also received the Inaugural Federal Vocational Student Prize. This year, Sunnybank State High School was selected as one of the three state finalists for the 2006 Education Queensland's Showcase Award for Excellence in the Senior Phase of Learning.

Further information

The Queensland Skills Plan outlines a policy framework that will better match the supply of skilled labour to industry's needs and the economy's demands. It sets out a range of actions the Queensland government will take to implement these policies. The new framework has four key elements:

- a training system that works for Queensland
- training that works for industry and employers
- training that works for the trades
- training that works for individuals.

For more information visit the Queensland Department of Education,

Training and the Arts website at www.trainandemploy.qld.gov.au/skillsplan or call 1300 369 935.

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School-based apprenticeships and traineeships give young people a career head start



Louise Morrison

Louise began her career as a Home Economics teacher, then evolved into a Hospitality and Tourism teacher. She was seconded, in 1997, into the Western Australian Department of Education and Training as a Senior Policy Officer for VET in Schools. She is currently the Principal Policy Officer. Louise also has had short stints working on other projects, e.g. a 15-19 year-old project, and in Fiji, on an AusAID funded project relating to enterprise education.

Where *VET in Schools* has come from in Western Australia

Introduction

In 1996 as *VET in Schools* was emerging at the national level from a concept into a reality, the time was right in Western Australian schools for change within the vocational education area. Prior to this, vocational education had begun to be acknowledged in a more formal way for students on their senior secondary certificate – Western Australian Certificate of Education (WACE). But there were still aspects of what students were doing that was not being acknowledged and recorded, even though the outcomes for students in gaining employment and further training were often very good.

In the 1980s, and into the early '90s, schools had developed alternative courses for students who were not university bound. These courses were based around the trades. They were very practical and hands-on in their approach with a significant component of work experience, and were often on the periphery of a school's offerings. Students doing these courses tended not to achieve their secondary certificate. The aim of many courses was to get students into employment or TAFE as soon as possible. There were local arrangements with TAFEs with students doing TAFE courses, which did not appear on the WACE.

The emergence of *VET in Schools*, nationally, came at a time in Western Australia (WA) when change had commenced in this area. In the early 1990s a range of vocationally based subjects had been developed on a state-wide basis with some links being made to national training packages.

WA also had in place accredited subjects acknowledging the place

of substantial work experiences for students in a vocational context. Structured Workplace Learning (SWL), a subject in its own right, was developed by the Curriculum Council (the Western Australian Board of Studies) for a range of industry areas as a means of capturing the significant skills students developed during work placements. If students completed the established minimum number of hours in work placement, and had the set of skills required signed off by employers (based on the key competencies), then SWL contributed to their WACE.

This was the environment in which *VET in Schools* in WA began. Baseline data collected from public schools in 1996 indicated that 36 schools had *VET in Schools* programs, involving 683 Years 11 and 12 students. This was only 2.8% of the cohort. Nearly ten years on, 129 schools are offering *VET in Schools* programs to a total of 13 272 Year 11 and 12 students. This represents just under 50% of the cohort. In addition, *VET in Schools* programs are being offered to Year 8, 9 and 10 students, often as an engagement strategy to keep these students within the school system (DET, 2006).

Where is *VET in Schools* going?

So what is the future for *VET in Schools* in WA? How can the successes be built on? How can the changes to the system over the past years be used as the foundation, so that young people can continue to use Vocational Education and Training (VET) as a successful pathway to further training and employment?

In WA the development of the vision and mission for *VET in Schools* has



seen a re-focusing on where the program is going, in particular, for public schools. With a vision to promote the implementation of VET in a school's context, through the development of policies, programs and resources and the mission relating to improving quality delivery, being evidence based in decision making and innovative in the approach to delivery and programs, *VET in Schools* is well placed to grow further.

Linked to this way forward are the delivery principles, that states have agreed on with the Department of Education and Training (DEST) to undertake in terms of *VET in Schools*. These include:

- the establishment of *VET in Schools* by schools not previously involved in the delivery of *VET in Schools*
- expanding the range and spread of *VET in Schools* courses offered across industry sectors by schools already involved in the delivery of *VET in Schools*
- the establishment of *VET in Schools* courses in new industry areas and in industry areas currently not well subscribed in *VET in Schools*
- increasing participation in *VET in Schools* by particular student

groups that are difficult to reach and/or service or example, improving access for students in rural and remote areas and for educationally disadvantaged students including Indigenous students and students with a disability

- developing strategies to maintain quality standards in *VET in Schools*, including professional development
- increasing participation in school-based new apprenticeships or other trades-related vocational courses which respond to skills shortages
- addressing areas of skills shortage.

Within the context of *VET in Schools* in WA public schools, this means the focus is on:

- supporting a collaborative approach to *VET in Schools* delivery across schools, districts and systems
- further enhancing strategic partnerships with industry and schools
- reporting and monitoring *VET in Schools* programs.

As well as the policy directions from the Australian government, within WA there have been changes taking place in relation to curriculum, with a move to an outcomes based approach for courses of study in Years 11 and 12. Students have the opportunity to undertake VET within the new courses, as well as separately, and this VET study will be recognised as part of the WACE. This has allowed student programs which have significant VET, such as school based traineeships (SBT), to have greater recognition.

Another significant policy shift has been in relation to schools operating as Registered Training Organisations (RTOs). Prior to





2006, schools could be Registered Training Providers with restrictions being placed on their ability to certificate student results. This was carried out by the Curriculum Council. Schools, as Regional Training Providers (RTPs), were also restricted to Certificate II, but this has also been lifted.

Currently there are 14 schools and five Agricultural Colleges operating as RTOs with scope to operate in a range of industry areas. Being a RTO school does not preclude schools having partnerships with other RTOs for VET delivery, in areas outside their scope.

On the ground – how policy translates to actual programs in schools

Districts, schools and teachers have been innovative in their approaches to programs that improve the outcomes for students. During the era of *VET in Schools*, this has also been the case. Below are highlighted several successful programs that have succeeded by keeping their focus on how to get students onto post-school pathways to future employment and/or training.

- School-based traineeship (new apprenticeships) numbers have been small in comparison to the total *VET in Schools* figures, which has been growing steadily. A significant innovation has been the successful implementation of the Certificate I in Workplace Readiness – Aboriginal School-Based Traineeship. This has seen growth in the numbers of young Indigenous students engaging in school programs and returning to school in the senior secondary years, often to undertake VET programs.
- Over 50% of all SBTs are part of a specific program for Indigenous students which is being developed,

with additional funding support from the Department of Employment and Workplace Relations (DEWR), to pay for the wages component for the students.

- SBTs in the trades have been piloted during 2006, in an attempt to alleviate skills shortages in some key trade areas. With additional support from DEST, a number of places were targeted for Year 12 students to convert their existing *VET in Schools* programs into a one year school based traineeship.
- A partnership between schools and two industry based organisations, College of Electrical Training (CET) and Electrical Group Training (EGT), has resulted in the development of a unique program for Year 11 and Year 12 school students who can now complete a Certificate I in Electrotechnology, plus substantial work placements. Students who successfully complete the two year program are guaranteed an electrical apprenticeship with EGT.
- Innovative use of technology to deliver instruction. Busselton Senior High School is using the online services offered by WestOne the Western Australian Department of Education and Training (operated by DET) to deliver to students competencies at Certificate I and II level in the Metals Training Package. By changing delivery methods, student completion rates have increased dramatically, and access for students with special learning



needs has improved significantly (DET, 2005).

- A district-based VET coordinator, in a district on the coast in the Perth metropolitan area, could potentially, given the strong local links to the maritime and transport industries, lead to the development of a program encapsulated as the Ocean to the Plate program. The aim has been to work with the industries and employers to give students opportunities, through work placements and SBTs, to experience a range of occupations within these industries. This has evolved into a very strong partnership with industry, in particular with transport and logistics partners.

Conclusion

As schools in WA grapple with the new paradigms for the post-compulsory curriculum and on-going changes to training packages, the challenge for both schools and the system is to ensure the outcomes and pathways for students to post-school destinations is enhanced. By focusing on quality, innovation, and ensuring decisions are based on sound evidence, *VET in Schools* will continue to grow and be a vibrant part of the education and training sector. The outcomes students are achieving and the pathways they are traveling, give the system the confidence that it is on the right path.

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New directions for local community partnerships in Australia

Introduction

A national project 'to develop strategies for the Australian Government funded network of Local Community Partnerships (LCPs) to better meet the needs of students, community and industry' was commissioned by the Department of Education, Science and Training (DEST) during 2005. The aim was to establish how LCPs can better understand skills shortages and areas of employment growth to provide a closer alignment between the coordination of Structured Workplace Learning (SWL) and the needs of industry. A sample of LCPs was studied to examine the ways in which they are developing strategies for working with local industry and employer groups to address local skills shortages and employment needs.

The role of Structured Workplace Learning

The primary role of LCPs, especially at the time of this research, was to coordinate the provision of SWL. The importance of SWL to skill formation is well known.

'Structured Workplace Learning is considered to be a VET in Schools programme/course component situated

within a real or simulated workplace, providing supervised learning activities contributing to an assessment of competency and achievement of outcomes relevant to the requirements of a particular Training Package or other AQF VET qualification.' (DEST, 2005a)

As Table 1 shows, despite a dip in activity in 2003, program growth continued and by 2004 over 114 000 students were participating in SWL. This represents 54% of all *VET in Schools* students participating in that year. Student exposure to the workplace continued to fall in terms of average student hours of SWL per year and this remains a concern. (MCEETYA, 2005)

It is instructive to consider the distribution of *VET in Schools* enrolments by industry groupings (this is not available for SWL). The picture that emerges from the recent data confirms the highly skewed pattern established over a number of years. The overwhelming bulk of enrolments, almost 60%, are confined to four Australian National Training Authority (ANTA) industry areas: tourism and hospitality; business and clerical; computing; and general education

Table 1: Key Structured Workplace Learning data

	2000	2001	2002	2003	2004
Number of students (000)	81.0	101.2	112.4	106.2	114.8
Total hours (000)	6.470	7.113	7.399	6.250	6.711
Average hours/student	79.8	70.3	65.8	59	58.4

Source: MCEETYA, 2005

and training. Much lower levels of participation are found in all other industry areas, including many that are experiencing skill shortages such as automotive (2.3%), community services and health (2.8%), building and construction (4.8%) and engineering and mining (5.4%) (MCEETYA, 2005). This means that the supply of work placements may not align with areas of skills shortages or emerging employment growth.

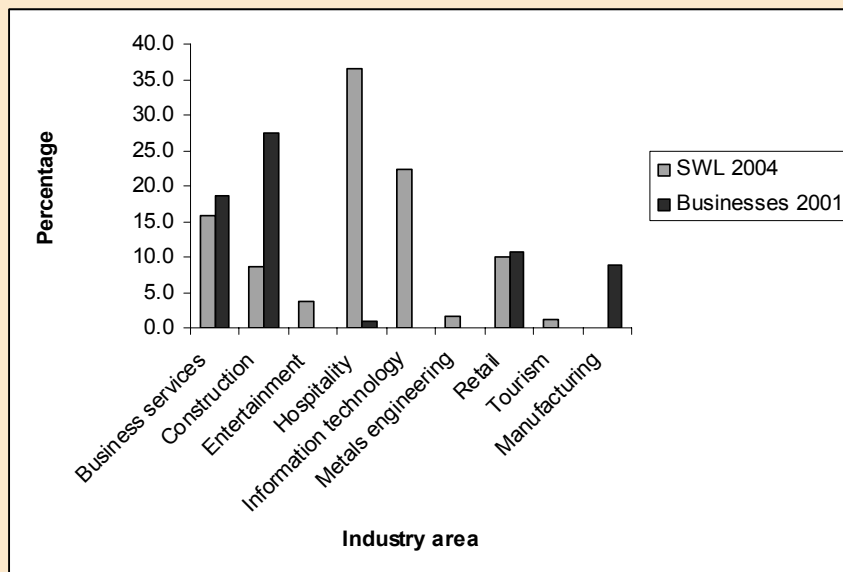
An illustration of this misalignment was sourced from the Liverpool region of New South Wales (Table 2).

The data shows that participation in SWL aligned closely with the number of local businesses in some industry areas but not in others. Although caution is needed in drawing conclusions from this kind of data, especially given the time differences, it is illustrative of some imbalance in provision. There is a relatively close alignment between the proportion of SWL and the proportion of employment in the business services and retail sectors. There is a mismatch in hospitality and information technology, as the percentage of SWL participation significantly exceeds the local percentage of employment available in these industries. The reverse is the case for the manufacturing and construction industries, where the proportion of employment available significantly exceeds the proportion of SWL provided. It would seem appropriate in such circumstances to use these data as the basis of a review of the pattern of SWL provision.

VET in Schools and skills shortages

It is important to clarify the meaning of skills shortages and related concepts

Table 2: Liverpool economic profile 2004 and Liverpool workplace learning participation data (2004)



Sources: Information gained through the research process from Liverpool economic profile 2004 and Liverpool workplace learning participation data (2004).

as these are often confused. The research project drew on the following key Department of Employment and Workplace Relations (DEWR) definitions.

DEWR definitions relating to skills shortages

‘Skills shortages exist when employers are unable to fill, or have considerable difficulty filling, vacancies for an occupation (or specialised skill needs in the occupation) at current levels of remuneration and conditions of employment, and reasonable location. Shortages are typically for specialised and experienced workers, and can coexist with relatively high overall unemployment in the occupation. An occupation may be assessed as in shortage even though not all specialisations are in shortage. Occupations may be in shortage in some regions and not in others.

‘Recruitment difficulties occur when employers have some difficulty filling

The supply of work placements may not align with areas of skills shortages or emerging employment growth.

In relation to VET in Schools, it is more likely that the key labour market issue is recruitment difficulties.

vacancies for an occupation. There may be an adequate supply of skilled workers but employers are still unable to attract and recruit sufficient suitable employees. These difficulties may be due to characteristics of the industry, occupation or employer, such as: relatively low remuneration, poor working conditions or image of the industry, unsatisfactory working hours, location hard to commute to, ineffective recruitment or firm-specific and highly-specialised skill needs.

Skill gaps occur where existing employees lack the required qualifications, experience and/or specialised skills to meet the firm's skill needs for an occupation. Skill gaps may apply to new employees, where employers are unable to find suitable applicants for an occupation and recruit workers who need further training and/or experience to meet the firm's skill needs for the occupation. DEWR (2004, p.12)

In relation to *VET in Schools*, it is more likely that the key labour market issue is recruitment difficulties, as skill shortages and skill gaps are more typically issues for higher level skills than entry level and for existing workers, rather than new entrants to the workforce. While it is unrealistic to expect LCPs to develop specialist knowledge of labour markets and economic indicators, a general understanding of various concepts and major information sources will assist LCPs in making informed planning decisions.

The labour market and LCPs

It needs to be understood that at the time of this research there was a broad diversity in the size, areas of focus and operations of LCPs throughout Australia. Not surprisingly, the most common model is working with schools and employers to coordinate SWL for local students. Variations on this model

were apparent in some jurisdictions where LCPs undertake other student transition services, or where state education and training authorities supplement Commonwealth funding for the purpose of broadening the role and functions of LCPs.

Many LCPs face challenges in balancing supply and demand drivers for the provision of SWL. In many instances the supply side predominates, with provision being largely driven by student choice according to the courses offered by schools. However, in other instances LCPs are making use of information about skills shortages and projected employment growth to inform the planning and provision of SWL. Currently there are four broad strategies that reflect better practice in operation:

1. Strategies to influence supply side arrangements. LCPs have responded to demonstrated industry needs in a variety of ways, including organising industry tours for school career advisers, developing *VET in Schools* program packages based on local need and 'reverse mapping' where a LCP determines industry vacancies and then matches students to them. This has been combined with a greater allocation of SWL to skills shortage industry areas than other areas.
2. Influence exerted by external agencies. These external agencies include local government, Area Consultative Committees, Chambers of Commerce and other networks. LCPs are linking with these to drive industry needs.
3. Relationships, partnerships and alliances. There are examples where LCPs form particular relationships to meet industry needs. Examples of these include a major construction company in the ACT, the commercial vehicle industry in Brisbane, and

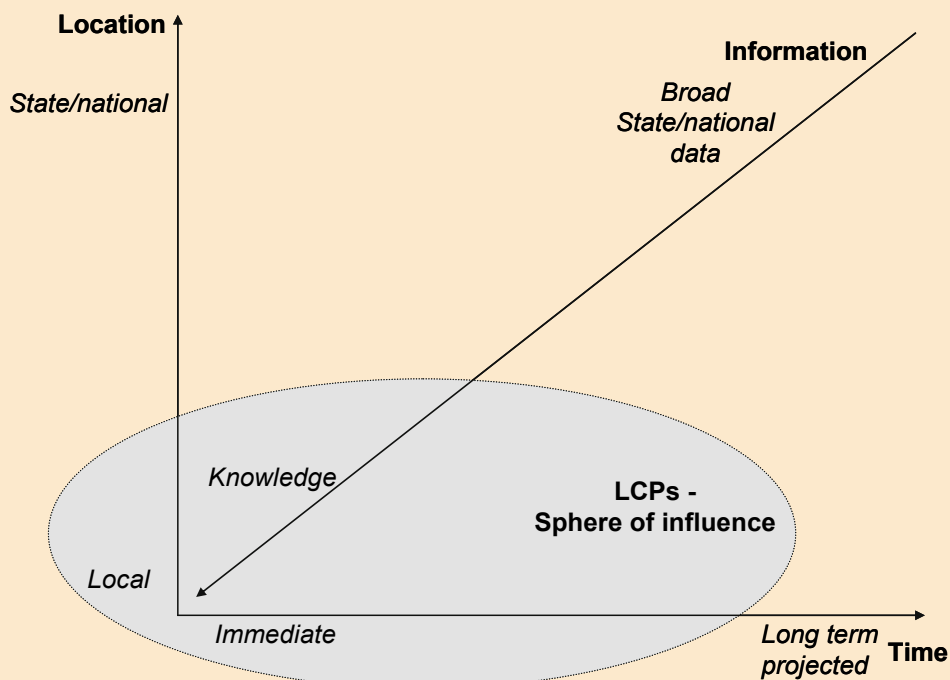
an electro-technology initiative in Adelaide through the state industry training board.

4. Direct influence by industry and industry bodies. LCPs have facilitated industry needs in situations where industry is prepared to play a lead role such as the engineering traineeship in Western Australia and the Rural Careers and Education project through the Tasmanian Farmers and Graziers Association.

A key finding of the research was that LCPs do not have the capacity to gather and analyse labour market data but have a keen interest in making greater use of these data to inform their work and dialogue with industry and schools. While it is recognised that information derived from the Department of Employment and Workplace Relations (DEWR) and the Department of Education, Science and Technology (DEST), for example, provides a useful background to planning and decision-making within LCPs, it is not until this material is contextualised to impart a local flavour that it becomes a valued tool within the day-to-day operation of LCPs.

In circumstances where LCPs are making use of labour market information, it is very often sourced from an intermediary agency (such as an Area Consultative Committee, local government, local Chamber of Commerce or equivalent, or an industry organisation such as the Australian Industry Group). LCPs rarely have the capacity to undertake data gathering and analysis with the

Figure 1: 'Positioning' Structured Workplace Learning



Source: The above diagram was developed as a visual aid during the research.

current level of resourcing and skills base. Through the relationships with intermediary agencies, LCPs are able to access information that has been contextualised to provide insights into the trends, issues and opportunities which exist within their local area.

Figure 1 illustrates the relationships among location, information and timeframes as they connect to the provision of *VET in Schools*, SWL and the sphere of influence of LCPs. It shows that knowledge that is based on contextualised information sourced from national/statewide information, and referenced against local experience, plays a critical role in positioning *VET in Schools* and SWL in relation to prevailing labour market conditions.

It is through the process of transforming data to information to knowledge that SWL can be aligned to the needs of labour markets. Data on their own will not lead to any change, but

A new model to guide the operations of LCPs has emerged.

when they are analysed according to specific criteria, and brought to bear on a specific geographic area, the information that they yield can provide the evidence to inform decision-making.

New directions

During the course of this research, DEST (2004) released the Australian Network of Industry Careers Advisers (ANICA) directions paper. The purpose of the ANICA initiative, subsequently named Career Advice Australia, is complementary with existing arrangements and provided clarity in relation to the intended role for LCPs beyond 2005. Based on these directions, and combined with the outputs of three national workshops of LCPs conducted as part of this research, a new model to guide the operations of LCPs has emerged. The model draws on the ANICA initiative and better practices evident across a range of LCPs to identify three core roles:

- coordination of SWL
- career and transition support
- expanding Adopt a School projects.

The research indicated that underpinning these core roles are a number of functions which include accessing and utilising labour market information to inform planning, decision-making and stakeholder relationships. Through this process it is expected that LCPs will continue to build and sustain relationships with industry, schools and other entities.

The key point of differentiation in the new model centres on bringing labour market and economic development information to the forefront of planning, organisation and service delivery within LCPs.

For this to be achieved, the flow of information into LCPs needs to

be managed in a systematic way. Advice will need to be provided to key information sources such as DEWR and industry bodies regarding the information needs of LCPs. At the same time, LCPs will require, in the short-term, training and support to make optimum use of the information which is made available. The Regional Industry Careers Advisers (RICAs), introduced as part of the ANICA initiative, will play a critical role in this area. Their objectives include improving 'the quality and availability of regional industry career information, advice and resources, particularly in skill needs areas, for LCPs, schools, employers, businesses and young people' (DEST, 2005b, p. 3).

So what are the key research messages?

1. Beyond LCP expertise: Information and data on current labour demand, including skill shortages, are produced by a range of agencies and can be complex and of variable quality. A systematic and sophisticated local assessment of job prospects and skill shortages is outside LCP expertise and beyond their core business.
2. LCPs are receptive to labour market information: This will guide planning and decision-making at the local level and inform a dialogue between LCPs and industry, schools and students to achieve a greater alignment between the provision of SWL and the emerging needs of industry.
3. Need for local contextualisation of data: This is needed for the information to be useful to LCPs at the local area and some of this is sourced from intermediary agencies with strong local links to employers.

4. New LCP operational model for core roles: To perform these roles LCPs need:

- access to and use of labour market information to inform planning, decision-making and stakeholder relationships
- to build and sustain relationships with industry, schools, other training providers and other stakeholders within the local community and with students and parents through the identification of post-school pathways and promotion of careers resources
- to build and sustain relationships with other service providers through collaboration and, where possible, co-location.

5. Relevant and customised data: Advice needs to be provided to agencies such as DEWR, and to industry bodies, to ensure that valid and reliable information flows to LCPs in a manner that enables optimum use at the local level.

6. Critical role of RICAs: They have a critical role in supporting and guiding LCPs in the use of information to inform the dialogue with stakeholders and enhance the delivery of SWL.

7. Systematic documentation and dissemination of better practices: The researchers gathered some documentation on Indigenous students and students with a disability participating in SWL, which needs to be distributed.

8. Increased certainty: The efficacy of LCPs will be enhanced by surety and equity in resourcing, training in governance, and maximising the alignment between the Commonwealth transitions agenda and that which exists in each state and territory.

Next steps

Since this project has been completed, DEST has taken a number of steps to clarify the situation in relation to LCPs. The three major roles of LCPs have been identified; there has been a national tender process to select LCPs for service regions based on ABS statistical sub-divisions; and funding has been allocated for a three year period. In addition, a national network of 57 RICAs and 10 National Industry Career Specialists have been appointed and are now in place. The centrality of the issue of the provision of labour market information to assist LCPs to deal with skill shortages issues has not yet been addressed. The capacity of LCPs to make a concerted difference in this area remains untested until this is done.

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Getting research around *VET in Schools* on the agenda

Introduction

In April this year, the Australian Vocational Education Training Research Association (AVETRA) held its 9th annual conference – Global VET: Challenges at the Global, National and Local Levels – at the University of Wollongong. Endeavouring to explore questions pertaining to the international, national and local context of Vocational Education and Training (VET), the conference had three themes: global VET research, reform and change in Australian VET and their implications for VET research, and VET at the local level. The conference program included keynote addresses by Professor Michael Singh from the University of Western Sydney; Aurora Andruska, representing the Department of Education, Science and Training (DEST); and Barry Peddle, the president of TAFE Directors Australia and the Institute Director of the Illawarra Institute of TAFE. It also included panel presentations chaired by Michael Singh, Fran Ferrier and Jenny Ferber; and a number of individual presentations, workshops and three symposia.

The three symposia, 'introduced to complement the development of special interest groups as well as some of the key research themes and groups that exist in VET research' (AVETRA, 2006) included: *VET in Schools: Where next for research?*, coordinated by Angela Hill; research to support VET providers build capacity, conducted by Berwyn Clayton and Roger Harris; and National Skill Formation through apprenticeships and traineeships, coordinated by Erica Smith. It is to the first of these symposia – *VET in Schools: Where next for research?* – that this article will now turn its focus.

VET in Schools: where next for research? symposium

The *VET in Schools: Where next for research?* symposium comprised of three presentations: 'Secondary teacher education and *VET in Schools: Is it that difficult?*', presented by Angela Hill from the School of Education, James Cook University; 'Voicing views of *VET in Schools: sound bites from a national study*', presented by Leanne Dalley-Trim from the School of Education, James Cook University; and 'Have school vocational education and training programs been successful?', presented by Tom Karmel, the Managing Director of the National Centre for Vocational Education Research (NCVER). The symposium sought to showcase recent research and in addition pose questions that need further exploration.

The first of the presentations, 'Secondary teacher education and *VET in Schools: Is it that difficult?*', examined issues associated with the preparation of secondary teachers for a school environment rapidly embracing VET. The paper drew on research completed for a doctoral study, and commissioned research relating to the implementation of *VET in Schools* for Indigenous Students (Hill and Helme, 2005).

Since 1996, a range of research and policy reviews has noted the need for teacher education faculties to incorporate preparation of teachers for VET. The Cumming report (1996), *Coordinating diversity: directions for post-compulsory school education in Queensland*, recommended the preparation of teachers to implement competency based curriculum and incorporate learning theories associated with adult learning. Bell's research

on the implementation of VET in Queensland in 1999 noted the lack of systematic support for the introduction of new VET curriculum. Teachers in Bell's study noted their concerns about the ability to assess students using competency. They stated the need for specialist skills to teach and embed the literacy demands of the new curriculum, and expressed concern at the poor resource levels to support high needs students. They expressed concerns associated with the high level of work involved in developing motivation strategies for students who had a long history of disengagement with learning and school structures. In addition, teachers expressed alarm at school practices of 'dumping' students in VET subjects if they were not succeeding in the academic curriculum.

Despite these clearly raised issues, teacher education faculties have responded slowly. Four key concerns are highlighted in recent research associated with teachers' work in VET, each identified as needing urgent attention. These are the increasing diversity of learners in the senior years of school; the rapid take-up of VET curriculum and related support required for teachers; increased use of varying delivery locations and access to resources; and the complex governance systems associated with VET. Despite these significant challenges, VET related teacher education programs are mostly elective subjects. Acknowledging the need for action, in late 2005, a joint workshop, facilitated by the Queensland Studies Authority and the then Board of Teacher Registration, called for teacher education faculties to 'consider how VET could be included in preservice preparation of teachers for secondary schools/senior phase of learning'. Given that in Queensland, *VET in Schools* has rapidly expanded for over a decade,

reforms to teacher education are long overdue.

The second presentation, 'Voicing views of *VET in Schools*: sound bites from a national study', reported on the findings of the national study *School Students Making Education and Career Decisions: Aspirations, Attitudes and Influences* (Alloway, Dalley, Patterson, Walker & Lenoy, 2004). More specifically, it focused on the *VET in Schools* theme explored in this research.

This presentation explicated that the formalised language or terminology of VET was not commonly used in schools – that career advisers and principals tended to employ largely informal language practices when making reference to VET, and that students and parents had a limited understanding of the term per se. Furthermore, this practice of not employing formalised language, of not differentiating between VET and non-VET subjects within schools, served to broaden the curriculum base and range of options available to students while fostering the spirit of student choice.

The reasons for enrolling, or not enrolling, in VET – as given by students, school principals, career advisers and parents – were also examined. As reported in the research, students suggested that they enrolled in VET subjects because they were 'the good subjects', and that they provided a 'head start' – functioning 'like stepping stones for the rest of your life'. Students generally saw VET subjects as less intellectually demanding and less emotionally stressful in that they were more likely taken for enjoyment and as a break from a more rigorous work load than for any other reason. Career advisers, principals and many parents also shared this perception of VET subjects as being less academically

Students enrolled in VET because they were 'the good subjects', and they provided a 'head start' – functioning 'like stepping stones for the rest of your life'.

VET is viewed within a binary framework: VET was for the non-academic ‘doers’ of physical and undervalued work while, in opposition, non-VET subjects were for the academic ‘doers’ of mentally rigorous and valued work.

demanding than other ‘harder’, ‘heavier’ school studies. Students – and parents – also suggested a number of reasons for not enrolling in VET subjects such as: VET subjects being detrimental to university entrance scores, VET subjects being a dumping ground for troublemakers, and the negative attitudes held by those students who did enrol in VET subjects.

The presentation also reported on institutional and similar issues which were identified in research as having a significant and detractive impact upon VET in studies. These issues pertained to the constitution of the school site itself; the strained and frustrating relationships that exist between TAFE colleges and schools; the inflexibility of cross-institutional timetabling; transportation difficulties; and a lack of resourcing within schools.

Finally, the presentation highlighted the way in which VET is viewed within a binary framework: VET was for the non-academic ‘doers’ of physical and undervalued work while, in opposition, non-VET subjects were for the academic ‘doers’ of mentally rigorous and valued work.

The third presentation, ‘Have school vocational education and training programs been successful?’, drew upon research conducted by the National Centre for Vocational Educational Research (NCVER) – and published as a report of the same name in 2006. In light of this research, it was signalled that: ‘We define ‘success’ in the school context as retention to Year 12, and outside school in terms of full-time engagement with employment or learning, or part-time employment combined with part-time study’ (Anlezark, Karmel and Ong, 2006, p. 6). From this position, the presentation reported on the following emergent key messages.

- Participation in school VET programs was found to have a positive impact on Year 10 to Year 11 retention but a negative impact on retention from Year 11 to Year 12. Overall, these programs had a small negative impact on retention from Year 10 to Year 12.
- The overall negative effect on retention from Year 10 to Year 12 is larger for boys than girls, for which it is close to zero. The negative impact is too small to be of any real policy significance. This conclusion is not altered if the vocational equivalent to Year 12 is included.
- There is a clear positive impact on school-outcomes for students who participate in school VET programs in Year 11 but do not go on to complete Year 12. These gains are more sizeable for girls than boys. Over time, however, the positive effect is diluted. These gains are not seen for those who complete Year 12.
- School VET programs provide a clear vocational pathway for some students, particularly for boys studying in the areas of building and engineering. However, for most students the pathway is not so direct. Further, when comparing students of similar ages, we see different types of vocational education and training studied in and outside the school environment. For most students, there is a poor alignment between the types of VET programs studied at school and the requirements of the world of work or further study. (Anlezark et al., 2006, p. 6)

Posing the questions: Where to from here for research?

The first presentation, ‘Secondary teacher education and *VET in Schools*: Is it that difficult?’ prompts a number of questions.

- How can all secondary teachers be adequately prepared for the VET curriculum and associated governance requirements?
- Is there still resistance within teacher education faculties to incorporate

VET in Schools as part of secondary preservice preparation?

- What do school leaders now understand about the VET in Schools agenda? How do they support teachers' work?

The second presentation, 'Voicing views of VET in Schools: sound bites from a national study', also gives rise to a number of questions. These include:

- What are the effects of using non-differentiated, informal language practices upon the take-up rate by students of VET in Schools? Are these effects positive in the way the research seems to suggest? What detrimental effects might such practices also have?
- How can school staff (and others) more effectively 'tap into' positive student views of VET and harness their efforts to promote VET within schools? Promote VET in what ways, for which students?
- Is it important in order for the VET agenda to move forward that the binary construct of VET as non-academic, physical and undervalued work/non-VET as academic, mentally rigorous and valued work, be challenged and/or disrupted? If so, how can this be done?

The third presentation, 'Have school vocational education and training programs been successful?', gives rise to two questions in particular. These, which are relevant to policy issues and are identified in the NCVET (Anlezark et al. 2006, p. 6) report, include:

- Should school VET programs be offered at Year 10 rather than being concentrated at Year 11 and Year 12, given that many students leave before Year 11?
- Should school VET programs be better aligned with the world of work or, alternatively, concentrate on broad pre-vocational skills?

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Back to the future? Girls, and young women, working futures, VET and VET in Schools. A snapshot¹

Elaine Butler with Robyn Woolley

Introduction

Females are more likely to experience a troubled transition from school than male school leavers despite a higher rate of completing Year 12 and higher participation rates in post-school education. (Long, 2005)

Recent longitudinal research shows that in general young people have high levels of life satisfaction consistent with previous generations of young Australians. But their satisfaction in life is intimately related to what they are doing as students or workers, to whether they have a full-time job or not, or a course or a career plan that provides direction. To whether they are part of Australia's economic 'insiders' or 'outsiders'.

It may surprise but there are currently more than 560,000 young Australians not in full-time work or study, people who are predominantly on the 'outside' of the Australian economic success story. Most of them – about 330,000 – are women (Spierings, 2006).

Initial engagement with the VET system – whether at school, or in entry level VET – is a critical juncture for girls and young women. The issues ... to address include barriers to considering VET as a viable option, together with the occupational segregation that occurs once girls and young women engage with VET. (Quay Connection, 2003, p. 53)

In Australia, as in other industrialised countries, vocational learning for 'youth' is both a hot topic and a complex contemporary policy issue of high significance. This is especially so for 'youth in transition' – a term utilised to capture and indeed influence the movements of young people from compulsory education to the world of work. It is here in this contested space that boundaries between education sectors, and the institutional divides of employment and education are blurring and evolving.

Perhaps more importantly this is also a significant period in the formation of young people's subjectivities, and their life chances. The choices made by and for young persons at this time are inter-related with the quality and quantity of opportunities

available to them. Such opportunities, and so choices, are also shaped by young people's biographies, their geographical location, gender, race, socio-economic status, family history, educational attainment and aspirations (Beavis, Murphy, Bryce & Corrigan, 2004; Dwyer & Wynn, 2001; Teese & Polese, 2003).

The movement to link vocational learning with compulsory education as a (funded and policy driven) pathway to employability and employment for young people continues to grow at unprecedented rates (DEST, 2006; House of Representatives, 2004). Within this field, a generic concept of youth collapses the perceived life/ education/work experiences and needs of the diverse range of young people into the one category, most often regardless of differentiating factors mentioned above, and including that of gender. There is a dearth of work that focuses on experiences and needs of girls and young women engaged in Vocational Education and Training (VET) and/or *VET in Schools* (VETiS), especially within their socio-cultural, economic and political contexts.

The focus of this article, and of the research findings reported herein, is one that seems to be less than fashionable in these current times: that of girls and young women. We strongly endorse the comments of Spierings (2006, p.1), who recently posited that:

It's a curious thing that there has been such a passionate focus in recent times on boys' participation in schooling – and rightly so – but relative indifference to the labour market opportunities for teenage girls and young adult women.

While full-time jobs for young men are gradually recovering and trade apprenticeships have grown, little attention has been focused on the predominance of casual, part-time and

often low-skilled jobs for young women who have left education. It is true that young women have lower levels of absolute unemployment than young men and they participate in education more readily and for longer, but they are also considerably more prone to precarious employment and to underemployment.

Perhaps it's part of our social condition. The outward signs of distress (at school) – aggression, bullying, misbehaviour – attract parents, communities and policy-makers. Meanwhile the piecemeal nature of serial part-time work tends to be endured as an individual experience, stoicism rather rebellion being a favoured means of coping.

By foregrounding data collected specifically from girls and young women, we sought to redress this relative silencing, albeit in a small way. We also aimed to provide a window into some experiences and issues of Australian girls and young women, in relation to their thoughts about their working futures, and their early engagement with VET.

So – what was the project, and more importantly, what did we learn?

The research: The girls project

While we are all too aware of the dangers of homogenising girls and young women, this project sought to provide some early data, to understand what three cohorts of girls in different parts of urban Australia were doing, saying and thinking, in relation to their working futures, and especially VETiS². The intent of this small-scale research project was to provide snapshots of the perceptions of girls and young women in three states (New South Wales, Queensland and South Australia) engaged in VET activities, as part of their school-based activities as they approach transition from school-to-work and/or further study.

Female school leavers continue to face greater disadvantages than males during this period of transition from school-to-work.

The students were highly positive about work experience programs, VET and its relevance, and that the knowledge and skills gained from VET would be useful at some time in the future.

Overview of the research

The growth of vocational education has been rapid, including the delivery of vocational education in schools, by schools, or TAFE, or by private providers. During this process it has been observed, anecdotally and in a very few studies available, that the gendered pattern of course selection, and/or field of study is being repeated with school students' choices. This mirrors those patterns well entrenched in the wider VET system and Australian working lives. The results of labour market gender segregation have been of little benefit to women and are of particular relevance to a study examining linkages between education, work and economic security.

Dwyer & Wyn (2001) are among those researchers who warn of the gender blind approach currently informing *VET in Schools* and school-to-work transitions. In addition, and as reconfirmed by Spierings (2006), recent reports (Long, 2004, 2005) looking into the lives of Australia's young people found that female school leavers continue to face greater disadvantages than males during this period of transition from school-to-work, with an increasing number of girls not in school, or work. This points to differing outcomes from education based on gender, which can have serious life consequences.

This concern is not new and is supported by numerous earlier reports identifying the gendered constructions of cultural, social and domestic barriers to equality of access and outcomes (Collins, Kenway & McLeod, 2000). Further, concern over career choices, and also concern regarding the transition period from school to training or work, were each described as 'a critical juncture for girls and young women' (Quay Connection, 2003). However, studies and initiatives with a focus on girls are all too few.

State-based case studies explored future work aspirations, information patterns of career guidance, and the linkages girls are making with training and life plans. Was their VET (in Schools) and/or early post-school experience a positive learning experience, and one that they anticipate they will return to? What were the trends? The issues? The possibilities?

We wanted to understand more about how girls think and talk about their work aspirations and the complex set of factors leading to subject and occupation/industry related choices by girls who participate in *VET in Schools*. We also wished to ascertain if workplace application of their chosen subject was a motivator for their *VET in Schools* course selection, as well as investigate whether the learning experience was a positive educational experience that might encourage them to consider VET educational pathways post-school

Methodology included a critical literature review, interviews, a questionnaire, and targeted focus groups.

The findings

The following sections draw on and highlight findings documented in various sections of the report (Butler & Woolley, 2005). Given the limitations of this article, not all findings are discussed. However, it should be noted that overall, students were positive about their futures, with many of them intending to undertake further study, mostly through VET or, for some, at university. The students were highly positive about work experience programs, VET and its relevance, and that the knowledge and skills gained from VET would be useful at some time in the future.

Work experience followed similar choice patterns to courses, with personal

interest being the main influence for the majority. Comments also indicated that some girls could see skills transferability from work experience, their own casual employment, school study, and VET study, to future study and work application.

Literature review (Daniels, 2005)

The wide-ranging literature review found disturbingly little to suggest that opportunities and outcomes in relation to working futures and VET will improve for girls and young women in the near future.

This review identified a number of major characteristics within the literature. It identified:

- a narrow research and policy agenda set within the current economically-driven climate of vocationalism in education, which prevails in Australia and internationally
- continued growth of *VET in Schools* and transition-to-work programs
- a gender-neutral or gender-blind approach has subsumed the strong focus on girls' career and vocational needs, evident in the literature of the previous decade
- major funded research operates within a masculinist VET framework.

From these findings, a number of relevant topics were identified, of which four were discussed further in the review. The topics referred to:

- entrenched gendered social conditioning that affects the ways girls and young women approach their future career and life choices
- the current situation for women already in the workplace, that is far from satisfactory, and which young girls are being expected to perpetuate
- the narrow research base informing VET and *VET in Schools*, that

promotes the current gender-blind focus and masculinist framework of vocational training

- a political trend with potential to diminish rather than enhance the role of women and steer women and girls into traditional roles.

The review concluded that discussion of these issues in the literature provides only a partial and simplistic critique of the current situation for girls; that research agendas in the area of *VET in Schools* and transitions to work carry (in large part) assumptions that girls' gendered issues have been dealt with. The focal areas have shifted, leaving girls and young women out of focus. This clouding of girls' issues within research has been documented, with some literature indicating that, for girls and young women, both the current models of transition education and school-linked VET, and the framework of paid work into which they expect and are expected to move, limit opportunities and operate to disadvantage them.

Interviews: Overview of findings

The interviews found that:

- VET subjects provide an additional opportunity to school organised work experience to learn about work.
- The majority of the girls are still choosing traditional (feminised) courses and career paths into the workplace.
- Nearly all the girls told us they felt familiar with the type of work involved in their career choice, but then demonstrated they did not know about job availability or pay rates, or how these factors impact on their career choices or outcomes.
- School-based career advisers are seen as a major source of information about courses and careers.

Both the current models of transition education and school-linked VET and the framework of paid work into which they are expected to move, limit opportunities and operate to disadvantage them.

If the information and guidance they receive at school about work, part-time work placements, VET subject choice and careers, is neither accurate nor broad enough to encourage students to think ‘out of the box’ for their career aspirations, then the gender blind focus and resultant disadvantages will continue.

- Family and friends rate as a significant influence in career decisions.
- The majority of girls felt they were already on a career track – the vast majority stated they planned to do more study in the career area of their choice – demonstrating a high relevance of education for work.
- The majority of the students were in VET courses of their choice and had a high level of satisfaction with VET.
- Participants overwhelmingly perceived the skills and knowledge from VET as useful for their futures – either as a career or for everyday life.
- VET for many was seen as more relevant than school.

Working futures: early career choices

- The young women tended to base their career decisions on what they enjoy and what they are good at.
- In the main, girls’ career choices seem unconnected to employment trends and job availability, and are based on personal preferences without supporting information on the sustainability of this choice.
- While the young women surveyed had strong ideas of what career they wanted, overwhelmingly, the majority of girls had identified future careers in feminised occupations. Girls are continuing to select traditional/feminised areas of work where they are at risk of high rates of casualisation and low rates of pay.
- The data indicate that young women think less about economic security when making decisions about their careers and more about a preferred occupation.
- While most students tended to have a strong idea of the nature of the work involved in their chosen career,

most had no relevant information on job availability or rates of pay in their selected VET area.

Many girls participating in VET while at school are electing industry areas where they are at risk of low remuneration and casualised insecure working futures. This knowledge is highly relevant to young women and may in fact assist them to assess if a potential career route can provide them with the future lifestyle they want – or can afford.

Moving from the individual, this has long-term considerations due to the disproportionate burden of casualisation borne by Australian women. The traditional female orientation of their work experience and future career aspirations gives support to the finding noted in the literature review that entrenched social conditioning that affects the way girls and young women approach their future career and life choices.

Access to information

- Students’ main source of information about the type of work involved in their career of choice was their school. This was augmented by family, friends, and employers.
- Career information appears to fall short and leave invisible the differing labour market experiences of Australian women and girls.
- Students wanted more information about how to succeed in their chosen career, and about how to apply their VET course to maximise outcomes for their future.

If the information and guidance they receive at school about work, part-time work placements, VET subject choice and careers, is neither accurate nor broad enough to encourage students to think ‘out of the box’ for their career aspirations, then the gender blind

focus – and the resultant disadvantage identified in the literature review – will continue.

This has significant implications for both the quality and integrity of information, advice and guidance provided at school, and for the professional development and support necessary for staff to enable them to make a difference to the lives and aspirations of young women studying VET.

Of utmost relevance is the lack of information on job availability and pay rates in the girls' chosen industry areas. There was little demonstration that the girls received any guidance of how (or if) the industry area of personal interest would or could provide economic security. There was no evidence of any understandings of the implications of gender in relation to field of study or work-force patterns and what this would mean to them as individuals.

Connections were not made as to whether pursuing areas of personal interest would provide them with a job, or what the conditions of that job would be like. Moreover, there is no evidence of proactive use of employment forecasts or job growth data to inform girls' choices. While the girls perceive themselves to be on a career path, there appears to be widespread failure to support them by ensuring their choices are fully informed, as they move towards independent futures.

In summary

The above findings have much in common with the international research that does focus on girls, and their experiences of VET, work, and work-related aspirations. For example, the motivation for pursuing careers is similar to that identified in Canadian research (Fenwick, 2004), as is a recognition by young women in the twenty first century, that they

will continue to carry most of the responsibilities related to home and family (Pocock, 2003).

The high potential for the existing global and national/local gendered inequalities to be perpetuated through the choices and pathways that the majority of the girls are selecting is also of high concern. This trend will not enhance opportunities for the economic well-being for such girls. Whether these girls continue studies through VET, in workplaces or as students, or if they continue on to university study, seemingly entrenched gendered patterns of selection are being repeated – as ever.

This brings us to ask the question, posed by Fenwick (2004) in Canada, in similar circumstances, about similar cohorts and issues.

The important question here is: how is it that girls can enjoy higher overall educational achievement but have significantly lower economic achievement than boys? What happens or doesn't happen in girls' career and vocational education to address this disparity? (Fenwick, 2004, p. 178)

Our research findings, précised above, go a long way to answer the latter query.

We argue that appropriate complementary national and state/local policy initiatives and resources to investigate and support girls and young women in their engagement with *VET in Schools* and ensuing career paths is a matter of high priority. Similarly, the collection of gender disaggregated national and state data for *VET in Schools* programs and associated activities is a basic necessity.

Such initiatives must engage with the realities and future projections of young women's lives, within the socio-cultural, economic and political contexts that shape their lives. These

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It is time that girls and young women are freed from the jail of 'generic youth'.

gender-sensitive initiatives are required throughout national and state policies, data collection, implementation, monitoring and on-going evaluation of relevant VET programs for girls and young women. Further, longitudinal studies to track and link the pathways of girls and women from school through further studies and on into their labour market outcomes are critical.

At school and local levels, gender sensitive labour market training and further professional development are of central importance for all educators or counsellors involved in career (and subject selection) advice, work experience placements for girls, and/or the development and offering of vocational courses in schools. This extends to industry and employer representatives, given their increasing involvement in *VET in Schools* and work experience programs. In-service training is a priority for those who give career advice and must include relevant workplace information.

Moreover, it is essential that in the framing of such initiatives, critical cognisance of historical global/local gendered inequalities that continue to be reproduced must be addressed. This is doubly important, given the push for girls and young women to make choices around occupations and careers at ever earlier ages without understanding the implications of such choices in relation to their future economic well-being.

It would appear that, despite the rapid changes of the last two decades, and the rhetoric based on assumptions that 'girls have done/are doing well', old employment and labour market patterns could well be perpetuated and re/produced. This study highlights a (worrying) insight that more rigorous efforts to broaden and inform girls' career choices are still required. It could be argued that the gender neutral delivery of mainstream VET is erasing

an opportunity to inform girls and young women of the long-term gendered structural norms in occupations, industries and workplaces, including the implications of early decisions to move into feminised work areas may well have on their future careers and economic potential. Proactive gender specific policy initiatives and career education should be foundational to the planning and delivery of *VET in Schools*.

From a Canadian perspective, Fenwick (2004, p. 169) posits four directions for change, for girls. These are:

- more gender sensitive career education for girls
- sponsored vocational education for women
- management education in gendered issues arising in the changing economy
- critical vocational education in both schools and workplaces.

We support similar initiatives for development and implementation in Australia. This is especially important, given the current well-publicised skills shortages in the traditional masculinist trade areas, along with the establishment of a new brand of technical colleges, and the lack of success in either attracting or retaining a critical mass of girls or young women to such trade areas over the last two decades.

This research project, although described as small-scale, resonates strongly with issues that are much wider, for the economic well-being of girls and young women. It is now urgent that wider and deeper gender-sensitive research be conducted in this area. It is time that girls and young women are freed from the jail of 'generic youth'.

We argue that girls and young women should be active recipients of policy making and implementation that

support them. Rather than being the recipients of policy and practices that position young women in scenarios of contradictions and ambivalence relating to their vocational futures, *VET in Schools* must assist them in their ambitions to 'get real', ensuring that the choices made by girls and young women are fully informed choices. Implicit in this statement is the requirement that the VET system also needs to 'gets real' – girls and women comprise over half of its constituency.

What is needed are policies, pedagogies and practices that support girls and young women to fulfil their dreams, rather than setting them unknowingly on pathways that may well compromise their future economic well being.

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Endnotes

- 1 This article is a précis of findings from Butler, E. & Woolley, R. (Eds.) (2005). *Getting real? Girls and young women, working futures, VET and VET in schools*. Melbourne: Security4Women, the report of research conducted by WAVE and commissioned in 2004 by Security4Women (S4W), one of four secretariats funded through the Australian Government Office for Women (OFW). The full report can be located on the websites of WAVE (www.converse.com.au) and Security4Women (www.security4women.com).
- 2 The project was also a sub section of a larger Investigation in relation to lifelong work-related learning for women and girls. See the above websites for details.



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Vocational interests of Greek senior secondary school students and factors that can affect them

Introduction

Vocational interests have been identified as an important aspect of career counselling for adolescent students. The vocational preferences of an individual are subject to constant changes, and they are in a continuous process. This article studies the vocational interests of Greek senior high school students and the factors that can affect them, such as their school achievement, gender, grades, and the job of their parents. Lapan (2004, p. 113) argued that 'academic achievement plays a pivotal gatekeeper role in the selection of career paths leading out of adolescence and into adulthood'. A number of research studies have supported the assertion that economically poorer students have lower academic achievement and vocational expectations (Cook et al., 1996; Wilson, 1996), and female students tend to make traditional female vocational choices (Warrington & Younger, 2000). Also, research has shown that parents play an extremely significant role in the vocational career of their children (Turner et al., 2003; Turner & Lapan, 2002; Wentzel & Feldman, 1993).

Purpose

The two-fold purpose of the study was to determine if differences existed in vocational interests of the students depending on:

- their achievement, gender and grades
- their parent's occupation.

Method

Participants

The sample consisted of 155 boys and girls aged between 16 and 17 in an urban area of northern Greece. From first grade, there were 41 boys and 40 girls who participated in the research; from second grade, there were 32 boys and 42 girls who participated. (First and second grade equate respectively with Year 11/fifth form and Year 12/sixth form.)

General school achievement

Students were allotted to one of four groups according to their general achievement. Greek senior high school students' achievement is graded from 1 to 20, with 20 being the highest achievement level and 10 being a pass.

One group was formed by two students (2.5%) in the first grade with low achievement scores that ranged from 10 to 13.4.

A second group was formed by 20 students (24.7%) in the first grade, and 17 (23%) in the second grade, with medium achievement scores that ranged from 13.5 and 16.4.

A third group was formed by 24 students (29.6%) in the first grade, and 28 students (38%) in the second grade with high achievement scores that ranged from 16.5 and 18.4.

The final group was formed by 35 (43.2%) students in the first grade, and 29 (39%) in the second grade with excellent achievement scores that ranged from 18.5 and 20.

Current parental occupation

The jobs of fathers were categorised as follows.

- jobs without training or low training, such as construction workers
- jobs with medium or higher technical training
- jobs with high specialisation and university studies; public sector, industry, services jobs, such as doctors, electrician/mechanical engineers, architects and teachers
- military jobs, such as those in the armed forces
- artistic jobs, such as painters and musicians
- the 'learned' professions without higher educational level, such as tradesmen and contractors
- the unemployed
- retired/deceased/other.

Table 1 shows the mean scores according to father's job.

The jobs of mothers were categorised as follows.

- jobs without training or low training, such as office cleaners
- jobs with medium technical training, such as dressmakers and hairdressers

- jobs with medium specialisation, higher or secondary education, such as nurses, secretaries and cashiers
- jobs with high specialisation and university studies, such as civil engineers, economists, chemists and doctors
- artistic jobs, such as designer and musician
- the 'learned' professions without higher educational level, such as a business ownership
- housekeeping, unemployed or other.

Table 2 shows the mean scores according to mother's job.

Instruments

Two questionnaires were used. One questionnaire was concerned with the demographic data of students (place and time of birth, place of residence, gender, parents' education, current parents' occupation and achievements from the previous school year).

For the assessment of students' vocational interests, the Rothwell-Miller Interest Blank (RMIB) questionnaire was used (Miller, Rothwell, Tyler, 1994). The RMIB was originally developed as an interview aid in career counselling and examines a subject's interest in 12 work fields (outdoor activities,

Table 1: Mean scores in the first and second grade according to father's job

Senior high school	Father's current job								
	Jobs without training/low training	Jobs with medium/higher technical training	Jobs with high specialisation & university studies/public sector/industry/services	Military	Artistic	Learned	Unemployed	Retired/deceased/others	Total
1st and 2nd grade	24.2	3.9	37.3	12.4	0.7	13.1	1.3	7.2	100
-	37.0	6.0	57.0	19.0	1.0	20.0	2.0	11.0	153

Table 2: Mean scores in the first and second grade according to mother's job

Senior high school	Mother's current job							
	Jobs without training/ low training	Jobs with medium technical training	Jobs with medium specialisation/ higher/ secondary education	Jobs with high specialisation/ university studies	Artistic	Learned	Housekeeping/ unemployed/ other	Total
1st & 2nd grade	2.6	3.2	18.7	14.8	1.9	9.7	49	100
-	4.0	5.0	29.0	23.0	3.0	15.0	76	155

mechanical, computational, scientific, persuasive-personal contact, aesthetic, literary, musical, social service, clerical, practical, medical). It is structured in nine sets of 12 jobs, representing the previously mentioned 12 work fields. In each set, there is a representative job from every one of the 12 work fields. The participants rank the jobs in each set from 1 to 12, the 12th preference being their least preferred. Guidelines explain that a job's classification in each set should be done according to the preference for the type of work. The student is not supposed to co-examine questions having to do with salary, possibilities of success, or required qualifications and training. The sequence of the sets is the same in the 12 work fields. In set A, first is the field outdoor activities; in set B, first is the field mechanical, and so on. Students' assessment took place in groups.

Results
School achievement

To determine if the differences in general school achievement can influence the vocational interests of the students, an Analysis of Variance (ANOVA) was used. School achievement was considered to be an independent variable with four

categories: low (10-13.4), middle (13.5-16.4), high (16.5-18.4), and excellent (18.5-20). Students' assessments in the 12 fields of vocational interests, were considered the dependent variable. The following statistically important differences were observed.

1. The students with excellent general achievement ($M = 70.48$) tended to reject the jobs in the field outdoor activities more than the students with medium general achievement ($M = 63.29$) [$F(3.151) = 4.59$; $p = 0.0042$].
2. Students with low general achievement ($M = 67$) tended to choose jobs in the field outdoor activities more than students with high ($M = 48.26$) and excellent achievement ($M = 48.1$), who tend to reject them [$F(3.154) = 3.07$; $p = 0.0294$].
3. Students with medium general achievement ($M = 78.08$) tended to choose jobs in the practical field more than students with high achievement, who tend to reject them ($M = 86.73$) [$F(3.154) = 3.97$; $p = 0.0093$].

Gender

ANOVA was used to determine if there were any differences between the two genders in relation to vocational interests. Gender was considered the independent variable with two levels, boys and girls; whereas students' assessments for the 12 fields of vocational interests were considered as the dependent variable. The following statistically important differences were observed.

1. Boys ($M = 42.05$) tended to choose more jobs in the mechanical field than girls ($M = 61.32$), who tended to reject them [$F(1.154) = 40.42$; $p = 0.0000$].
2. Girls tended to reject jobs in the computational field, whereas boys tended to choose them [$F(1.154) = 13.35$; $p = 0.0004$].
3. Girls tended to choose jobs in the aesthetic field and boys tended to reject them [$F(1.154) = 19.21$; $p < 0.0001$].
4. Boys tended to choose jobs in the literary field more than girls [$F(1.154) = 25.23$; $p = 0.0001$].
5. Girls tended to select jobs in the social service field more than boys, who tended to reject those types of jobs [$F(1.154) = 46.35$; $p < 0.0001$].

Grades

Using ANOVA, it was determined that the students of two senior high school grades were differentiated regarding the choice of outdoor activities [$F(1.154) = 9.95$; $p = 0.0019$]. Students in the first grade tended to reject outdoor activities ($M = 64.24$; $SD = 10.42$) whereas students in the second grade tended to choose outdoor activities ($M = 69.7$; $SD = 11.11$).

Parental occupation

To ascertain if the occupation of parents can affect the vocational

interests of students, ANOVA was used. The independent variable was the eight categories of fathers' occupation, and the dependent variable was the students' assessments for the various work fields. The control of individual differences between the groups was done using Tukey's method (it considers all possible pairwise differences of means at the same time). The jobs in the outdoor activities field were chosen more by the group of students whose parents were unemployed than the groups – in order of priority – whose parents were retired/deceased/other, in the military, in jobs with no or low specialisation, in 'learned' jobs without high educative level, in jobs with medium or higher specialisation/technical training. The group of students whose parents had jobs with high specialisation and university studies; had jobs in the public sector; in industry; in services; tended to reject jobs in the outdoor activities field. It should be noted that the difference is marginal $F(7.152) = 2.06$; $p = 0.0509$. Using ANOVA to determine the effect of mother's occupation established no statistically important differences.

Discussion

The results show that the vocational interests of students are affected to an important degree by their achievement, gender and grade level and to a minor degree by their parent's job.

- The influence of achievement in school affects the work fields outdoor activities and practical. The students with excellent general achievement reject the outdoor activities more than the students with medium general achievement. In addition, students with medium achievement tend to choose the practical field more than their classmates with high achievement, which may be attributed to the fact

The vocational interests of students are affected to an important degree by their achievement, gender and grade level and to a minor degree by their parent's job.

The influence of gender is statistically significant.

Prejudices by both parents and teachers seem to prevail, and through generations influence which professions are 'male' and which are 'female'.

that the other job fields require high intellectual skills.

- The influence of gender is statistically significant. The boys tended to choose jobs in the mechanical and calculating fields, whereas the girls tended to reject them. The girls tended to choose the aesthetic field more than the boys.
- The students in the first grade tended to reject jobs in the outdoor activities field, whereas the students in the second grade tended to choose them. Greek adolescents appear to not have shaped constant vocational preferences and seem to be in an initial stage of their career development.
- The influence of parent's occupation was marginal. Students of unemployed parents tended to choose jobs in the field outdoor activities, rather than any in the other work fields, which tended to be rejected by the parents.

Implications for school counsellors

In Greece, despite the progress that has been noticed during the last few years, prejudices by both parents and teachers seem to prevail, and through generations influence which professions are 'male' and which are 'female'. The vocational career of every student is a matter for careful planning, and school counsellors have a critical role to play in restricting career stereotyping.

It is worthwhile mentioning the changes that have been observed in Greek society during the last two decades. Well-off citizens seem to have better social status and recognition in comparison with educated but lowly-paid citizens. The more affluent group has high expectations for their children's school and career goal achievement. They support their children's academic endeavours and provide more choices according to their

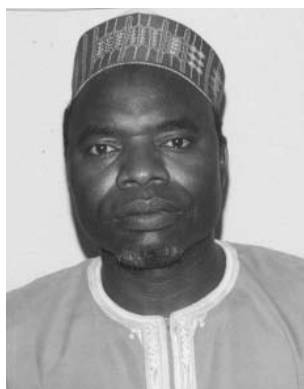
interests (reinforcing teaching, study in colleges and abroad). More systematic work by school counsellors is needed with teachers and the students and parents who come from economically poorer families. This work should be focused on the advancement of these students' learning and academic achievement.

In the process of growing up from adolescence to adulthood, young people need rules, limits and emotional control, but at the same time they also need caring and understanding. Research has shown that teachers can improve students' achievement (Darling-Hammond, 2000), but there is low affective involvement of students and teachers in school (Freiberg, 1999). Teachers communicate their attitudes, practices and expectations through their daily interaction with students, but in many cases, their relationships are not good. In these difficult situations, the task of the school counsellors should be to create the appropriate conditions in which both teachers and students can develop and evaluate their feelings for themselves. In addition, the counsellors may organise, on a regular basis, meetings between students and their teachers where they can freely communicate. The aims should be to limit social inequalities by encouraging and providing reinforcement for low-achievement students, and improve students' relationships with their teachers.

The study was conducted in an urban area of Greece. Based on the data analysis, and in order to gain more understanding of this issue, more research is needed replicating this study. This new research should involve students in rural and islander regions as well as pupils from private senior secondary schools.

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Quality assurance in the Nigerian VET sector

Introduction

An observer of the Nigerian vocational training scene will see a diversity of skills training arrangements without a common standard-setting body. Several agencies of government are involved in non-formal training for skills acquisition or development, but none of these programs are based on any nationally recognised occupational standards. National standards only exist in the case of Vocational Education and Training (VET) in Technical Colleges (TCs) and polytechnics. This absence of common standards is seen by many as a major shortcoming of the entire vocational training system.

This is especially so because there is a wide consensus that the non-formal sector is the dominant component of the economy. The National Master Plan for Development of Technical & Vocational Education (TVE), prepared by the Federal Ministry of Education, admits that 'in Nigeria, the non-formal mode of TVE has the larger share of the training market. It consists of the various forms of apprenticeship schemes and custom and tailor-made programs meant to impart occupational skills for gainful employment.' (Nigerian Federal Ministry of Education, 2000, p. 23). The absence of national vocational qualifications (NVQs) and a national apprenticeship scheme, precludes any recognition or progression pathways for the non-formal sector. Needless to say, this is a major hindrance to effective skills development.

As commonly applied in Nigeria, the Technical and Vocational Education and Training (TVET) sector covers the artisan training in vocational centres, the crafts training in TCs as well

as the technician, technologist and professional training in polytechnics and monotechnics. This article will tend to use the acronym TVE, which is more popular in earlier Nigerian publications, even though TVET is now gaining wider usage.

National Board for Technical Education and its quality assurance roles

The National Board for Technical Education (NBTE) is the Federal government agency mandated by law to coordinate all aspects of TVE falling outside the universities. NBTE's establishment law (*Act No. 9 1977*) empowers the Board to 'lay down standards of skill to be attained (in TVE) and to continually review such standards as necessitated by technological and national needs'. This wide remit, combined with the reinforcement of *Act No. 16 1985*, which clearly spells out the power to accredit programs for national certification, engages the Board in three major areas: coordinating the development of curricula for TCs and polytechnics; accreditation of programs in these institutions; coordinating government policies regarding TVE.

Although the law does not expressly bar it from the non-formal TVE, NBTE has hitherto operated almost exclusively in the formal educational sector. But non-formal TVE is now receiving more attention.

Major constraints

The greatest challenge for the Board comes from the general low regard towards TVE discernible in the attitudes of bureaucracy and general public. Two serious consequences are low enrolment in TVE institutions

and limited employment and progression opportunities for TVE graduates. Candidates entering or leaving secondary schools generally aspire to university education where social sciences, arts, management, sciences and professional disciplines dominate. Rarely would candidates or their parents consider TVE as a first choice. This situation is a result of a societal attitude that sees the ultimate objective of education as acquisition of a degree certificate as a 'meal ticket' into government work. Historically, jobs were easily available in the early post-independence era, when there were numerous vacancies in the public service. However, with time and the explosion in the number of job-seekers, public service vacancies naturally dwindled. Unfortunately, the organised private sector did not grow fast enough to accommodate the growing hordes of graduates, most of whom could only boast of a paper qualification, rather than practical skills.

On the other hand, those who braved the odds to study in vocational centres, TCs or even polytechnics, were subjected to various forms of discrimination in respect to salary scales, professional recognition, and opportunities for career progression. Moreover, there was no good articulation of their qualifications with those from other sectors of education and they often found themselves in a cul-de-sac. As a result, the TVE sector could not grow to the critical mass necessary to establish high national standards for regulating practice. This in turn caused severe shortage in qualified artisans and craftsmen, especially in areas such as plumbing, masonry, building construction, electrical installations, appliance maintenance, machining, welding and fabrication, with serious consequence for the effective delivery of such

services. In particular, the highly skilled manpower needed by the oil sector is largely not available locally.

Furthermore, as the vast majority of Nigerians live in rural communities, they were critically affected by the poor quality of the TVE sector, coupled with past government policies which failed to promote appropriate technology and cooperative ventures. These combined to rule out any significant modernisation of the traditional subsistence forms of agriculture, making the small-scale farmers (about 60% of the labour force) the least empowered segment of the population. Other constraints affecting the sector include poor infrastructure and shortages of qualified staff and instructional materials.

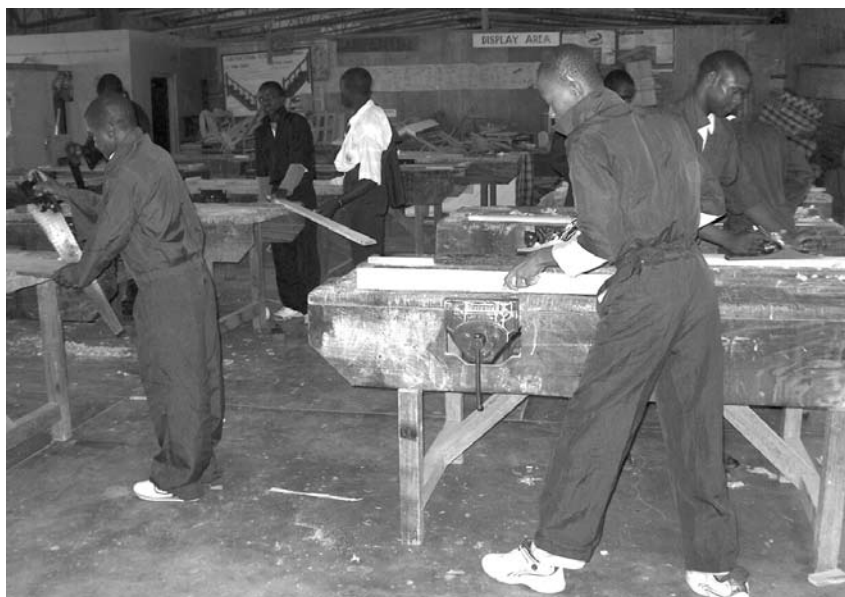
The result of neglecting TVE is a poorly developed skill base. This, with the non availability of white-collar jobs, leads to high levels of graduate unemployment and low productivity. These twin negatives in turn breed extraordinarily high level of poverty, with 70% of the 126 million Nigerians living below US\$1 per day (UNDP, 2006).

Scope of this article

The main objective of this article is to describe NBTE's attempt to facilitate quality assurance through program accreditation. Although this evaluation system is more established for polytechnics, the focus here will be on TCs. These colleges, like their name-sakes in other Commonwealth countries, are secondary schools dedicated to the education and training of craftsmen/women.

The article casts a cursory glance on the Nigerian educational system and the place it allots to TVE; provides a brief description of the concept of accreditation in the Nigerian TVE sector, pointing out the standards and criteria applicable to Technical

The result of neglecting TVE is a poorly developed skill base.



program (Federal Republic of Nigeria, 2004). Primary education usually begins at the age of six. This is the first contact with school for the vast majority of children as only a few parents can afford early childhood education.

According to the NPE, junior secondary is supposed to include Integrated Science and Introductory Technology (popularly known as Introtech), among its core subjects. Introtech was designed to achieve three main goals: provide pre-vocational orientation for further training in technology; ensure basic technological literacy for everyday living; and stimulate creativity. Unfortunately, due to resource constraints, only a few schools could effectively implement this important subject.

The expectation of the NPE is that students completing junior secondary would have four possible options: senior secondary school; technical college; vocational training center; an apprenticeship scheme. But in practice most parents usually prefer the senior secondary option, and only allow their children to go to a technical college if they miss out on this option. This excessive emphasis on 'grammar school' education explains why the vocational training centres and apprenticeship schemes have not been developed to the level of providing viable alternatives to the academic option.

But in spite of the above limitations of vocational training, and because senior secondary is supposed to be comprehensive, the NPE has made adequate provision for some *VET in Schools*. Along with the core subjects such as English, Mathematics, a Nigerian language, a basic science and a social science, each student is required to take one or two vocational electives such as Agriculture, Applied Electricity, Auto-mechanics,

Colleges; discusses the attempt to implement accreditation in Nigerian TCs; and highlights the different initiatives being taken to move the Nigerian TVE sector forward.

Nigerian educational system and the place of TVE

At independence, in 1960, Nigeria had a federation of three regions, each with its own educational law inherited from colonial administration. Six years later, ethnic and political differences culminated in a military coup, which led to a 30 month civil war. To ensure national unity, integration and technological development, and above all fashion out an indigenous education policy, with unified structure, a special national curriculum conference was convened in 1969. This forum produced far-reaching resolutions leading to a National Policy on Education (NPE), first issued in 1977.

National Policy on Education

The main characteristic of the NPE is the 6-3-3-4 scheme, providing for a six-year primary and six-year secondary education. The secondary phase consists of junior and senior segments, each lasting three years. The scheme ends with a four-year undergraduate

Students completing junior secondary have four possible options: senior secondary school; technical college; vocational training center; an apprenticeship scheme.

Bookkeeping and Accounting, Building Construction, Woodwork, Metalwork, Food and Nutrition, Home Management. However, limited teaching staff and facilities preclude the practical realisation of these vocational electives in most schools.

Technical Colleges

As indicated above, some vocational courses are available at the senior secondary school-level. However, the specific types of secondary schools dedicated exclusively to TVE are the TCs. Curiously, the most peculiar feature of these TVE secondary schools is their small number: about 150 from a total of over 10 000 secondary schools (SchoolNet Africa, 2003). Equally disturbing is that they constitute less than 5% of total senior secondary enrolment (Yakubu, 2003, p. 11).

Whereas the conventional secondary school prepares students for senior secondary school certificate examinations, which are nominally equivalent to an Australian Senior Secondary Certificate of Education (SSCE), the TCs offer various technical or commercial trades in their three-year program. The most common disciplines are: Mechanical Engineering trades, Building/Wood trades, and Electrical trades. Many TCs also offer Business, Catering, Garment-making, Textiles, Printing, and other popular crafts.

National certificates

In the colonial period, and first few decades after independence, the main TVE qualification was the City and Guilds for technical crafts, and Pitman's, or RSA, for commercial students. Subsequently, the West African Examinations Council (WAEC) took over the testing of crafts for many years before the Nigerian government established a special examination body, the National Business and Technical

Examination Board (NABTEB) in 1992, to take over the certification of all technical and business disciplines. NABTEB commenced the testing for the National Technical Certificate (NTC) and the National Business Certificate (NBC) based on the craft curricula developed by the NBTE. Today, according to Act No. 16 1985, only candidates from duly accredited programs would have qualified for such national examination. But as you will see below, this requirement could not be immediately enforced.

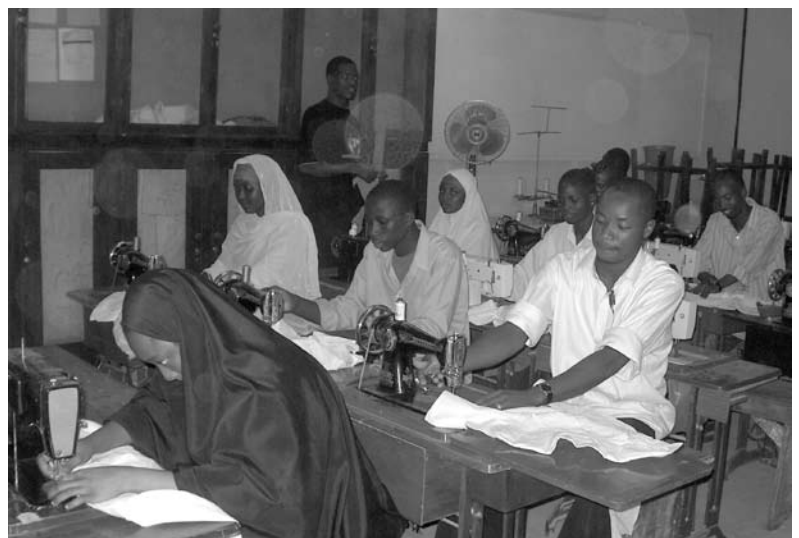
National diploma programs

The Nigerian polytechnics are tertiary institutions that offer a two-tier national program. The first is the National Diploma (ND), which admits secondary or technical college students with a credit level pass in SSCE or NTC/NBC. National Diploma programs have a two-year duration, and generally produce technicians for junior or intermediate supervisory roles. Candidates who pass ND at a minimum of lower credit level are eligible for admission into the Higher National Diploma (HND) program.

National Board for Technical Education's accreditation system

In Nigeria, accreditation is always based on individual programs. The

Limited teaching staff and facilities preclude the practical realisation of vocational electives in most [senior secondary] schools.



The entire TVE sector needs revitalisation through the introduction of modern instructional techniques, updating of curricula and extensive incorporation of ICT into curriculum delivery.

issue of establishment of an institution is a different matter. The Nigerian Constitution has placed education under the concurrent legislative list, which means that both the Federal and State governments can legislate and establish schools and enable them with laws or edicts as the case may be. However, educational standards fall under the exclusive power of the Federal government; hence the establishment of various supervisory agencies such as the National Universities Commission, for the universities, and NBTE for TVE outside the universities. The accreditation procedure for polytechnic programs is described elsewhere (Abubakar, 2002), and it is not intended that it be repeated. The technical college process, which is similar, is discussed next.

Standards and criteria for accreditation in technical colleges

Accreditation is defined as:

The recognition granted by a national agency to an institution or its programme that has met the minimum national standard laid down for that level of institution or programme. It is a process by which an institution periodically evaluates its educational activities in whole or in part and seeks an independent judgment to confirm that it is substantially achieving its philosophy and objectives, and there are indications that it will continue to maintain or improve on the standard existing at the time of accreditation. (NBTE, 1992, p.1)

Accreditation is primarily a peer assessment process. Its starting point is a curriculum that is based on the national minimum standards. NBTE develops minimum guide curricula by convening critique workshops involving the major stakeholders, including the concerned institutions, professional institutes, registration bodies, and employers. When a national critique adapts a curriculum for any program,

it becomes the national minimum standard, and can be used by any institution that is properly established. But such institutions must be assessed to confirm the availability of minimum requirements before commencement.

Evaluation procedure

Accreditation panels undertake physical inspection of staffing, instructional resources and facilities of the technical college. Two evaluation documents are administered. The first of these is concerned with the establishment of the institution as a whole, and covers evaluation of the institution, that is:

- establishment
- available structures
- utilities
- funding
- school management
- goals and philosophy
- library
- general education.

The other evaluation is concerned with individual trades, and assesses the provision made for curriculum delivery. It covers program evaluation, that is:

Academic matters: Goals and objectives of programs; curriculum structure and content; students' performance.

Physical facilities: Classrooms/studios; workshops; tools/equipment/training materials; staff office accommodation; student's industrial attachment.

Staffing: Teaching staff; technical support staff.

Implementation of accreditation in technical colleges

Implementation of accreditation in TCs proved far more difficult than first expected. Although the NABTEB started its NTC and NBC examinations in 1995, the first accreditation visits could only be undertaken in 1998. The delay was brought about by repeated requests to

the National Council on Education (roughly equivalent to former Australian Education Council) for deferment of the commencement of accreditation by the State Ministries of Education, who owned most of the TCs. Again, even after take-off, the exercise moved very slowly as only a few states at the beginning were ready to present their institutions for accreditation. But by the end of 2004, NBTE had managed to visit most institutions in all but two of the 36 states. Table I shows the general outcome of the exercise.

A total of 113, out of 154 registered TCs, were involved in the exercise. Only three of these institutions are privately owned. The Federal government also owns 19 of the colleges. These Federal institutions have recently been renamed Federal Science and Technical Colleges, to make their programs more comprehensive.

Discussion on the performance of the trades

The results show that out of 655 trades visited, only 284 could secure accreditation in the first instance. This translates to only 43% success rate, and in actual fact reveals a result that is not much different from expectations, judging from the candidates' achievements in the NTC/NBC examinations. Inadequate numbers of qualified staff, and non-availability of or ill-equipped workshops and laboratories, as well as gross deficits in required tools, equipment and instructional materials, accounted for most of the reasons trades failed to attain accreditation. The table also shows that the hard-core technical crafts are the most common, if not the most popular in the institutions.

It would also appear that crafts such as garment-making, leather and textiles works, that could be expected to enjoy wide patronage, are rather few in number. However, this is perhaps compensated by the active engagement of the non-formal sector in these areas. This also further underscores the need to find some means of accommodating the non-formal sector in the national TVE system. On the whole, the programs in TCs are rather too traditional, and pedagogical techniques tend to be very conservative. Indeed, the entire TVE sector needs revitalisation through the introduction of modern

TABLE I: Summary of programs visited for accreditation in technical colleges (NBTE, 2004)

S/N	Programs	Number of programs	Programs granted accreditation	% Granted accreditation
1	Agricultural Implement Mechanics	16	5	31.3
2	Blocklaying & Concreting	69	41	59.4
3	Carpentry & Joinery	54	26	48.1
4	Electrical Installations	95	50	52.6
5	Fabrication and Welding	53	12	22.6
6	Furniture Craft	34	20	58.8
7	Mechanical Eng. Craft	45	22	48.9
8	Motor Vehicle Mechanic	77	31	40.3
9	Painting & Decorating	25	7	28
10	Plumbing & Pipe-fitting	24	7	29.2
11	Radio and Television	38	19	50
12	Refrigeration and A/C	19	6	31.6
13	Business Studies	46	21	45.7
14	Catering Craft Practice	21	8	38.1
15	Foundry Craft	3	2	66.7
16	Ceramics	1	1	100
17	Garment Making	8	1	12.5
18	Graphic Arts	4	0	0
19	Auto Electric Works	1	1	100
20	Leather Trades	2	0	0
21	Vehicle Body Building	6	1	16.7
22	Instrument Mechanics	3	1	33.3
23	Printing Craft	7	0	0
24	Textile Trades	2	1	50
25	Machine Wood Working	1	1	100
26	Marine Engineering	1	0	0
	TOTAL	655	284	43.4

With the return of civil rule, the nation is making a great effort to regain her bearing and forge ahead.

instructional techniques, updating of curricula, and extensive incorporation of ICT into curriculum delivery. A number of initiatives have been embarked upon along this direction, as will be seen in the conclusion.

Funding problem

School managers and staff would always tend to attribute all problems to inadequate funding. Funding is indeed a problem. But so is lack of motivation, poor management culture, lack of training opportunities, poor quality of students, and a host of other characteristics of a distressed educational system.

Conclusion

A running theme throughout this article is the striking contrast between the lofty ideals of the NPE and the unpalatable realities on the ground. This sadly is a common feature of the entire Nigerian education system. Arguably, the distress had its origin in the long and barren era of military rule. With the return of civil rule, the nation is making a great effort to regain her bearing and forge ahead. The focus on accreditation, which is now noticeable in all sub-sectors of higher education, is a manifestation of greater awareness for progress and quality.

The first nationwide accreditation exercise to evaluate the ordinary trades in Nigerian TCs has revealed serious deficiencies in infrastructure, teaching staff and working tools, for a large number of programs. The performances of individual colleges are largely reflections of the qualities of their management, as well as the support of their proprietors (Ministries of Education). But the proprietor's role is critical in respect to funding, as these schools depend almost entirely on government subventions for their day-to-day running.

Funding is quite often not based on what the college requires to achieve its objectives, but what is allocated

to it in the budget – a budget that can barely meet all the competing requirements in health, water supply, agriculture, access roads, and countless other social services. This is also a budget that is quite often a victim of mismanagement. The demand to meet accreditation requirements is often seen as a nuisance which could explain the endless postponement of the accreditation process.

It is however delightful to see that a number of initiatives are being put forward to address the human and material resources problems in the TVE sector. These planned and ongoing interventions include the following.

- Nigeria Project to Revitalize TVE (UNESCO)

This program commenced in 2001, and has since established seven special staff development centres; organised train-the-trainer workshops in TVE management; initiated review of TVE curricula; and currently plans to undertake study to fully characterise the non-formal sector, preparatory to introducing NVQs. This is one area where the more developed countries of the Commonwealth, like Australia, can assist with their high expertise in national training and workplace assessment.

- The Educational Trust Fund

This special intervention agency for educational funding has just rolled out a three-year action plan to strengthen TVE. The activities planned aim to:

- upgrade workshop and laboratory equipment
- introduce modern instructional methods
- facilitate the review of existing curricula and the development of new ones
- accelerate certification of untrained teachers.

A similar intervention is the Petroleum Technology Development Fund, which focuses on training high-level manpower

for the oil and gas sectors. Ironically, this fund lays the strongest emphasis on university graduates, rather than craftsmen and technicians.

- Supervisory agencies for education
These are considering institutional accreditation rather than the limited program accreditation. There is also more interest in institutionalizing internal quality assurance, rather than expecting to enforce quality assurance exclusively from without.

These various initiatives, coupled with the new spirit of value re-orientation and reform, now pervading the country, and the government's anti-corruption posture, are expected to bring about a change of attitude in public sector management. More and more Nigerians are now confident that education will take its rightful place as the driving force for national development, and that the TVE sector has a key role to play in modern industry. In particular, the oil and gas industry, which accounts for 95% of Nigeria's foreign exchange earnings, and 25% of GDP, should benefit from a strengthened TVE sector.

The newly introduced Universal Basic Education is also likely to strengthen the quality of basic education (primary and junior secondary), the essential building block for TVE. Moreover, there is now greater emphasis on entrepreneurship development to help alleviate extreme poverty, and the concept of technology incubation has started to gain ground. More significantly, the societal perception of TVE is also changing, judging from the recent presidential directive to remove the ceiling on the career progression of HND holders in the public service. Therefore, the general prospects for the TVE sector are likely to be brighter.

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The societal perception of TVE is also changing.



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The coexistence of unemployment and the shortage of skilled workers in Hungary. What can vocational education do?

Introduction

Hungary, in Central Europe, is a country with slightly more than 10 million inhabitants and an area of 93 000 sq kms. It took the road towards a market economy from a planned (communist) economy in 1989, together with (or just a little sooner than) other Central and Eastern European countries. During this more than 15-year period, its economy has transformed, both in terms of ownership and structure. The technical conditions for production have improved and private property has become dominant. With regards to the economic sectoral distribution of employees, the service sector employs almost 60% of the workers, industry takes a little more than 34%, and a little more than 6% work in agriculture. In 2004, the per capita GDP on purchasing power parity at current price was 15 960 USD (HCSO, 2006a).

The transformation of the economic structure was not painless. It is still being felt. The employment rate has dropped from the earlier full employment. Compared to the 15 older EU member states, the employment rate between ages 15 and 64 is on average 10% higher than the approximately 57% in Hungary (HCSO, 2005b). Even so, Hungary is not in the worst situation among the new EU members.

In 1989 the qualifications of the Hungarian population were satisfactory. This was also true for other ex-communist countries. Although the ratio of those with a degree was behind those in the most developed countries, the general qualifications, especially of the young, were acceptable. In the year

of the regime change, 70% of the 14-17 age group took part in some kind of secondary education (HCSO, 1998c). At present, this figure is more than 10% higher.

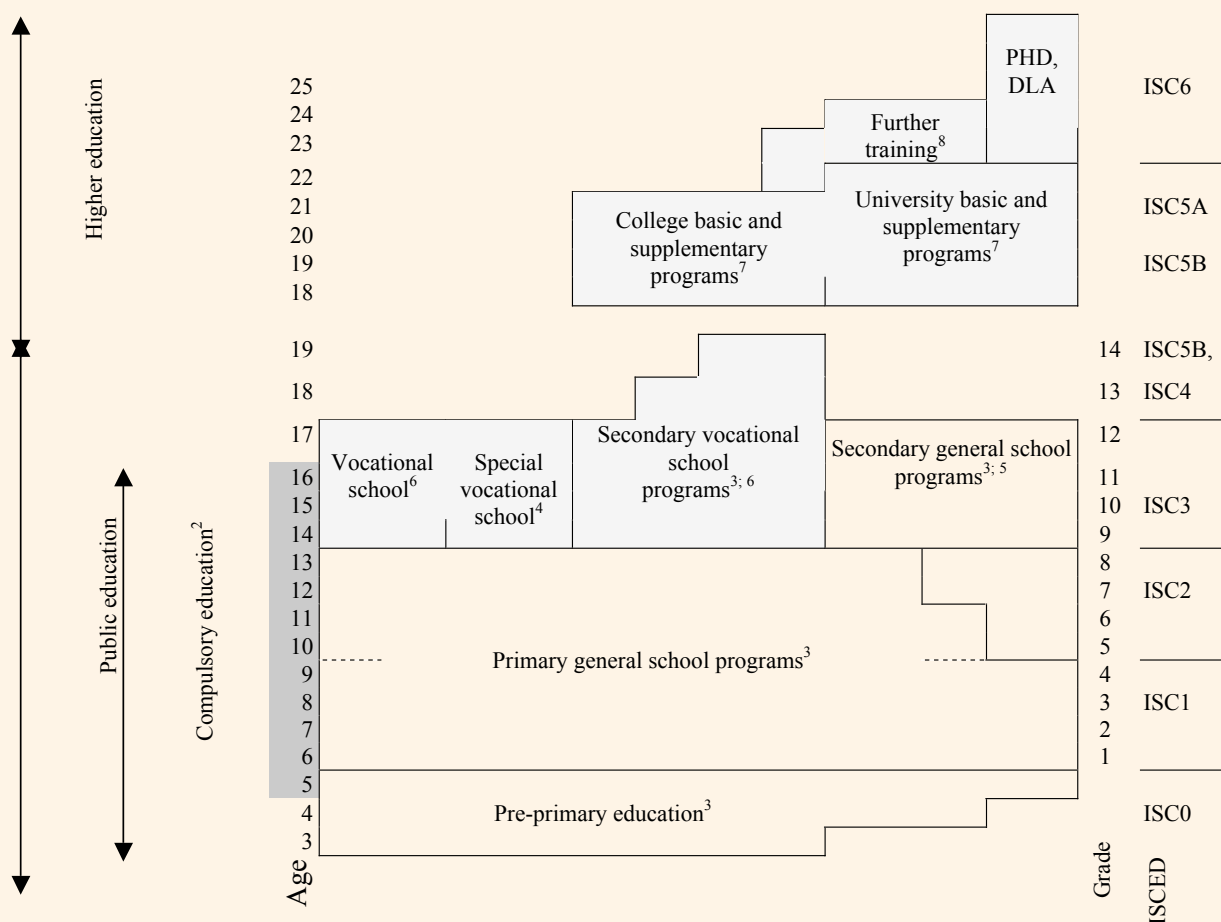
The increase in participation in education is the most spectacular in higher education. Here, despite the demographic decline of the age group concerned, in the years after the transformations, the number of students enrolling in universities has increased four fold. However, the general increase in participation did not mean an improvement in knowledge or professional skills in all cases. In Hungary, a tendency similar to that of older EU members is prevalent. The period of adolescence has expanded and the requirements within a given school-level have been lowered.

In the following, I am going to demonstrate which elements of the Hungarian educational structure offer professional qualifications. I shall also call attention to the fact that the increase in the general level of qualifications, at all costs, does not necessarily mean better professional grounding. Finally, I am going to elaborate on those currently introduced measures in Hungary which aim to increase the prestige of secondary professional training.

The structure of Hungarian vocational training

In Hungary, professional qualifications can be obtained both within and outside the school system. Acquiring the first profession is usually provided by training within the school system. In Figure 1, you can see the structure

Figure 1: The structure of the Hungarian public education and higher education system by age, grade and by ISCED level¹



- 1 Ministry of Education (2005, p. 7). The figure shows the typical age and typical length of programs in full-time education.
- 2 From 1998/99 academic year compulsory education lasts until the age of 18.
- 3 Pre-primary, primary general, secondary general and secondary vocational school programs also include the programs for pupils with special educational needs.
- 4 Special vocational programs mean vocational school programs delivered to students with special educational needs at ISCED2 level, vocational programs contain programs without requirement of graduation examination.
- 5 Secondary general school programs include the programs with 4 (5), 6 and 8 grades.
- 6 Vocational and secondary vocational school programs contain programs with requirement and without requirement of graduation examination.
- 7 College and university basic and supplementary programs.
- 8 Postgraduate specialisation programs: programs in ISCED5A level with requirement of graduation in college or university and with requirement of special attainments. These programs do not give a higher attainment level, but give a special qualification.

of Hungarian education, with shading highlighting those areas where professional qualifications can be obtained.

With regards to the categories based on ISCED-97 in Figure 1, vocational training can take place at levels 3, 4, 5 and 6. On the third level, those leaving with official qualifications can take part in vocational school programs, or

special vocational school programs. Special vocational programs ensure the vocational training of the mentally or physically disadvantaged. The number of these students is considerably lower in comparison with the other vocational programs.

The vast majority of those obtaining a qualification on the third level of ISCED

The entry of young people into the labour market is delayed.

come from vocational schools, which in fact means apprenticeship training. The duration of the training is four years. The first two years are spent acquiring general knowledge. Vocational training takes place in the third and fourth years. In the previous system, training in vocational schools only took three years, and vocational training began in the first year, in line with general subjects.

Vocational training also takes place in secondary vocational schools on the third level of ISCED. However, these schools, apart from a few special subjects for professional orientation, teach general subjects during the first four years, in the same way as secondary general schools. At the end of the fourth year, students take a graduation exam. (In the Hungarian system it is called a matriculation exam, but in the following, I will only refer to it as a graduation exam.) Success in the graduation exam is the pre-condition for entering tertiary education.

On ISCED3 level, neither secondary vocational, nor secondary general programs give official professional qualifications. To gain professional qualifications, students have to spend, depending on the profession and the kind of secondary education, one, two, or three years at the ISCED4 or ISCED5B level of secondary vocational school training. They can also apply to colleges, or universities, where they can get their qualification and a degree.

Secondary vocational and secondary general programs, besides the advantage of providing general programs, only differ in that vocational programs provide professional orientation training as well. Also they offer their students a professional qualification in a shorter period than they do to those coming from other secondary schools. In the previous system, vocational programs ensured both the graduation exam and an

official professional qualification in four years, so during this time, students acquired both general and professional qualifications.

In many cases, the fifth and sixth year of vocational programs are already accepted as tertiary vocational training. Tertiary vocational training provides credit points that students can use in case they wish to obtain a college degree. In tertiary education, Hungary is currently changing over to the unified EU structure of bachelor and master training. Earlier, there was college and university education, which meant that colleges provided what counts in the new system as a bachelor's degree, whereas universities did not offer a bachelor's degree, but after five or six years of training they gave a master's degree straightaway. In the new system, having a bachelor's degree is a prerequisite to obtaining a master's degree. Master's level does not mean leaving the school system for everyone, as PhD and DLA training offers high-standard learning opportunities for more students than earlier. These students usually do not have work experience.

You can see that all elements of Hungarian vocational training within the school system provide longer training than formerly, and therefore, the entry of young people into the labour market is delayed. There are debates, not only in Hungary, but in the European Union, about the advantages and disadvantages of this approach.

The 11% participation rate of the 25-64 year old population in lifelong learning compared to the 30-40% participation rate of top countries (HCSO, 2004), shows that Hungary still has to improve in this field. A certain part of education outside the school system, similarly to the one within, but leaving out elements of general knowledge from the training, provides professional qualifications that are listed on the State Training Register.

In Hungary, a whole branch of industry has emerged for teaching trades that are listed on the State Training Register. Among school system training institutions, state-owned ones constitute the majority. In training outside the school system, the main role is played by privately owned institutions. Owing to their direct interest in profit, these institutions quickly react to changes in economic conditions and strive to offer the most useful knowledge with respect to the labour market. Nevertheless, paradoxically, one of the main contracting parties of these educational institutions on the market is the state itself, which finances all or most retraining costs of the unemployed.

General qualifications and vocational training

The evaluation of vocational training is very difficult as its ultimate success is measured by the participants' success in the labour market. However, apart from the efficiency of participants' training, success in the labour market depends on the degree of economic development and the employment opportunities present in the economy.

One basic indicator of success is 'persons in employment by highest education obtained'. As Table 1 shows, in Hungary, similarly to developed countries, the basic education qualification of those in the workforce has risen over time. Whether vocational schools with a graduation certificate (the exam traditionally referred to as the matriculation exam) are better in all cases than vocational schools without a graduation certificate is highly debated in Hungary.

Table 1: Persons in employment by highest education obtained (%)

Educational attainment	1980	1990	2001
Primary school less than 8th grade completed	18.5	5.2	0.8
Primary school 8th grade completed	35.4	33.4	19.6
Together	53.9	38.6	20.4
Secondary school without graduation certificate, with professional qualification completed	16.9	24.4	28.8
Secondary school with graduation certificate completed (matriculation)	21.1	24.8	32.5
Together	38.0	49.2	61.3
University college completed	8.1	12.3	18.3
Total	100.0	100.0	100.0

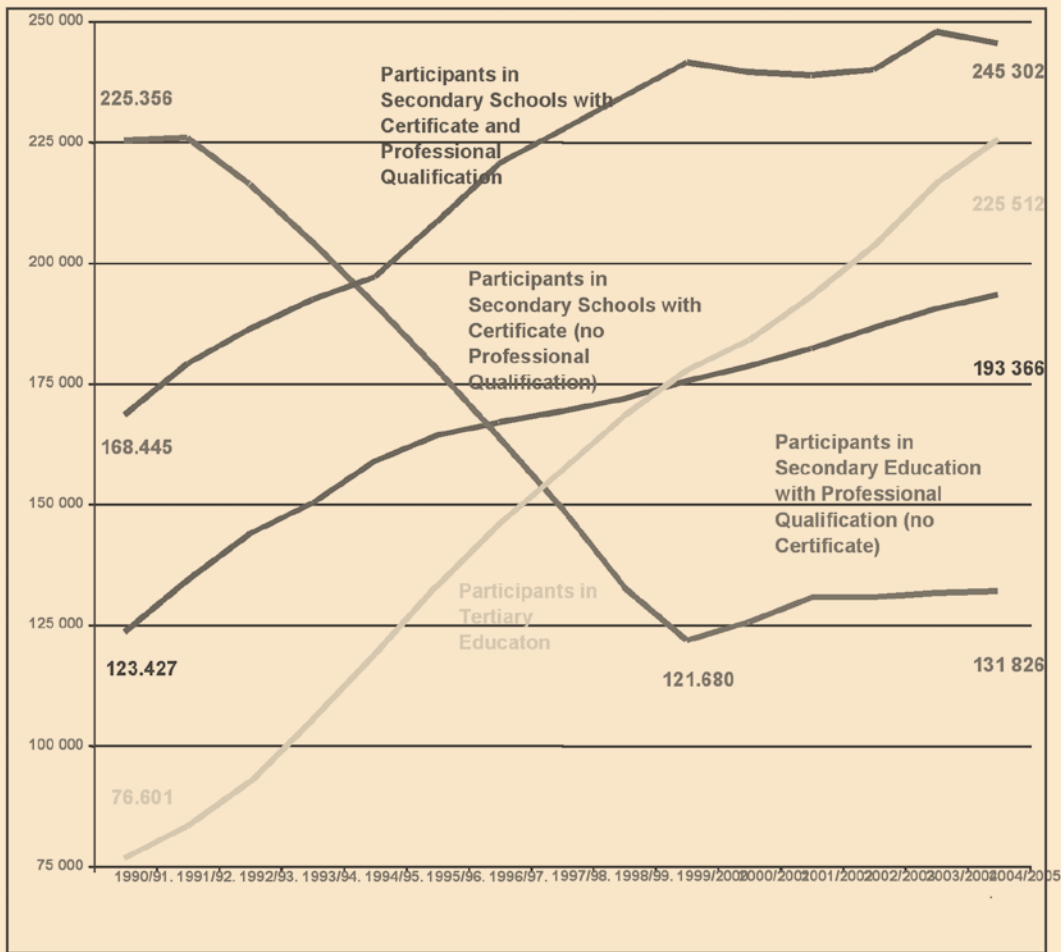
(Source: Census)

Table 1 shows that those with a maximum of a primary school qualification constitute an ever decreasing percentage of the employees. On the other hand, the number of employees with degrees and with a professional qualification, but without a graduation certificate, has increased. These are the ones who have participated in the programs of vocational schools or special vocational schools on ISCED3 level. The growth in the percentage of those with a graduation certificate has also been higher. Even so, this is where one of the most critical areas of secondary vocational training in Hungary is found.

Owing to the natural ambition to improve the educational level of the population, which is in accordance with the Lisbon Orientations of the European Union, at the beginning of the 1990s, schools offering vocational training programs with a graduation certificate were given more and more emphasis. At the same time, as a result of the *Vocational Training Law* of 1993, the formerly three-year-long training became a year longer, and the first two years were devoted to general education, apart from a few

Whether vocational schools with a graduation certificate are better in all cases than vocational schools without a graduation certificate is highly debated in Hungary.

Figure 2: Number of students in secondary education (1990-91 to 2004-05)



Source: Ministry of Education (2005)

increase their revenue based on the principle of normative financing. This is also how private institutions, which constitute the minority, can raise more income from tuition fees. The fluctuation in the number of students at the secondary level is shown in Figure 2.

The employment rate of those with a professional qualification, but without a graduation certificate has increased, while the number of those finishing this kind of training has decreased considerably.

This indicates that the growth in the number of

special orientation subjects. Actual professional training and practice only occurred in the third and fourth year. This triggered the natural reaction from students willing to learn a profession, that they preferred vocational schools with a graduation certificate, even if they could only obtain a professional qualification after an additional year or two. The opportunity of a graduation certificate was also attractive in itself, because with the help of this they could also enter tertiary education, where the demands of both admission and graduation lowered during the 1990s. On the other hand, state-owned vocational schools with graduation certificates were also strongly interested in increasing student numbers, since this way they could

students taking part in the programs of vocational schools with a graduation exam cannot be considered an entirely positive trend.

Those young people, who show talent in completing practical tasks, often find it difficult to meet the general knowledge demands of vocational schools with a graduation certificate. They might have to repeat a year, or they might drop out. On the whole, they lower the standard of vocational schools with graduation certificates. However, if they could do what they actually would like to do by attending practical training at the beginning of secondary school, they could become well qualified workers.

Practical training has had to face many problems since the political transformations. With the extinction of large state-owned firms (out-of-school training places), which provided an important provider of vocational training ceased. The establishment of new places for practical training is a gradual process. At present, the vast majority of practical vocational training is carried out in the workshops of schools, not at actual enterprises.

The consequences of the situation facing vocational training are unemployment and labour shortages in certain regions of the country (G. Tóth, 2006). Approximately eighty to one hundred thousand qualified blue-collar workers are needed by the Hungarian labour market, while about two hundred and thirty thousand unemployed people are in search of job opportunities (HCSO, 2006b). As a consequence it has been necessary to increase the prestige of vocational training without graduation.

From the autumn of 2006, measures increasing the weight of practical orientation in the first two years of vocational schools without a graduation certificate are going to take effect. Thus professional training is going to become the central task of the training. In addition to this, an element of the government's program called 'One step forward', and sources from the European Union, will support training in those trades experiencing shortages. Those who have a professional qualification, but undertake learning a trade experiencing shortages, can get their qualification free of charge. (Currently in Hungary, obtaining the first qualification is free of charge, but students are obliged to pay for mastering other trades.) From January 1, 2006, in order to encourage young people to choose those trades experiencing shortages, those attending such training after primary school get

a bonus that is equal to the 20% of the compulsory monthly minimal wage.

Programs supporting places offering practical training are also increasing the prestige of vocational training. Employers who organise practical vocational training courses get various allowances. Hopefully, this will promote vocational training to a level that meets the demands of the economy, and provides young people with jobs.

Conclusion

Although increasing the general level of qualifications is a desirable objective, it is not always in accordance with real needs. The number of years spent in school education have increased considerably, yet, neither this, nor the increase, in the level of average qualification means success in the labour market. To achieve this, you also have to take into consideration the demands of the labour market, and the individual abilities and ambitions of the workforce. In secondary vocational training, practical training has to play an important role in all grades.

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With the extinction of large state-owned firms which provided out-of-school training places, an important provider of vocational training ceased.



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Work-integrated learning options in Botswana

Introduction

The policy and legislative commitment of the Botswana government is evidenced by the Revised National Policy on Education (1994), the National Policy on Vocational Education and Training (1997), the *Vocational Training Act No. 22 1998*, and the establishment of the Tertiary Education Council and Botswana Training Authority. They have articulated the purpose of Vocational Education and Training (VET) as being able to meet the learning needs and aspirations of individuals and the economy at large. This includes the higher level knowledge and skills needed for growth and prosperity through economic development. There have been repeated calls for VET to be more responsive, accountable, relevant and accessible.

Botswana education system

The school system in Botswana is a three-tier system of primary, secondary and tertiary levels. The Department of Primary Education looks after primary education; the Department of Secondary Education looks after secondary education; and the Department of Vocational Education and Training (DVET) is responsible for technical and vocational education.

Students at secondary level complete two exit examinations – the Junior Certificate in Education (JC), and the Botswana Government School Leaving Certificate (BGSE), which is equivalent to O levels. Students are introduced to VET as a subject but it is usually not examined. The bulk of students complete JC, and proceed to BGSE, while some are not absorbed by senior secondary schools. The management

of technical colleges falls under DVET. Technical colleges have become a route to upgrade JC leavers. They provide technical education through vocational and academic modules which enables students to gain competences that could enable them to get employment and further training.

Relevance

In Botswana, technical colleges have, since their inception about 18 years ago, been on a development and growth trajectory towards being career and VET focused. This responsiveness shows an appreciation of the changing requirements in knowledge, skills and competencies in the world of work, and the implications for, and their application in, VET. Technical colleges also embrace a more overarching focus on societal goals and a critical citizenry that recognises and engages with a range of key stakeholders from government, labour, the private sector and social and community partnerships.

Curriculum development

Curriculum development that incorporates prescribed work experience units, should be informed by, and developed in partnership with commerce and industry. The decision to prescribe a block of experiential learning time in industry should be informed by the assessment criteria of the structured learning outcome components.

Work experience learning must be understood to be a learning and development experience that focuses on student needs. The experiential learning in the workplace must be carefully planned to accommodate the particular workplace environment

and its integration with the academic learning at the institution. Managing the learning process effectively, in preparation for, and during the experiential learning, needs to enjoy similar priority in terms of infrastructure and resource allocation, as is the case for the academic learning environment. This approach supports career paths that include the recognition of prior learning (RPL), and different combinations of education and training, as the basis for progression through recognised levels and across educational bands.

The Outcomes Based Education (OBE) approach places the primary focus and emphasis on the outcomes of learning and moves away from traditional, content driven, objectives. The result is a student centered approach that encourages self-confidence, reflections on learning, and the enhancement of critical outcomes (soft skills), as a direct link to the successful integration and application of contextual or discipline specific learning.

The implications of OBE for curriculum development creates opportunities for the re-design of curricula, that should promote new paradigms and approaches to teaching, learning, assessment, and service delivery facilitation. The role of the lecturer changes from provider of knowledge content to manager of the learning process. This facilitation starts with exit level outcomes and the associated assessment criteria. These outcomes cascade down to smaller enabling or sub-outcomes, each with its own assessment criteria that could evolve down to a unit standard as the smallest unit of learning.

Academic credit allocation now relates to notional hours of learning. Accumulation of credits can be

clustered into flexible modules for ease of progression and articulation.

The most positive aspect of OBE for work experience learning is that those specific outcomes within the qualification, which can be best achieved in the workplace, can be identified. The accumulation of these specific outcomes, along with the associated credits, and notional hours, should inform structured learning programs and timeframes for experiential learning. At the same time level descriptors, as currency for staged levels of complexity, can be infused into critical cross-field benchmarks as the basis for generic assessment criteria in any program discipline.

The above scenario presents many challenges and opportunities, and can only be realised if supported by adequate funding and dedicated resources for curriculum development. At the same time the core business activities of teaching and learning have to be maintained.

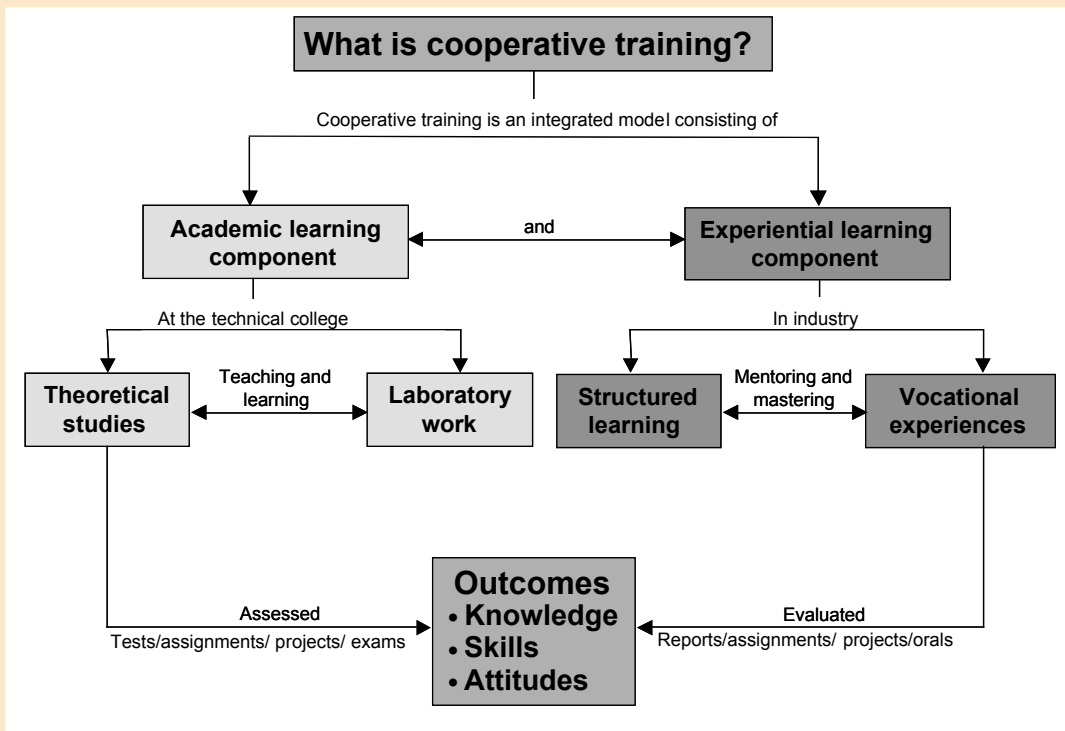
Quality assurance

The integrity of the programs is achieved through the auditing and review of quality learning provision. Quality assurance of service and program delivery represents an ongoing cycle of continual growth and development. Quality should be viewed as a transformational process of implementation, accountability, and the pursuit of excellence. A clear understanding of the definition of quality should underpin approaches to quality delivery mechanisms. The following definitions should be noted:

Quality assurance: The sum of activities/elements that assure the quality of products and services.

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Figure 1



Do the program outcomes ensure that the learner is able to integrate the knowledge theory through work-based provider linkages?

Cooperative training

Cooperative training provides an overarching framework for learning integration between the colleges and industry. Figure 1 shows the components of cooperative training.

Quality audit: Activities undertaken to measure the quality of products and services.

Quality control: Undertaken by the persons who make the product or deliver the service.

Quality management system: A combination of processes to ensure that the degree of excellence specified is achieved.

Transformation at the level of program delivery has become necessary for implementers to demonstrate program delivery in line with the new principles. The following questions specifically relate to work-integrated experiential learning and form part of the co-operative training partnership model.

What are the learning components (modules) that make up the program?

How is learner-centedness ensured in the delivery?

How are learners given feedback on their performance?

It is generally recognised that academic learning at the institution is planned, resourced and structured to ensure an environment that supports the student experience of learning.

Examples would include orientation, subject syllabi guidelines, assessment methods, timetables, lectures and teaching methodology, support intervention for access, bridging programs, libraries, laboratories, tutorship and extended programs.

As the workplace is not a learning institution, but rather a place for productivity and profit, it stands to reason that for work-based learning to be successful the obligation would rest on the establishment to ensure that a similar emphasis is placed on ensuring processes that track the student's development, learning and transition from the institution into the workplace, until the return to the institution at the end of the experiential period.

Orientation: Work preparedness and life skills program

Students receive instruction to prepare them for the world of work. Policy and ground rules clarify roles and the obligations of the students, colleges and industry in the cooperative training partnership. Students acquire job-seeking skills such as curriculum vitae writing, application procedures and interview and presentation skills. Other life skills such as time management, team building and communication are also introduced. Students have to be prepared for the workplace over a period of time.

Outcomes Based Education provides the opportunity to identify specific learning outcomes and assessment criteria that will generate activities and tasks which will allow students to demonstrate knowledge and competence across a range of learning areas. This learning process should attract notional hour credits when done correctly.

The placement process

The colleges market and promote cooperative education to commerce, industry and government, and secure accredited workstation placement opportunities. Learners are introduced to a range of companies and have to apply and secure their own placements.

Colleges facilitate the application and interview process as required, and students are selected by the companies after short-listing and interview processes. Placement is not an administrative exercise of allocating students to companies. It must be understood to be a learning experience for the students where they have to acquire knowledge, skills and competencies to prepare for, and secure, their own placement, as an outcome of the placement learning

experience. This placement learning process also has specific outcomes and assessment criteria along with credits to measure success. They have to meet minimum criteria, apply for the placement, and experience the short listing and interview process, which should lead to securing a placement. Mock interviews are part of the learning, which must be assessed formatively.

The acquisition of industry support to participate in the program requires resources, which must not be underestimated. The often-heard remark – ‘there is insufficient availability of workstations’ – is more often than not a reflection on the inability of institutions to provide sufficient and competent staff to market, and negotiate good quality workstations to meet the learning needs of the program. Once the company agrees to participate, competent staff is needed to facilitate the placement of the students into industry.

Learning program

Learning criteria and specific outcomes are documented to give guidance to the students and mentors on the work-based training and learning areas for the specific disciplines.

Students are guided on how the work learning experiences should be integrated and recorded. Assessment criteria and evaluation timeframes are documented and clarified.

The structured learning begins to unfold once the student has been placed. Although the learning program and obligations are clarified during orientations, the student has to be supported once in the learning environment. The relationship between workplace supervisor and mentor has to be monitored by technical staff. Problems associated with interpretations of the learning program, student and industry expectations, and

Learners are introduced to a range of companies and have to apply and secure their own placements.

Interrelationship between the parallel processes of:

- work experience assessment of the learner's performance***
- quality assurance of the educational management of the work-based learning operations and service delivery environment.***

actual workstation conditions, need to be supported so that valuable time is not lost, or morale dampened, both of which could negatively impact on the learning progress.

Visitation and monitoring

College staff visit students to ensure that their learning experience meets the expectations of all parties. The students, mentors and academic staff meet to discuss progress. Logbook entries, presentations, or any other agreed evidence portfolios or artifacts, might be used to assess student progress.

Visits to students at the workplace are planned carefully and by appointment. Frequency of visits will depend on geographical location, costs and related factors.

Assessment

Interim and continuous assessment occurs throughout the experiential learning period.

Assessment and evaluation is performed by mentors, college staff or external examiners. Logbooks, assignment reports, projects, presentations, or any other agreed evidence portfolios, might be used to assess and evaluate student learning. Marks, credits or records of OBE competence may be used to reflect student success and learning outcomes. Structured and recorded feedback by students and employers in industry can serve as a quality assurance tool for review and improvement.

In OBE, learning outcomes and assessment criteria relate to the nature of the knowledge, skills and competencies for the progressive development of the student as they move through the experiential work-based experience.

Each element has its own resource demands and accountability for outputs. This approach can now meaningfully address funding provision linked to specific learning outcomes.

Assessment is fundamental to the design of any curriculum. Assessment is a process of collecting and interpreting evidence in order to make judgments on the outcomes of pre-determined processes or procedures in a system. Evidence can be generated and collected at different times and places with the use of various methods, instruments, modes and even media.

A significant point of departure in presenting notions of assessment in this article is the interrelationship between the parallel processes of:

- work experience assessment of the learner's performance
- quality assurance of the educational management of the work-based learning operations and service delivery environment.

The outcome of the above assessment strategies will be dependent on the many stakeholders who have an interest and involvement in the successful performance of the students. These include the students themselves, parents, sponsors, employers, mentors, supervisors and lecturers.

The nature of such assessment does not seek to measure the actual quality of outputs in relation to teaching and learning performance, but rather to:

- establish the nature and extent of the quality management systems in place
- determine what policies, systems, available resources, strategies and targets exist for the development and enhancement of quality.

The effectiveness of such systems should be evaluated on the basis of evidence produced by the institution

that will provide indicators of success and effectiveness.

When work experience learning forms part of, and is integral to, the exit level outcomes of the qualification, then it is incumbent on the colleges to ensure that the assessment and evaluation of the student's learning experience are managed and measured with the same rigour and credits that apply to the theoretical component of the curriculum.

It is commonly the case that work-based learning is very often not well structured or meaningfully integrated into the curriculum. The quality and quantity of workplace provision are at times inadequate and the opportunities for maximising student learning and development are compromised.

Models for assessment of work placements

The complexity of work-based assessment has to be acknowledged and any attempt to propose that a simple pass/fail system would work would be in conflict with the spirit and objective of an outcomes based approach to assessment. A multi-model arrangement has to be negotiated among stakeholders and could include:

- employers' views of the quality and competence of student performance
- the student records of reflective understanding and the integration of work experience with academic learning
- the preparation of assignments and portfolio profiles.

Conclusion

Technical colleges in Botswana face many challenges as they strive to position themselves as a major player in the development of human capital through qualifications that are responsive to technological

developments and to economic and social development needs.

Work-integrated experiential learning programs are a specific learning intervention strategy that has significant benefits for students, academic staff and industry. The challenge is to ensure that quality and adequate resource provision will underpin service delivery and implementation so that the students can be guaranteed a vertical, value added, knowledge learning progression through the work-based learning program as part of the curriculum.

Work-based learning must be viewed as a learning program experience whereby the classroom is transferred to the workplace. Therefore the colleges and the Department of Education have an obligation to ensure that the necessary infrastructure and support to underpin successful learning outcomes are given the same priority and financial support as is done in a more controlled and managed environment for the academic programs at the colleges. Similarly work-integrated curriculum design must ensure that the assessment criteria and instruments can match the intellectual and pedagogical rigours of 'pure' academic programs.

Work-based learning must be viewed as a learning program experience.



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Career and technical education in the United States

Introduction

In the United States there is now common agreement that all youth need some education beyond high school to be economically self-sufficient. Thus, students completing secondary-level Career and Technical Education (CTE) programs should look to continue their studies, and often the nation's two-year community colleges are the most appropriate place. There is increased attention, therefore, to the ways that policy and practice can help CTE students enter and succeed in postsecondary education. This article explores current efforts to do so, describing the federal role in CTE and emphasizing the ways that, in the United States, state policy plays a prominent and integral role in developing and supporting pathways to postsecondary credentials.

Although the importance of postsecondary education for all students is clear, and most high school graduates do enrol in college at some point, persisting in college and earning a credential is difficult for many US students (Bailey, Alfonso, Scott, & Leinbach, 2004; Deil-Amen & Rosenbaum, 2002; National Center for Education Statistics, 2004). Yet research shows that it is the credential that yields long-term and significant wage gains (Marcotte, Bailey, Borkoski and Kienzl, 2005). Hence the emphasis in CTE policy and programming on creating clear pathways from secondary to postsecondary studies with the goal of easing the transition and supporting the acquisition of a degree or other credential.

Federal involvement in career and technical education

The Federal government has long supported CTE programs, starting with the *Smith-Hughes Act 1917*. Currently in effect is the *Carl D Perkins Vocational and Applied Technology Act*, which provides over one billion dollars per year for CTE. Since the 1980s, funding from this Act has been used by states and localities to support CTE at the secondary and postsecondary levels. Each state can decide how

to divide its allocation between the two sectors.

A specific CTE program, Tech Prep, was set into motion in 1990 when it was given its own funding stream as part of the Perkins legislation. The intent was for Tech Prep to serve as a vehicle for the integration of academic and occupational education, and to provide pathways from high school to college CTE programs. The federal resources are provided to consortia of high schools, colleges, and employers who together create occupational programs that encompass the last two years of high school and two years of postsecondary studies ('2+2'). The partners identify opportunities for aligning courses and curricula across the secondary and postsecondary institutions so that the programs usually provide the opportunity for high school students to earn some college credit for their high school courses, if they continue in the program at the partnering college. Currently approximately 7400 high schools offer at least one Tech Prep program and the vast majority of community colleges participate.

Unfortunately, recent research on Tech Prep has not been entirely positive. The US Department of Education has reported that only an estimated 10% of Tech Prep consortia offer the comprehensive two-plus-two model envisioned by proponents (Office of Vocational and Adult Education, 2003). A national evaluation of eight consortia found that students tended not to earn college credits through Tech Prep, sometimes because student participants were unaware that they could do so. In some of the consortia, Tech Prep students were more likely than the comparison group to transition directly to work after high school graduation and not enrol in college (Bragg, 2001). Analysis of the 1997

National Longitudinal Survey of Youth (NLSY) showed that participation in Tech Prep programs had a negative effect on college attendance (Neumark & Rothstein, 2003), while another analysis of the same dataset found that Tech Prep increased the likelihood that students attended a two-year college and decreased the likelihood of attending a four-year college (Cellini, in press). One study did find that Tech Prep students who remained in the program, and continued at the partnering community college, graduated faster than similar non-Tech Prep students (Sweat & Fenster, 2006).

With these mostly discouraging results from the Tech Prep investment, and the current federal focus on higher academic standards and accountability, policymakers have been reevaluating the federal role in CTE, and the Tech Prep program in particular. President Bush has proposed eliminating the entire Perkins funding stream, while still supporting some CTE funding for community college programs, in particular industry sectors. Some policymakers don't advocate such a drastic a step as doing away with Perkins, but want to abolish the Tech Prep stream specifically. Applying the current federal priorities to CTE means increasing its academic rigor in order to prepare students for success in postsecondary education, while making stronger connections to high-wage, high-growth occupations.

Since 2002, in selected programs in fifteen states, a new federal funding stream, the College and Careers Transition Initiative (CCTI), has been building upon Tech Prep to link secondary and postsecondary career and technical education. The goal of CCTI is to help community colleges, working with high schools and business partners, to create career pathways that lead from high school

Consortia of high schools, colleges, and employers together create occupational programs that encompass the last two years of high school and two years of postsecondary studies ('2+2').

States have begun to rethink the structure and focus of the education pipeline.

to two- and four-year degrees and technical careers. While some have questioned whether CCTI represents a real improvement over Tech Prep, the initiative's focus and specific goals do more clearly emphasize success in college. The five specific long-term outcomes are: decreased need for remediation at the postsecondary level; increased enrolment and persistence in postsecondary education; increased academic and skill achievement at the secondary and postsecondary levels; increased attainment of postsecondary degrees, certificates, or other recognized credentials; and increased entry into employment or further education.

CCTI focuses on career pathways as the main strategy for pursuing its goals. Career pathways have therefore become a model for connecting secondary and postsecondary studies, as well as engaging employers in CTE. While there are varying definitions with different emphases on youth transitions versus adult learners, the federally funded CCTI defines a career pathway as a 'coherent, articulated sequence of rigorous academic and career courses, commencing in the ninth grade and leading to an associate degree, an industry-recognized certificate or licensure, or a baccalaureate degree and beyond. A career pathway is developed, implemented, and maintained in partnership among secondary and postsecondary education, business, and employers. Career pathways are available to all students, including adult learners, and are designed to lead to rewarding careers.' (CCTI, 2005).

State CTE trends

Perkins and other federal funding may be an impetus for reform, but the United States' long history of decentralized education means that much of

the work in creating an integrated educational system that encourages postsecondary access and completion falls to individual states. The Federal government provides some funding for CTE, but aside from broad parameters and goals, provides little guidance as to program models or implementation. Directing practice and developing mechanisms to smooth CTE students' paths into postsecondary education are the job of the states. States have begun to rethink the structure and focus of the education pipeline, including the relationships between high schools and colleges, academic and applied courses, and educational credentials and the labour market.

In most states, the secondary and postsecondary education sectors exist as two separate systems. The 50 states show a diversity of policies with regard to the level of centralization of education systems and the extent of coordination of systems. Efforts to smooth student transitions into postsecondary education have led to a rethinking of these state systems. Thirty states have created P-16 (preschool through postsecondary) commissions that focus on the continuum of education in which students engage (National Governors' Association, n.d.). Rather than viewing each step in isolation, the goal is to reconceptualize education as a pathway spanning high schools, colleges, and workplaces. Policymakers expect that connecting formerly separate facets of the education system will facilitate students' transitions into college and careers. In addition, states have sought reforms that will better prepare students for postsecondary education. Such reforms include the adoption of more stringent high school graduation requirements and graduation exit exams, and increasing the availability of rigorous, potentially college-credit-yielding

programs such as Advanced Placement and dual enrolment.

Career pathways

Although career pathways are created through institutional partnerships, and may receive some federal assistance, state policies can help or hinder their implementation. For CCTI states, as well as other states seeking to create smooth secondary-to-postsecondary transitions for CTE students, state policy has become a focus of reform efforts. Often unintentionally, state policies may inhibit the creation of career pathways by creating disconnects among high schools, community colleges, 4-year colleges and universities, and the labor market. However, states also can encourage career pathways.

At least seven states explicitly use the term 'career pathways', but the extent to which they span the secondary and postsecondary sectors, or emphasize one or the other, varies. In Delaware and West Virginia, high school students must select a career pathway and take sequences of courses in that pathway. The Missouri Department of Elementary and Secondary Education has implemented six career paths to provide context for career exploration in elementary and middle school; the creation of a career plan in high school; and a plan of postsecondary study that includes articulation or dual credit. Kentucky characterizes its career pathways initiatives as a new systemic framework, not a program, to improve workforce development. While the state has outlined career pathways starting in the 9th grade, the initiative is overseen by the office of the chancellor of the community and technical college system. The State of Maryland advocates the use of career clusters (broad groupings of occupations developed by the US

Department of Education) and career pathways in curriculum and educational programming. North Carolina has divided occupational groupings into ten career pathways, and has outlined fifty-three career maps within those ten pathways that outline high school course sequences, as well as postsecondary and career options.

Dual enrolment

Another reform in which many states are engaged is the switch from an articulated Tech Prep model of CTE pathway, to a dual enrolment model. In the former model, high schools and colleges work together to create articulated sequences of courses. For example, a college offering an associate degree in culinary arts may collaborate with a high school creating a culinary arts program. In looking at syllabi, the two institutions may determine that two semesters of high school culinary arts courses could be based on the college curriculum, so that the high school students would gain the same competencies that they would if they took Culinary Arts 101 at the college. The two institutions may come to an agreement that any high school student who completes the two courses and matriculates into the college may enrol directly in Culinary Arts 102.

Because research indicates that Tech Prep has not uniformly encouraged postsecondary access and success, many programs are replacing articulated Tech Prep with dual enrolment opportunities for CTE students. In dual enrolment programs, high school students enrol directly in college courses, either on a college campus or in college-sponsored programs at the high school. The courses are college-level, usually using the college syllabi and textbooks, so high schools and colleges do not need to engage in a process of matching

State policy has become a focus of reform efforts.

Technically oriented dual enrolment programs can address both types of coursework by building program pathways that include college-level academic and college-level technical classes.

competencies. The college credit earned through dual enrolment courses is immediately placed on students' college transcripts. Participating students do not have to later matriculate at the sponsoring college to gain the credit.

Traditionally, dual enrolment programs have focused on academic courses, such as English composition or statistics, for advanced students. But the programs are being increasingly seen as a useful model for offering technical coursework. Many high schools do not have up-to-date equipment for CTE; college partners often do. Moreover, many high-wage, high-growth technical fields require high levels of academic skills. Technically oriented dual enrolment programs can address both types of coursework by building program pathways that include college-level academic and college-level technical classes.

As with the creation of career pathways, state policies play an important role in the expansion of dual enrolment to CTE students. As many states raise their graduation standards, for example, students may find that they have less room in their schedules for electives, including CTE dual enrolment courses. In addition, a number of states have policies clearly delineating student eligibility for dual enrolment; many require students to be relatively academically advanced (Karp, Hughes, Fermin, and Bailey, 2005). These requirements are particularly troublesome when dual enrolment is targeted at CTE students. CTE students are sometimes disengaged from traditional academic work, or learn better when academics are placed in context, and therefore could benefit mightily from technical dual enrolment—and yet their previous academic performance may prevent them from participating.

State policies can also encourage technical dual enrolment, however. Some states have policies that support the inclusion of a broad range of students in dual enrolment. Other states have implemented eligibility requirements that provide for the inclusion of students who do not have strong grade point averages in academic coursework. Still other states have policies creating, supporting, and funding dual enrolment programs expressly for CTE students. For example, Iowa has provided special funding for career academies, which are essentially CTE dual enrolment programs. State legislation defines a career academy as a program of study that:

- combines a minimum of two years of secondary education with a postsecondary career preparatory program in a nonduplicative, sequential course of study that is standards-based
- integrates academic and technical instruction
- incorporates work-based and worksite learning where appropriate and available
- uses an individualised career planning process that involves parents
- leads to an associate degree or postsecondary diploma or certificate in a rewarding, high-skill career field.

Conclusion

It is positive that some current federal and state reforms—rigorous curricula, the creation of pathways—mirror each other. Dual enrolment is certainly one program that is receiving great interest at the national and state levels. But the fate of Perkins, and of Tech Prep, is still undecided. Certainly many are fighting the possible loss of federal support for CTE. Yet the new models—CCTI and technically-oriented dual enrolment—so

far lack research on their effectiveness. Studies have begun that should show whether participation in these programs improves college-going and college credential completion. We at the Community College Research Center will soon begin analyses of data from Florida and New York that will compare outcomes for CTE students who do, and do not, participate in dual enrolment. What seems clear is that the only viable CTE programs are those that are shown to prepare students for, and lead to, postsecondary credentials.

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Community-based senior high schools in Taiwan

Introduction

Taiwan started to promote community-based senior high school in 2001. It involved a variety of public and private vocational high schools and some other high schools. The promotional period is divided into three stages: the preparation time (2001-2002), the medium range plan (2003-2008), and the long-term vision (2009 and later).

The goals of the community-based senior high school are to:

- fully combine community educational resources
- construct multiple suitable educational environments for students
- equip students with various aptitudes, minds and abilities.

Taiwan hopes to:

- promote quality postsecondary education all over the country
- reach the goal – ‘school community, community school’
- develop study communities
- put a lifelong learning society into practice
- establish the base for a twelve-year elementary education of the future.

Background

Entering the 21st century, the world has undergone fast and tremendous changes in politics, economy, and culture. It is a highly competitive era, full of opportunities and challenges. The more one can integrate resources and seek cooperation, instead of opposition, the more competitive one is.

Education is the foundation of social reform, and educational objectives must meet social needs. Nevertheless, in

the educational system in Taiwan, the differentiation of general education and career and technical education begins too early. It begins at the start of senior high school, and there is no academic interchange between these two types of education. Besides, elective courses are generally lacking in our high school curriculum.

These factors not only make it difficult for schools to provide adaptive environments for the growth of a broader range of students, but also stifle students' ability to think creatively. Moreover, due to the uneven geographical distribution of senior high schools, overlapping or inadequate educational resources have become a serious problem. This leaves the educational system unable to meet the needs of adjacent communities and thus it forces many students to go to a school outside their school districts. As a result, there has been a waste of time, energy, as well as social costs. Therefore, there is an urgent need to popularise community-based senior high schools throughout the country.

According to the statistics of the Department of Technological and Vocational Education, as well as the Ministry of Education, there are 487 public and private senior high schools participating in the 45 ability-adaptive learning communities throughout the country. All the public senior high schools throughout the country are ordered by the Ministry of Education to join the project.

What are community-based senior high schools?

The goals of community-based senior high schools are to:

- establish ability-adaptive learning communities
- equalise educational environments and resources
- allow senior high schools in the community to develop specialisation
- raise the competitiveness of senior high schools.

To realise these goals, communities are encouraged to pay attention to school education and take part; and schools are encouraged to open up their educational facility to create a community environment for lifelong learning. To achieve these goals, four important tasks are involved. These are:

- Clearly delineating the area of communities.
- Creating ability-adaptive learning communities, including general education, career and technical education, gifted education, and special education for students with mental and physical disabilities.
- Promoting equal-quality communities, including curricula; tackling the differences between public and private senior high schools; enrolment capacity; and enrolment needs assessment.
- Strengthening the interaction between schools and communities, for example, providing further education, continuing education, and recurrent education.

Why promote community-based senior high schools?

- There is no academic interchange between general education and career and technical education, and differentiation of both begins too early. Consequently, students are not provided with opportunities for adaptive development and flexible connection to prepare for higher education.

- Uneven geographical distribution of senior high schools has been a serious problem causing overlapping or inadequate educational resources.
- Overextending of enrolment capacity in senior high schools is becoming a serious problem rendering school education unable to meet the educational needs of adjacent communities and causing tremendous social costs.
- To respond to the impact from the outside, efforts to promote community-based schools are badly needed in order to enhance educational competitiveness.

Implementation results and problems study

Community-based senior high schools have been implemented and promoted for four years since the preparation period in the school year of 2001. By accumulating experience over the years, the idea of community-based senior high schools has taken root and started growing. To promote the policy, the Ministry of Education did a satisfaction study, throughout the country, that surveyed junior and senior high school employees, teachers, students and their parents. In the survey, stratified sampling was taken in proportion to the number of students in the ability-adaptive learning communities. The survey results are shown in Table 1.

Ability-adaptive learning communities include: general education, career and technical education, gifted education, special education for students with mental and physical disabilities.

Table 1: Results of satisfaction with the policy of ‘enrolment in a nearby school’ (%)

Variable	2003	2004	2005
Satisfaction with the policy of ‘enrolment in a nearby school’	72	77	78

Source: “80% of Parents say Yes to Community-based Senior High Schools” 2005. *United Daily News*.

Table 2: Satisfaction with variables related to governmental policy of promoting community-based schools (%)

Variables	Satisfaction		
	School teachers and employees	Parents	Students
Being able to shorten the time of going to school and going home	92	88	84
Being able to provide diversified curricula	65	75	67
Being able to help students choose fields of study that are in line with their aptitudes	63	76	67
Being able to lower learning pressure for junior high school students	61	75	70
Being able to help senior high schools develop their specialties	72	70	54
Being able to help enforcement of the 12-year compulsory education	66	67	54

Source: "80% of Parents say Yes to Community-based Senior High Schools" 2005. *United Daily News*.

• The myth of 'star senior high schools' is gradually being broken. For example, in Tao-Yuan County, it has become less frequent for gifted students to leave the county to study in a 'star senior high school' in Taipei. Instead, most of them go to the nearby National Wu-Ling Senior High School. According to statistics over the years, this practice has not only saved a lot of commuting time, energy, and expenses, but has also produced better all-around students.

• Thoughtful plans and matching procedures, ahead of time, have enabled the cooperating schools to complement one another.

The Ministry of Education has authorised National Ping-Tung University of Science and Technology to survey employees, parents, and students throughout the country on satisfaction with variables related to governmental policy of promoting community-based schools. Table 2 shows the most recent results that were released by the Ministry of Education.

After consulting the above statistics and the contents of The Definition of Community-based Senior High School and 'Why Promote Community-based Senior High School?', an assessment of the achievements, and a problems study of the community-based senior high schools can be analysed.

Achievements of implementation

Since the policy of community-based senior high school was implemented, several achievements have been recognised.

- It has facilitated positive interaction among cooperating schools, enabling each to contribute its best and support one another.
- For schools of different natures, the regional cooperation of curricula has been able to meet the learning needs of students with special talents or different aptitudes.
- It has gradually integrated the educational resources in the community and established a positive interactive relationship.
- Through rewarding private schools and supporting public schools, the policy has increased the competitiveness of the schools and significantly enhanced the quality of secondary education in the community.
- The results of the policy implementation have gradually laid a good foundation for the 12-year compulsory education.

Problems study

Based on the practical aspects and responses from the schools interviewed, implementation of community-based senior high schools is facing the following problems (Ming-Hua, 2005).

- Plan-making procedures are too complicated and forms to be filled out are too many, wearing out the authorised persons.
- No schools have assigned special personnel to handle the task. Most schools only reduce the classes for the participating teachers. As a result, the turnover of authorised persons is too frequent, making the transfer of experience very difficult.
- Budget appropriation is too slow. A number of times the budget appropriation has not come in until the projects have been halfway through.
- The budget has been decreased annually, and some projects that had been doing well were forced to stop because of this decrease.
- There should be flexible accompanying measures to promote community-based senior high schools. There should be more specific policy goals and implementation measures stated in order to dissipate the anxiety and doubt surrounding the policy, and to consolidate a common ground for better promotion of the policy.

Planning of community geographical areas, and ability-adaptive learning systems, is faced with multiple problems (Kun-Chung, 2003).

- Planning of community geographical areas is based on the principles of separation and connection of each community's geographical area, with the integrity of geographical area and living circle as the

main consideration. However, implementation regarding the area between two communities is still faced with controversies over how the communities should be divided and whether or not some overlapping is allowed. These are issues that require more study.

- Some far-off areas have too few schools, as well as an uneven distribution of senior high schools, making planning an ability-adaptive learning system difficult. If the number of schools is used as the criterion, the learning community will be too big in area, the distance between schools will be too far to travel, and regional cooperation of curricula will be difficult to implement. When the learning community is too small, the number of junior high school graduates will be too small, and the number of senior high schools will not be enough to include general education, career and technical education, gifted education, and also special education for the physically and mentally handicapped.
- The definition of 'enrolment in a nearby school' is unclear and has incurred some doubts and criticisms from parents from outside the community. Besides, a guaranteed number of students for the community is difficult to implement and is against schools' developmental objectives.

Problems of ability-adaptive curricula and turned comprehensive senior high schools

- Every senior high school is asked to simplify its personnel. Under the circumstances, a comprehensive community-based senior high school must have ability-adaptive teachers as well as flexible teachers, but a

There are problems in implementing community-based senior high schools.

There are also strategies for improvement.

balance between them is hard to strike.

- The crowding-out effect that adjustment of core curricula of postsecondary education has on recruitment of teachers in a turned comprehensive senior high school should be resolved.

Regional cooperation on curricula has problems

- To schedule time and place for interschool common classes is difficult.
- Cooperative courses in a community are hard to negotiate, and management of students is tough.
- Integration of community resources, inter-library cooperation, and management of sharing teaching facilities among community schools is not easy.
- Opening (attending) classes in other schools takes time and energy and costs more money, especially for the handicapped students.
- Limited by time, teacher availability and other related factors, some courses don't have much independence, and recruitment of teachers and scheduling of classes is not easy. As a result, some classes cannot be offered as many times as necessary.
- Under the framework of existing curriculum, weekly class schedules are already busy. Therefore, there is hardly time to devise any creative courses.

Promotion of foreign languages is difficult

- Currently, there are no laws allowing public schools to hire native speaking teachers.
- Limitation on hourly teaching pay, NT\$400 per hour, has made it

difficult to recruit well-qualified teachers.

- Scheduling of new classes has been difficult, causing some courses to stop as a result.

Strategies for improvement

- Step up marketing and promotion. Actively promulgate the idea of community-based senior high school to all the students, parents, and teachers in a school, as well as residents of the community. Make them fully understand the purpose of a community-based senior high school and why the idea should be promoted.
- Encourage each learning community to make the most of its speciality and to pursue excellence. Use the achievements in diversification, equal quality, and good quality, to persuade parents to accept the idea and make them willing to let their children enrol in a nearby school.
- Increase interschool cooperation in the community. By taking and opening classes at other schools and distance learning, a learning community can make the most out of the human and material resources in the community, in an effort to offer as many diverse courses as necessary to students and create an environment conduit to ability-adaptive learning.
- Moderately adjust the ability-adaptive learning system to make good planning for delineation of the communities' geographical areas. Allow some overlapping in the area between two communities.
- A more generous budget and prompt appropriation in accordance with annual plans. Rewards from government should also be given to well-executed areas.

- Set up a standing unit of ‘community-based senior high school study groups’ to:
 - collect related problems
 - find out solutions to problems through empirical research
 - devise appropriate self-assessment and review mechanisms
 - establish various models to promote the idea of community-based senior high school.

Conclusion

As a result of the promotional efforts of the Ministry of Education, the policy of community-based senior high school has gradually gained the support and recognition from senior and junior high school teachers and parents. The implementation results have also been recognised.

However, the participating senior high schools have encountered some difficulties that require speedy attention and assistance from the education authority. In order for the community-based senior high schools to operate smoothly in the future, school teachers, employees and parents, should all be responsible; but no one should be more responsible than the educational policy-makers. In this regard, the government, while planning implementation strategies, should listen to a variety of suggestions in an attempt to come up with the best and most practical policy. During the implementation process, constant reviews of problems and difficulties should be done, and those identified immediately improved and resolved, so that the policy of community-based senior high school has a better chance of success.

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In order for the community-based senior high schools to operate smoothly in the future, school teachers, employees and parents, should all be responsible; but no one should be more responsible than the educational policy-makers.



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The journey from school to workplace: A snapshot of the Canadian perspective

Introduction

It is predicted that with continual global, economic, educational and workplace changes, Canadians will experience multiple career transitions across their working lives (Moses, 1997). While parents do have a role to play in helping young people to make a successful adult transition, secondary schools are key in preparing the next generation for their future employment years. Of particular concern are those learners who wish to pursue an alternative or non-traditional vocational stream in the high school years (Schuetze & Sweet, 2003). This article presents a snapshot of Canadian research on the transition between school and work, and concludes by offering two key suggestions for readers interested in supporting teachers and learners through this transitional process.

The school-workplace transition

Cairns, Woodward & Hashizume (1992) asked employment counsellors and young people about their views on the transition-to-work. Interview results found each group reported on the importance of developing employment skills, the benefits of gaining employer perspectives on diverse workplace environments and the critical importance that family, friends, and professionals can have on employment futures. The researchers noted, however, that youth reported they received little information to help them in their personal transitions from school-to-work. Even though school counsellors had 'tried to tell us at school ... they attempt to prepare you for this' (p. 235), learners said they did not find these effective or useful strategies. Youth did offer several

recommendations that would help them to learn how to adapt, cope and respond to the potential impact of employability skills at this time in their lives. These include a need to 'learn by doing, not by being told what to do – a common principle in adult education which seems to have been overlooked in many classrooms' (p. 239). Further, career education needs to be taught from richer on-the-job training opportunities and by offering expanded high school co-operative education programs. Left unresolved, the personal, economic and societal effects may result in lengthy periods of youth unemployment and multiple personal difficulties.

Donaldson, Hiebert, Pyryt & Arthur (1998) provide a comprehensive review of the literature on the transition from school-to-work. They reaffirm that new career development messages need to be given to youth as they prepare for work. Careers might better be addressed through a life perspective referred to as the (High 5!) career philosophy for young people (Redekopp, Day & Robb, 1995). This philosophy states that change is constant. Emphasis is placed on the experience of a career 'journey' rather than a specific occupation. Following a personal interest often leads to enjoyable job opportunities. Preserving learning is a desirable event over the course of a lifespan. Building a strong set of allies and personal networks and maintaining contact with them over time can offer tremendous advantages to youth in today's marketplace. By developing and working with positive role models; engaging in enjoyable and diverse activities; seeking safe and personally rewarding environments;

youth can begin to identify with an employment approach that is more than just a job, and offers a strong learning perspective that can be explored within the secondary school years. From these types of messages, young people are able to bring a sense of self-confidence and self-esteem to their workplace, while developing more self-knowledge, learning and competence at their work.

Expanded directions

Vocational education needs to incorporate their practical experiences with these research findings. The two suggestions mentioned below are currently used in Canada with adults but could offer tremendous benefits to secondary or internship students within Vocational Education and Training systems.

Online communication opportunities

Vocational education teaching and learning environments might explore the addition of an online communication component for students as part of any internship experience. In Canada, there are an increasing number of high schools, colleges and universities which offer asynchronous computer-mediated courses that provide open discussions and peer learning via computer at anytime in any location.

Closer examination of this type of learning indicates that transition students, like adult learners, present at least two learning requirements. On the one hand, they need to participate in a structured learning experience which is often accomplished by just being in a workplace environment and responding to work demands. But, they also require time to identify, reflect, and discuss their learning experiences with peers from other workplaces. By exchanging their stories with one another, learners move

beyond a surface level to a deeper approach that offers opportunities to reflect, describe, compare, differentiate, and self-assess their learning through exchange with others. As well, the process of learning at work often occurs for students at a different pace, scope and depth than that of traditional classroom environments. Missed learning opportunities can occur in a work environment because students are often individually-placed, are integrated with workplace details, do not have access to peers, and do not have a teacher or facilitator present to readily engage in a learning episode. The results are gaps between what students know, what they are expected to learn, and what this learning experience means to them.

If an online communication system were established in the form of a simple listserv, students, teachers and others could engage each other on a daily basis. They would have the opportunity to engage in feedback about their workplace learning experiences outside work hours. This could be done as an informal learning experience, three or four times a week from home or the office, if computers could be made available to learners. By relating their experiences and exchanging stories with a purposeful approach, students develop a sense of what work means for them, what the strengths and limitations of different types of work are, and the ways that work can serve personal and professional goals. They have the opportunity to participate in the work experience while reflecting on how work can serve as an important function within their life experience. All of these are benefits over-and-above earning school credits.

In 2002, the Vancouver School Board, British Columbia, Canada, completed a needs assessment of adult students, teachers and administrators. One of

Transition students present at least two learning requirements:

- a need to participate in a structured learning experience***
- time to identify, reflect, and discuss their learning experiences with peers from other workplaces.***

...the reality exists that young Canadians must develop a portfolio of skills to remain current in the workplace.

the recommendations from this study was that an online system for high school learners would enable support between students as they completed their secondary school requirements while maintaining employment. This form of adult peer communication was seen as an effective way to promote excellent student learning patterns. The Master of Teaching Program, University of Calgary, Canada, has international teaching students who frequently exchange their informal learning experiences with peers in other countries. The graduate-level Workplace and Adult Learning Program, Faculty of Education, University of Calgary, Canada, is built around the notion of online communication and the tremendous effect this has in achieving online teaching and learning goals for learners and the faculty. In each case, a central component for the success of these programs is that each has a community of learners built upon patterns of formal or informal virtual communication among learner groups of any age.

Employability skills

Although education remains a provincial jurisdiction in Canada, the reality exists that young Canadians must develop a portfolio of skills to remain current in the workplace. In 2000, the Conference Board of Canada defined a skill inventory necessary for present and future national workplace market needs. These workplace skills fall into three categories – fundamental skills, personal management skills, teamwork skills.

Fundamental skills are required to prepare for the world. They include essential communication skills, knowledge about how to manage information, the use of numbers for decision-making purposes, and an ability to think and solve problems.

Personal ability to demonstrate positive attitudes and behaviours, to be responsible, and to be able to be adaptable and learn continuously are identified as personal management skills. They offer learners future opportunities and growth within the workplace. Teamwork skills are described as competencies needed when working with others on projects and tasks. Collectively, these three sets of skills are excellent guidelines for learners to think about as they establish their workplace interests, needs and development. More information about this inventory is available through the Conference Board of Canada's website at: www.conferenceboard.ca/education

All schools, including VET institutions, need to reinforce these skills by exploring how such an employability skill set can be used for local, national and global economies. While further guidelines for tailoring this skill set to learners are provided on the website of the Conference Board of Canada, the importance of emphasising these skills with students can not be overemphasized. It would be especially useful if teachers could invite students to explore these skills and ask students to create their own inventory of employability skills from school to the work environment. This type of workplace preparation is critical to students as they build a personal toolbox of skills to prepare for their future work environments.

Summary

This article has provided a snapshot of research on transitions in Canada from the perspective of youth preparing for the school-to-work transition. While this is a critical period in the life of young people, there are ways to address this issue that are very different from traditional educational methods. Online communication programs and

employability skills identified by the Conference Board of Canada are two recommendations that might be considered, in light of research findings, by VET facilities interested in new approaches.

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Evaluation of the UK's Increased Flexibility Program for 14 to 16 year olds

Introduction

In the United Kingdom, over the last few years, a considerable number of important changes have been taking place in relation to the provision of vocational education for the 14-19 age group. The key changes have included the following.

- The introduction, in September 2002, of an Increased Flexibility Program, to create enhanced vocational learning opportunities for 14-16 year-olds, with flexibility in the curriculum, in qualification types, and in location of study.
- The introduction, also in September 2002, of 'applied' or Vocational GCSEs (General Certificate of Secondary Education), which are intended to have 'parity of esteem' alongside the more traditional academic GCSE examinations.
- The publication in 2004 of the Tomlinson report which recommended a 'strengthening of the vocational offer' and called for 'rationalised vocational pathways' for 14-19 year-olds (Working Group on 14-19 Reform, 2004, p. 8).
- The publication of the 2005 White Paper: 14-19 Education and Skills, which sets out the future development of 14-19 provision (GB. Parliament. House of Commons, 2005).
- The publication, in 2005, of the 14-19 Implementation Plan which sets out a timetable for every local area to develop a system in which schools and colleges can offer more to young people through working in partnership (DfES, 2005).
- The planned introduction, from September 2008, of specialised diplomas for 14-19 year-olds which will combine practical skill development with theoretical and technical understanding and knowledge (QCA, 2006).

It can be argued that the two common denominators behind these changes are, firstly, a drive for more flexibility for young people in terms of their choices of vocational pathways, and, secondly, the encouragement of partnership working among schools,

colleges and other institutions involved in the provision of Vocational Education and Training (VET) for the 14-19 age group.

This article sets out details of the key findings from an evaluation of the longest-standing of these reforms, the Increased Flexibility Program (IFP) for 14-16 year olds. The evaluation was carried out by a research team based at the National Foundation for Education Research (NFER) in Slough, England, with funding from the Department for Education and Skills (DfES).

The Increased Flexibility Program

The IFP aims to create enhanced vocational and work-related learning opportunities for 14-16 year-olds (this age range is often referred to as Key Stage 4 in the United Kingdom context) of all abilities, including through the provision of eight new GCSEs in vocational subjects.

The first cohort of 14 year-old students embarked on their program in 2002 and this was followed by a second cohort in 2003, and subsequent cohorts in the following years. Around 300 partnerships have been established since the introduction of the IFP, each of which has a 'lead partner'. The majority of 'lead partners' are Further Education (FE) colleges. The partnerships involve links with schools and, in some instances, other colleges, training providers and employers. Funding to support these partnerships is channelled through Local Learning and Skills Councils (LLSCs) that also have responsibility for monitoring the process.

Through the IFP, partnerships have been established between colleges and training providers and around 2 000 schools. Partnerships have taken many forms. One common format involves one or two 14-16 year-old classes

going out of partner schools, for one or two half days, to participate in a vocational course at an FE college site, where the college population consists predominantly of post-16 learners. Often the teaching of the vocational course is shared between the school and the college. These partnerships aim to meet the broad objectives of the IFP which are to:

- raise the attainment in national qualifications of participating students
- increase retention in education and training after 16
- increase the skills and knowledge of young people.

The NFER evaluation

This summary presents selected key findings relating to the attainment, progression and attitudes of the first cohort of IFP students (2002-2004), and sets out some of the possible policy implications, which may have an international relevance for VET programs of this sort. The evaluation drew on a range of research methods, including the following.

- A baseline data collection exercise which identified the schools and individual students who were participating in the first cohort of the IFP.
- Baseline and follow-up questionnaire surveys of a representative sample of around 11 500 students and their associated 450 schools and 130 providers of vocational courses, including 'lead partners'.
- A further follow-up questionnaire survey of a sample of participants in the IFP in the autumn after leaving Year 11.
- Data on the achievements and post-16 destinations of the student sample, collected from their schools.

Common denominators behind the changes:

- ***more flexibility in choice of vocational pathways***
- ***encouragement of partnership working among schools, colleges and other institutions.***

The majority of young people who took these courses within the IFP did achieve their qualifications.

- A program of case studies in nine partnerships which entailed interviews with 'lead partners', tutors, school staff and students.

Key findings: achievement of qualifications

One of the difficulties in assessing the attainment of the first cohort of IFP students is that, in the period 2002-2004, such students could take a considerable range of qualification types. These included the vocational GCSEs already mentioned, along with General National Vocational Qualifications (GNVQs), National Vocational Qualifications (NVQs) and a number of other vocational qualifications.

There were variations in achievement rates according to qualification type, but the overall general finding was that the majority of young people who took these courses within the IFP did achieve their qualifications. For example, the percentage of young people who took new GCSEs and GNVQs, and attained their qualifications, was 91% and 80% respectively. In addition, the majority of the sample of young people who had undertaken NVQs and other vocational qualifications had achieved the qualification by the end of Key Stage 4 (66% and 67% respectively).

The next question to consider was whether the young people taking IFP courses had better examination achievements than their peers who took the same qualifications at school only and not through IFP provision. In other words, was the IFP 'adding any value' in terms of student attainment? In order to answer this question it was necessary to work out a total points score for each student. This was done using a standard set of points scores covering a range of qualification

types which were available from the Qualifications and Curriculum Authority (QCA). It should be noted that the number of points assigned to the qualifications varied according to the qualification type, level achieved and subject studied (QCA, 2005). Once these scores were calculated, it was possible to conduct a multilevel model analysis. This allowed the researchers to control for factors such as the prior attainment levels of students for both IFP groups and, where possible, comparison among groups of students.

It was found that the GNVQs and NVQs achieved by the young people on the IFP contributed to their gaining higher total point scores than would have been expected given their prior attainment and background characteristics. However, those who took GCSEs in vocational subjects attained levels commensurate with their prior attainment, and those who took other vocational qualifications achieved fewer points than might be expected compared to similar students who did not participate.

Key findings: retention and post-16 destinations

The target for the IFP was to achieve a retention rate, in education and training, for post-16, of at least 75%. In fact, the retention rate of the first cohort of IFP students was much better than 75%. The majority (90%) of the sample of young people were reported by their schools to have continued into further education or training after finishing Key Stage 4. Analysis of the cohort as a whole, across all schools, using matched participation and attainment datasets, indicated a post-16 participation rate of 80%.

Most of those in the IFP sample had embarked on a course-based route (in a school sixth form or at FE college

or training provider), while a notable minority were following a work-based route, in an apprenticeship, or other occupation with training. Students who had taken their IFP course away from school, and those who had undertaken a NVQ pre-16, were significantly more likely to have continued into further education at a FE college or training provider than elsewhere.

Two-thirds (66%) of young people undertaking a course post-16 were pursuing a qualification that was at a higher level than the level of the course they had undertaken through the IFP. Some young people appeared to have a continuing commitment to the vocational area they studied through the IFP. This is reflected in the finding that around two-fifths (41%) of those taking a qualification post-16 were taking a course that was in the same subject area as their IFP course.

Eight per cent of respondents felt that they would have been employed, rather than in further education and training, if they had not participated in the IFP. This suggests that the IFP may have encouraged these young people to consider further education, rather than employment, post-16.

A range of variables emerged as influencing these young peoples' post-16 destination, including their experience pre-16 through the IFP. Just over two-fifths (42%) of young people reported that the IFP had been an influence on their choice of post-16 destination and, indeed, 8% felt that their IFP course had been the most influential factor in their post-16 choice.

The majority of young people, particularly those who had continued into further education or training, were positive about what they were doing post-16. However, nearly half of these young people would have liked more help and guidance in deciding what

to do after the end of Key Stage 4, particularly in relation to exploring which careers might suit their skills, abilities and interests. Just over a third of young people stated that they were considering continuing into higher education. Although students who were taking NVQs, GNVQs and other VQs post-16, were less likely to state that they were intending to continue into higher education, a notable minority were considering this option.

Key findings: skills and attitudes

The evaluation also aimed to assess the impact of the IFP on participants' attitudes and skills. Young people who participated in the IFP, and who were surveyed in each year of the program, were significantly more positive about school and its usefulness for their future in the second year of the program.

Having a positive attitude was associated with gaining higher total points at Key Stage 4, while poor punctuality and truancy was associated with gaining lower points. Evidence from the surveys of IFP participants indicated that IFP students' attitudes improved between 2003 and 2004, and around half said that participation in the IFP had made them more aware of the importance of qualifications and learning. This may have contributed to this improved outcome at Key Stage 4.

These findings, together with the findings reported previously in the evaluation (Golden, O'Donnell & Rudd, 2005; Golden, O'Donnell, Benton & Rudd, 2005) which indicated that there was evidence that IFP participants had developed their social skills and confidence in their employability skills, including interpersonal, communication and problem solving skills, and their attitude towards school, suggest that, on the whole, the IFP made a valuable contribution to the education of the first cohort of participants.

More than half of these young people would have liked more help and guidance ...particularly in relation to exploring which careers might suit their skills, abilities and interests.

There was some indication that this transition into further education and training would be sustained.

Conclusion

Overall in the evaluation of the first cohort IFP found that the majority of students who participated had benefited. The majority achieved their qualifications at the end of the program and nearly all had progressed onto further education and training.

Attainment levels varied according to qualification type. It was found that the young people taking GNVQs and NVQs through the IFP gained higher total point scores than would have been expected given their prior attainment and background characteristics. However, those who took GCSEs in vocational subjects attained levels commensurate with their prior attainment. Those who took other vocational qualifications achieved fewer points than might have been expected compared to similar students who did not participate in the IFP.

The IFP had been an influence on the post-16 choice of two in five IFP participants. For 80%, the IFP had been the most influential factor in their post-16 destination. There appeared to be some continuity of routes from pre-16 to post-16, as students who had taken NVQs or other VQs through the IFP were more likely to be taking these types of qualifications post-16. This suggests therefore that participation in the IFP may have given young people the opportunity to find out more about the qualification pathways they could follow post-16. There was some indication that this transition into further education and training would be sustained, as most young people planned to remain in education and training for two years or more, and around a third were considering continuing on to higher education.

Policy implications

The experience of the first cohort of IFP participants may be helpful for informing the future development of similar programs, both in the United Kingdom and in an international context. The findings point to a number of possible implications for policy.

Targeting students

The selection of students had important implications for course outcomes. The evidence indicates that there were particular outcome benefits for students with particular characteristics – for example, those with lower prior attainment at age 14. While the program is aimed at, and could be beneficial for, all ability groups in a school, it might be worth considering targeting particular students who would potentially benefit more from the experience.

Further guidance

Around half of the IFP participants surveyed indicated that they would have liked more information and guidance about their post-16 choices. In particular, it appears that young people who wished or chose to pursue a work-based route post-16, had a particular need for guidance. This suggests that, while many students would benefit from enhanced information, advice and guidance relating to their destinations after age 16, those who intend to pursue a work-based route post-16 would particularly benefit from guidance about that route.

Engagement of students

Higher attainment at Key Stage 4 was associated with students having a positive attitude towards school. Finding the course interesting, and having helpful discussions with teachers and tutors about progress on the course, were associated with having a

positive attitude towards school. There would therefore be value in ensuring that teachers and tutors are able to incorporate these discussions into their delivery of the program, and to ensure that their delivery is engaging for participants.

Partnership organisation and communication

The majority of the schools (86%) and the colleges and training providers (92%) surveyed, indicated that their involvement in the IFP had led to more effective working partnerships between their organisations. In addition, it appeared that contact among organisations had become more frequent and more informal, as the partnerships matured. In addition to this informal contact, partnerships appear to have increasingly introduced formal mechanisms for sharing information about the progress of individual students. The experience of IFP partnerships has been useful for schools and colleges, and will help them develop further towards the working partnership that is required by the 14-19 Implementation Plan for 2008 and beyond.

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Australia's role in reforming Vocational Education and Training (VET) in China

VET development in China

Since the early 1980s, in order to respond to economic reform, China has undergone major changes in its education system. In particular it has adopted a policy of large-scale development of its VET system. After over twenty years of reforms and development, China has been able to establish a VET system with unique characteristics. This system consists of three levels of education: elementary, secondary and tertiary. Although there is a special focus on the senior secondary school level, there are linkages between all three levels of VET (Misko, Yufend, He, Li & Phan, 2002, p. 15).

The education system of the People's Republic of China (PRC) is the largest in the world. In 2004, there were 697 junior vocational schools with 525 100 total enrolments; 14 500 secondary vocational schools with 13 678 900 total enrolments; and 1047 tertiary level vocational education institutions with just under 6 000 000 total enrolments (Ministry of Education, 2006, p. 7).

During the 1990s the Central government made significant decisions and promulgated new laws to strengthen high school education, including regular education and vocational education, as well as vocational education at the tertiary level. Entering into the 21st century, the Central government continued with this strong focus on vocational education. At the 16th Communist Party of China (CPC) Party Congress in 2002, the government made a commitment to develop a modern national education system boosting senior secondary education, vocational education,

technical talent and lifelong learning (Ministry of Education, 2006, p. 2).

At the beginning of 2004, the State Council approved the 2003-2007 National Education Rejuvenation Action Plan, inclusive of the VET Innovation project. Also in 2004, the Ministry of Education (MOE) and the related departments of the State Council held the National Vocational Education Conference and formulated the Several Opinions Concerning Further Improving Vocational Education (Ministry of Education, 2006, p. 3).

China will continue with its VET reform as its economy continues to grow and evolve. China also actively pursues international VET linkages to ensure this reform not only meets the needs of modern China, but is also consistent with other global reforms in VET. Extensive exchange and cooperation has occurred with a large number of countries from around the world, including a number of substantial activities with Germany and Australia.

VET linkages between China and Australia

Australia has developed an effective, industry-led national VET system which is internationally recognised and well placed to respond to Australia's strong economic performance and changing demographics.

China is also experiencing strong economic growth and substantial demographic change. This growth and change provides substantial challenges to the Chinese VET system. Many of these challenges are similar to those facing Australia, although the scope and size may differ. Therefore, the reforms

that both countries need to put in place to meet the challenges are similar.

A 2005 study on the promotion of the Australian VET Framework in the PRC found that Australia currently is highly regarded for the structure and operation of its VET system, with elements directly relevant to the Chinese context and needs (Simmons & Polger, 2006). China, therefore, has developed a keen interest and good understanding of Australia's VET system and its modern reforms.

For Australia, China continues to be one of the most significant countries in terms of international education. In 2005, there were 66 000 international VET students studying in Australia, with over 12 000 students coming from China (AEI, 2006). China is also a key market as Australian public providers expand their transnational delivery of VET. Over two-thirds of Australia's offshore VET students study in China.

Although the end point of many transnational VET programs is increased numbers of Chinese VET students completing higher level studies in Australia, these types of programs also provide significant capacity building for Chinese teachers. This includes the transfer of flexible teaching methods, competency based curriculum, high level technical skills and teaching materials, as well as enhancing English language proficiency for both teachers and students (Barnaart, 2006).

Current cooperation between China and Australia in VET is also occurring in many other ways, with two projects currently making significant contributions. They are the Australia China (Chongqing) Vocational Education and Training Project (ACCVETP), and the TAFE Directors Australia (TDA)/China Education

Association for International Exchange (CEAIE) VET Mentoring Project.

Australia China Chongqing VET Project

ACCVETP is a bilateral project, funded by the government of the People's Republic of China, and the Australian government, through the Australian Agency for International Development (AusAID). The project's purpose is to reform and expand China's VET system. Its goal is to contribute to the economic development and poverty alleviation of both Chongqing and China through the development of a VET system that is responsive to the needs of industry (AusAID, 2004).

The ACCVETP, which commenced in early 2002, is being piloted in the municipality of Chongqing over a five-and-a-half-year period. It has a combined project budget of A\$25 million, with Australia contributing nearly A\$20 million. The project is divided into two major phases and uses a 'vertical slice approach' as a major feature of its design. In phase one this 'vertical slice' encompassed activities within school, municipal and national components (AusAID, 2001). In phase two an additional international component was added to the model.

ACCVETP phase one

This three year demonstration phase began in March 2002. Five pilot schools representing automotive, business services, electronics, hospitality and tourism, and construction industry sectors, were selected to implement activities that would strengthen their capacity and provide outcomes that could be replicated as part of MOE's national VET reform program. These activities included school-based planning, developing and piloting competency-based curriculum, teaching and learning material development,

Australia currently has a high reputation for the structure and operation of its VET system, with elements directly relevant to the Chinese context and needs.

In phase 1, five Industry Coordination Committees (ICCs) were modelled on Australia's Industry Skills Councils (ISCs).

professional development of school staff and equipment procurement to assist pilot activities. Three secondary VET schools and two tertiary VET institutions were selected as the pilot schools.

Municipal initiatives included the establishment of five Industry Coordination Committees (ICCs) in the automotive, business services, electronics, hospitality and tourism, and construction industries. These ICCs were modelled on Australia's Industry Training Advisory Boards (ITABs), now called Industry Skills Councils (ISCs). Their key tasks were to act as a catalyst to encourage the five target industries to make significant input into VET training standards, curriculum, and delivery. They were originally established within the pilot schools with the respective Australian school-based adviser providing executive support for their early development. These ICCs were relocated, both physically and operationally, to the relevant municipal ministries at the end of phase one.

Another key municipal activity was VET teacher reform, focusing on flexible delivery of VET and student centered learning. The Chongqing Normal University (CQNU) was chosen as the lead institution because of its status as one of China's fifty National Key Vocational Education Teacher Training Centres. CQNU teacher-trainers worked with the project advisers to develop skills and knowledge in VET pedagogy and train the trainer programs.

During phase one, national based initiatives enabled the MOE and the Central Institute of Vocational and Technical Education (CIVTE) to observe and review municipal school-based activities; to choose those outcomes which would assist China to better incorporate industry participation in

VET; and to be more innovative in the design of VET policy.

ACCVETP phase two

The two-and-a-half year replication phase is focusing on replicating successful outcomes achieved in phase one, and includes four key components. It began in March 2004 and will conclude in August 2007.

The objective of the school component is to replicate phase one outcomes within and between each of the five pilot schools, and between the pilot schools and thirty-seven VET partner schools/colleges. The latter are made up of twenty-four secondary VET schools and thirteen tertiary VET institutions. Competency-based courses developed in the industry areas during phase one were expanded from five to twenty-one, and now range from entry level certificate to diploma programs.

In addition, schools are establishing a significant number of strong industry linkages with a number of key Chongqing industry enterprises. For example, the Tourism Pilot School is developing separate customised and specialist classes for each of the Intercontinental, Marriott and Holiday Inn hotels in Chongqing, with shared delivery between the schools and hotels.

Within the municipal component, three additional municipal ICCs have been established, representing the agriculture and health industries, as well as rural migrant training associated with the Three Gorges area. All of the eight municipal ICCs lead the development and review of new competency standards which were approved before the successful development of the new competency-based courses by the project schools.

The VET teacher reform activities are being expanded by CQNU in partnership with the Chongqing University of Arts and Science (CUAS). Twenty-five ACCVETP participants completed training for the Australian Certificate IV in Training and Assessment which was delivered by a full-time teacher development adviser engaged through Holmesglen TAFE in Victoria.

The objective of the phase two national component is to continue to strengthen the basis from which MOE can implement national policy improvement and innovation of VET in China.

A number of key activities have been undertaken including the establishment of a national ICC made up of national ministry representatives from the agriculture, health, automotive, information technology, e-business, hospitality and tourism, and building construction industries. This national ICC is working with the eight municipal ICCs, observing and reviewing the reforms they are putting in place. It is also focusing on the role of national industry standards in a reformed VET sector.

Another major activity that is being coordinated at the national level is the development of draft national VET teacher competency standards and an associated quality framework. This is consistent with national policy where the Chinese government wants to reform the appointment and management of VET teachers to ensure they have both theoretical and practical qualities (Ministry of Education, 2006, p. 15). In general, teachers in China are developed first, as teachers, and then later as technical specialists. The reverse occurs in Australia where VET teachers usually develop the required vocational competence first, and then become qualified to be a VET teacher.

A significant number of Chongqing VET organisations, including the Chongqing Education Commission (CQMEC), and the Chongqing Research Institute (CQRI), are leading the development of draft municipal VET teacher standards which will be reviewed by MOE and CIVTE. Once approved by a national panel of experts, CQMEC will then develop a set of implementation policies for trialling by ACCVETP pilot and partner schools. Overall, this is a comprehensive activity occurring at three levels within the project's vertical slice.

The objective of the international component, which was added for phase two, is to establish and strengthen international VET linkages between China and Australia. This is to ensure there are sustainable, ongoing VET links between the two countries when the ACCVETP concludes in August 2007.

A Sino Australia VET Network was first established in 2005 linking Chongqing schools to Australian Registered Training Organisations (RTOs) in each state. This network has now expanded to include linkages between ISCs in Australia and Chongqing ICCs. A linkage between CQMEC and an Australian state training authority is also being considered.

During 2005 and 2006, the two ACCVETP pilot tertiary colleges were selected to be developed as Sino Australia Cooperative Model TAFE colleges. Swan TAFE in Western Australia was linked with the automotive tertiary pilot college, and the Illawarra TAFE Institute in New South Wales was linked with the electronics tertiary pilot college. College principals travelled to Australia for a two-week mentoring program with their respective TAFE director colleagues. A return visit was then made by the TAFE directors to

*In Phase 2:
national level
activities for
improvement
and innovation in
VET.*

The approach of the project has been not to transplant the Australian VET system in China but to share our experience of developing VET reforms over 20 years.

Chongqing. The focus of this was for the Chinese principals to learn from Australia's holistic approach to managing a large quality assured RTO in a reformed VET environment. MOE and CQMEC are now studying the outcomes of this activity and will develop a framework for the replication of model TAFE colleges in other parts of China.

It is evident that the ACCVETP is a large, complex and significant AusAID sponsored project. Over forty different Australian advisers have made short- and long- term inputs into the project. Each individual has been critical to the project's success. However, to fully realise the project's goal, the ACCVETP needs to have made some impact on China's reforms at a national level.

In late 2005, ACCVETP funded a study on municipal and national VET reform, involving a detailed study of existing national and municipal VET policies in Beijing and Chongqing, as well as VET delivery in Chongqing. The study identified the following five key elements of a comprehensive VET system for China. They were formally recommended to Vice Education Minister Wu, MOE and the CQMEC (Byrne 2005, p. 31). The key elements are:

1. Unified national leadership of a discrete VET sector.
2. Clear specific roles of industry in setting outcomes for delivery by the system.
3. A national VET quality framework including provider standards and registration.
4. A single national qualifications framework linking school, VET and university.
5. VET teachers who are competent industry practitioners.

These five elements align closely with the current priorities of VET reform in China, are reflected in the key design components in the ACCVETP, and match the current areas of world class expertise within the Australian VET system.

Conclusion

China and Australia face significant labour market challenges, relative to the size of each country. VET in both countries will be an essential contributor to meeting these challenges. The focus of Australia's reforms is similar, although Australia is well advanced with the implementation of these reforms.

Australia has developed a world class VET system which it is willing to share with other countries. The ACCVETP is a significant medium-term project where this sharing is occurring in an appropriate way. The project does not aim to transplant the Australian VET system into China, but rather to share its experience of developing VET reforms over 20 years. Our counterparts select the parts of our current system which are applicable to China, and contextualise them to ensure they are relevant and sustainable (Barnaart, 2006).

Other international VET activities such as Australian China translational programs and the TDA/CEAIE VET mentoring project, as well as VET student mobility between the two countries, will also provide important short-, medium- and long-term opportunities for ongoing VET linkages.

VET is an essential service in any country and education has always been a solid foundation on which to build and enhance economic and cultural ties between countries. Australia's role in reforming VET in China will contribute to a strong and sustainable bilateral relationship in the future.

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