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## ABSTRACT

Increasing globalization has spotlighted a range of international approaches to career and technical education (CTE), including the German dual system, the British National Vocational Qualifications and General National Vocational Qualifications, and Australia's Vocational Education and Training and Technical and Further Education systems. Across the international spectrum, CTE reflects a country's economic and social investment in education and the strategies used to enhance the skill development of workers and foster their employability. The ways various countries have approached the challenge of raising productivity and competitiveness have changed over the years. Across countries, there is a growing awareness of the need to connect academic education and CTE. Core competencies, soft skills, and foundation skills that contribute to lifelong learning are increasingly being recognized as vital to employment in workplaces that demand flexible production methods, product and production innovation, and generation of new knowledge. The responsibility for CTE is also changing as systems encounter considerable pressure to reduce costs by increasing private investment and initiating public-private partnerships. This is especially true for continuing vocational training programs, which are showing a trend away from government-led funding toward demand-side initiatives that distribute costs across governments, industries, and individuals. (A 23-item annotated bibliography constitutes approximately 80% of this document.) (MN)

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## International Models of Career-Technical Education

by Bettina Lankard Brown  
2003

Increasing globalization has spotlighted a range of international approaches to career and technical education (CTE) or vocational education (VE), for example, the German dual system, the British National Vocational Qualifications (NVQs) and General National Vocational Qualifications (GNVQs), and Australia's Vocational Education and Training (VET) and Technical and Further Education (TAFE) systems. This *Alert* reviews the trends and issues involved in international approaches to CTE/VE.

Across the international spectrum, CTE reflects a country's economic and social investment in education and the strategies used to enhance the skill development of workers and foster their employability. The purpose of these efforts is to raise the country's level of productivity and competitiveness in a global market (Keating et al. 2002). Ways various countries have approached this challenge have changed over the years, as have the systems to support the CTE programs.

There is a growing awareness across countries of the need to forge connections between academic and career-technical education. With employment opportunities moving from craft industries toward the new organizations of the information age, there is a tendency in some of the systems to allow greater flexibility in pathways that connect technical and academic courses as a means of encouraging cognitive skill development. Core competencies, soft skills, and foundation skills that contribute to lifelong learning are increasingly recognized as vital to employment in workplaces that demand flexible production methods, product and production innovation, and the generation of new knowledge (Keating et al. 2002; Sellin 2002).

The responsibility for CTE is also changing as systems are under considerable pressure to reduce costs by increasing private investment and initiating public-private partnerships. This is especially true for continuing vocational training (CVT) programs, which across countries, are showing a trend away from government-led funding toward demand-side initiatives that distribute costs across governments, industries, and individuals (Elson-Rogers and Westphalen 2000). The following resources contain additional information about trends and issues involved in international approaches to CTE/VE.

Bagnall, N. F. "The Balance between Vocational Secondary and General Secondary Schooling in France and Australia." *Comparative Education* 36, no. 4 (November 2000): 459-475.

Traces the historical development of technical/vocational education and general/liberal education in Australia and France and examines how Australia is attempting to bridge the gaps between vocational and general education to help prepare youth for successful transition to employment in a rapidly changing world.

Comley, L. et al. "Are TAFE Organisations Learning Organisations? Do They 'Walk the Talk'?" In *Research to Reality: Putting VET Research to Work. Proceedings of the 4th Australian Vocational Education and Training Research Association Conference, Adelaide, Australia, March 28-30, 2001.* (ED 456 255) <http://www.avetra.org.au/confarchives.htm>

Responses from Australia's TAFE institutes showed agreement with the following statements: TAFE staff are lifelong learners, TAFE organizations are learning organizations, and rural/regional institutes demonstrate the characteristics of a learning organization more strongly than metropolitan institutions.

Deissinger, T. "Current Problems and Developments of VET in Germany—The Educational Case for Modernisation." *Australian Journal of Adult Learning* 40, no. 2 (July 2000): 5-32.

Contends that (1) new technologies and the disappearance of old established training occupations are leaving young people with limited

general or vocational qualifications and few career opportunities; (2) new occupational profiles may be too demanding for weaker learners, causing companies to become more selective in providing training; and (3) regional diversity is making it difficult for some young people to find apprenticeship placements.

Deissinger, T. "Vocational Training in Small Firms in Germany: The Contribution of the Craft Sector." *Education + Training* 43, no. 8-9 (2001): 17-37.

The German dual system of vocational education and training (VET) is distinguished from most training systems in the world because it involves the voluntary contribution of companies who support it in both practical and financial terms. The craft sector, which has traditionally been its strongest training segment, is now in contention with the service sectors that have been previously neglected.

Dockery, A. M.; Kelly, R.; Norris, K.; and Stromback, T. "Costs and Benefits of New Apprenticeships." *Australian Bulletin of Labour* 27, no. 3 (September 2001): 192-203.

When 60 employers who were asked to assess the impact of Australia's efforts to develop a more encompassing system of employment-based vocational education and training, competency-based assessment and training flexibility were the two elements most favorably assessed.

Elson-Rogers, S., and Westphalen, S.-A. "Funding Continuing Vocational Training in the European Union." *Journal of Vocational Education & Training* 52, no. 4 (2000): 687-707.

Analysis of approaches to funding of continuing vocational training in Austria, Denmark, Finland, France, Germany, the Netherlands, Spain, Sweden, and the United Kingdom suggests that there is likely to be even greater increases in the distribution of training costs in the years ahead.

Erdl, H. "The Transition of Vocational Education and Training in Eastern Germany." *Comparative Education Review* 44, no. 4 (November 2000): 464-492.

Examines the effects of implementing in eastern Germany the dual system of vocational education used in western Germany, where students divide their time between work and school. Focuses on the role of European Union programs and funding that supports the programs, and describes specific education and training projects.

Fullarton, S. *VET (Vocational Education and Training) in Schools: Participation and Pathways. Research Report No. 21.* Victoria: Australian Council for Educational Research, 2001. <http://www.acer.edu.au/research/vocational/lisay/reports/lisay21.pdf>

Examines the need to retain higher proportions of young people in education and training and suggests that this can be accomplished by offering students a range of postcompulsory options and pathways that are suited to their different interests and needs.

Gibbons-Wood, D., and Lange, T. "Developing Core Skills—Lessons from Germany and Sweden." *Education + Training* 42, no. 1 (2000): 24-32.

Compares core skills efforts in Germany and Sweden that use vocational training to foster core skills and key competencies and describes how they integrate their training within existing structures rather than making radical long-term changes.

Heikkinen, A. "The Transforming Peripheries of Vocational Education: Reflections from the Case of Finland." *Journal of Education and Work* 14, no. 2 (June 2001): 227-250.

Compares Finland to "third-world" countries in order to examine the meaning of being peripheral in vocational education. Discusses how

centers and peripheries are changing, requiring more cultural sensitivity in vocational education research.

Heitmann, G. *European Structures of Qualification Levels on Recent Developments in Germany, Spain, France, the Netherlands and in the United Kingdom (England and Wales)*. Vol. 3. Thessaloniki, Greece: European Centre for the Development of Vocational Training, 2001. (ED 458 446)

Discusses ways to ensure the transparency of qualifications and their categorization in systems at the national and transnational level and describes the different routes that countries are taking to achieve this end.

Heraty, N.; Morley, M. J.; and McCarthy, A. "Vocational Education and Training in the Republic of Ireland: Institutional Reform and Policy Developments since the 1960s." *Journal of Vocational Education & Training* 52, no. 2 (2000): 177-198.

Because lifelong learning is a critical component of today's competitiveness, vocational education and training requires a learning environment in which thinking is combined with doing, all of which requires a strong commitment from both the state and from individual employers to facilitate the development a knowledge-based and knowledge-driven economy.

Keating, J. et al. *Comparative Study of Vocational Education and Training Systems: National Vocational Education and Training Systems across Three Regions under Pressure of Change*. Leabrook, Australia: National Centre for Vocational Education Research, 2002. <http://www.ncver.edu.au/research/proj/nr9009.pdf>

Describes and compares VET systems across nine countries in Europe, East Asia, and the Americas. Identifies key issues facing Australia: its attempt to relate VET to the other educational sectors, its relationship to the state and civil society, demand-side issues, and VET's capacity to change in the face of new challenges.

Konrad, J. "Assessment and Verification of National Vocational Qualifications: Policy and Practice." *Journal of Vocational Education & Training* 52, no. 2 (2000): 225-242.

Suggests that the vocational system should move from narrow quality control to total quality management and should initiate situated learning in communities of practice. Cautions that this change would require radically different quality criteria and professional development in collaborative and situated learning.

Lindell, M., and Abrahamsson, K. *The Impact of Lifelong Learning of Vocational Education and Training in Sweden*. Leabrook, Australia: National Centre for Vocational Education Research, 2002. (ED 462 605) <http://www.ncver.edu.au/research/core/cp0007.pdf>

Describes Swedish initial vocational education (IVT), which is financed by public money and addresses basic skills and general occupational qualifications, and CVT, which is provided through the joint efforts of public schools, private enterprises, training companies, trade unions, and employer associations.

Manning, S. "What Can We Learn from the Use of Qualifications with a Dual Orientation across Europe?" *Vocational Training: European Journal* no. 23 (May-August 2001): 45-52.

Describes how European projects that combined secondary vocational and general education with a dual orientation toward employment and postsecondary education facilitated mobility in the education system and labor market.

Mayer, C. "Transfer of Concepts and Practices of Vocational Education and Training from the Center to the Peripheries: The Case of Germany." *Journal of Education and Work* 14, no. 2 (June 2001): 189-208.

Suggests that, because education and training systems are embedded in sociocultural contexts, the transnational transfer of vocational education systems may be impossible.

Onstenk, J. "Broad Occupational Competence and Reforms in Vocational Education in the Netherlands." *Australian and New Zealand*

*Journal of Vocational Education Research* 9, no. 2 (November 2001): 23-45.

New technology, changing markets, and the rise of new organizational paradigms have shifted emphasis from action-centered skills to intellectual skills. Knowledge and skills must be learned in context, which will require changes in the content and didactic of vocational education that stimulate self-directed learning, problem solving, problem formulation, and the process of learning to learn.

Purcell, J. "Case Study: National Vocational Qualifications and Competence-based Assessment for Technicians—From Sound Principles to Dogma." *Education + Training* 43, no. 1 (2001): 30-39.

Describes four misconceptions about competency-based assessment in National Vocational Qualifications: they focus only on workplace performance, are appropriate only at vocational-technical levels, are concerned only with practical skills, and do not encourage further educational development. Identifies ways that these criticisms can be addressed.

Richardson, L. "In Sickness and In Health. Learning and Assessment Inside and Outside the New Zealand Qualifications Framework." *Asia-Pacific Journal of Cooperative Education* 2, no. 1 (2001): 23-30. [http://www.apjce.org/volume\\_2/volume\\_2\\_1\\_23\\_30.pdf](http://www.apjce.org/volume_2/volume_2_1_23_30.pdf)

Examines the implementation of the New Zealand Qualifications Framework and stresses that government policy must consider the differing skills of industry and education when forging relationships between educational institutions and industry partner organizations to ensure a balance of power that promotes effective implementation.

Schwab, R. G. "VET-in-School for Indigenous Students: Success through 'Cultural Fit.'" In *Research to Reality: Putting VET Research to Work. Proceedings of the 4th Australian Vocational Education and Training Research Association Conference, Adelaide, Australia, March 28-30, 2001*. (ED 456 313) <http://www.avetra.org.au/confarchives.htm>

Describes two innovative approaches to delivering vocational education and training to indigenous students in Australia. Identifies opportunities for community-based education and training, community relevance of programs, and the presence of leadership and a committed competent staff as factors that influenced program success.

Sellin, B. *Scenarios and Strategies for Vocational Education and Lifelong Learning in Europe: Summary of Findings and Conclusions of the Joint CEDEFOP/ETF Project (1998-2002)*. Thessaloniki, Greece: European Centre for the Development of Vocational Training, 2002. [http://www2.trainingvillage.gr/etv/publication/download/panorama/5131\\_en.pdf](http://www2.trainingvillage.gr/etv/publication/download/panorama/5131_en.pdf)

Identifies four areas of focus for the future: the social dimension of VET and lifelong learning, public and private partnerships, compatible national and European structures of educational and VET qualifications and the provision and promotion of European standards, and the modernization of work.

Smith, C. S., and Ferrier, F. *User Choice: The Experience since 1998. Working Paper no. 36*. Clayton, Victoria, Australia: Centre for the Economics of Education and Training, 2001. <http://www.education.monash.edu.au/centres/ceet/userchoice.rtf>

Australia's User Choice program promotes client negotiation of publicly funded training needs, encourages a national training market-based pricing of training on clearly identified state/territory unit cost benchmarks, and allows clients to negotiate and purchase training over and above what is essential to their qualification outcomes.

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