# Chapter 7
# Management of Knowledge in International VET: Diversity of Practice from Laos, Kuwait, and China

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**Abstract**  This chapter draws on research conducted between 2008 and 2010 that explored what happens when knowledge developed to regulate and manage training delivered in Australia is exported to another jurisdiction with a quite different regulatory framework. The focus of investigation was on the mechanisms, strategies, and tools deployed to enable Australian VET knowledge practices to respond to the needs of systems, training institutions, and individuals in these new contexts. This process of transfer and adaptation was explored through three case studies. On the basis of the empirical data analyzed in each model, a classification of transnational activities is proposed according to six dimensions of transfer activity – mechanism, drivers, key actors, purpose, context, and outcomes. The mechanisms used in each of the case studies are analyzed according to the theories of globalization of business, regulatory arrangements and knowledge management. The chapter concludes by positioning transnational vocational education and training (VET) in the context of global developments since 2010 including UNESCO's efforts to define the role of national and international standards in a global education and training environment and the work of WorldSkills International to define global skills standards.

**Keywords**  Australia • Training package • China • Laos • Transnational VET

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## Introduction

Knowledge, in multiple forms including skill, regulation, and technical know-how, has become a most critical resource in the era of globalization (Bresman et al. 1999), flowing in a worldwide pattern as a part of the circuit of capital (Thrift 2005; Sharma 2008). Governments and VET institutions in many jurisdictions have responded in various ways to the challenge and the opportunities offered by the internationalization of VET, and aspects of such initiatives aimed at the internationalization of qualifications, curriculum design, and delivery are explored in this book (e.g., see Reich and Ho (2017) on Vietnam in Chap. 8; Barabasch et al. (2017) on Korea in Chap. 11; and Bastiaannet 2017 in Chap. 13, in relation to the Netherlands). Dempsey and Xia (2017, Chap. 9) have also provided examples of the challenges associated with importing a foreign system of vocational training into China. In recent years, Australian VET providers, through their transnational activities, have positioned themselves as players in this global circuit of knowledge and capital. They have cooperated with each other and also established partnerships with non-Australian (host country) educational providers, as well as forming links with some industries and enterprises in host countries.

Between 2003 and 2006, offshore VET programs were conducted by a broad range of Australian public and private providers[1] in different developing markets across 42 different countries (DEEWR 2008). According to DEEWR (2008), 349 courses in 2006 and 325 courses in 2005 were delivered in foreign jurisdictions by Australian public providers. In a few years, the significant growth of offshore delivery by public providers led to the delivery of 524 and 499 courses in 2012 and 2013 respectively (DET 2014). In 2006, host country teachers, rather than Australian expatriates, taught 76.8 % of the courses, while in 2013, 50.9 % of offshore VET courses were delivered by host country teachers in the country of delivery (DEEWR 2008; DET 2014).

The focus of this chapter is the way in which the primary regulatory mechanism of the Australian VET system crosses jurisdictional borders to play a role in the transfer of knowledge from the Australian VET system into a foreign jurisdiction. Classifying these transnational activities as different models, and clarifying the characteristics of each model, will assist project managers and institutions to design, identify human resource needs, and implement transnational VET projects. The following research questions are addressed by this chapter: *What different mechanisms are employed to transfer Au-VET knowledge? What different actors operate? What are the scope and the main characteristics of each model?*

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[1] Data was not available for offshore activities of private providers.

## Theoretical Framework

This study is framed around two linked phenomena: *globalization* and *the growth of transnational VET*. It brings a multidisciplinary approach to what might appear at first to be solely an international education study, but which in fact spills over into multiple domains: the political economy of international aid, globalization, knowledge management, and international trade. The concept of *globalization*, specifically *globalization of regulatory arrangements*, is employed to analyze the transfer of Australian VET knowledge and practice at a macro-level and to name and classify these transfers. The *transnational transfer of knowledge* in globalizing capitalism provides a frame for seeing Australian VET knowledge through a new perspective and understanding how the transfer of regulatory arrangements takes place.

Globalization is a multidimensional process of, on the one hand, *breaking down borders and de-spatializing*, and, on the other, *compacting and forming new links* (Tetzlaff 1998). This unitary process is increasing transnational movement of capital, goods, knowledge and people. The era of globalization has brought with it concomitant implications for knowledge, education, and learning. Indeed, "The cultural circuit of capital allows the knowledges of very different situations to circulate much more freely and rapidly and to have a much greater say than previously within a space which is precisely tailored to that circulation, consisting of numerous sites and specialized route ways" (Thrift 2005, p. 94).

As Bloom (2004, p. 71) notes, globalization "is increasing the importance of education." As globalizing economies and markets shift from manual to knowledge-intensive economic activities, globalization fosters new skill formation needs. Nations are now recognizing the need to reshape their educational and training systems to meet demands of industries for more complex and higher-level skills. At the same time, individuals facing the complex new conditions imposed by economic change are looking to the expanded training options offered by the new markets to improve their life chances. In this way globalization is driving system reform and changes in individual choice of job and career. This multidimensional impact on skill formation is a feature of the knowledge transfer classification proposed in this chapter.

Braithwaite and Drahos (2000, pp. 15–26) conceptualize the process of globalization of regulatory frameworks in terms of the relationship between three concepts: *principles*, *mechanisms*, and *actors*. Through their analysis of cases of globalization, they conclude that globalization of regulation always involves more than a single process or mechanism (Braithwaite and Drahos 2000, p. 13).

Along with money (international investment) and technology, knowledge, particularly in the form of organizational principles and practice, is a critical resource driving globalization (Bresman et al. 1999, p. 440). However, multiple mechanisms are needed to facilitate the exchange of information and knowledge between firms, groups, and individuals in different regulatory environments (Bartlett and Ghoshal 1997; Kostova 1999). Kostova identifies factors operating at three levels of *country*,

*organization*, and *individual* and develops a model which recognizes that knowledge transfers are embedded in social, organizational, and relational transactions. The differences to be transacted are identified as "institutional characteristics, organizational practices that reflect the institutional environment of their origin's country context, and finally, the problem of 'not fitting' the transnationally transferred practices with a new institutional environment" (Kostova 1999).

Using Braithwaite and Drahos' analyses and Thrift's proposition, the international growth of Australian VET is regarded in this study as a prime example of the circulation of regulatory knowledge designed for one jurisdiction to different jurisdictions. This circulation of regulatory knowledge is facilitated by government-sponsored projects, international financial and aid agency support, international company skill needs, and VET organizations' pursuit of international business. Kostova's theoretical model for the transnational transfer of organizational practices is used to throw light on the multilevel dimensions of the transfer.

## Research Method

A qualitative method was adopted in this research for two reasons. First, it has not been possible to access large, standardized data sets, as much of the knowledge and understanding about the phenomena under investigation is emergent and being drawn from multiple domains of social, economic, and cultural activity. Secondly, a case study approach was essential in order to investigate *what* was being transferred and *how* the conditions of the transfer affected the implementation of Australian VET in non-Australian jurisdictions. The analytical focus of each case in this study is at the stage when the highest interaction for transfer of Australian knowledge and practice takes place. In the first case, the focus is on *project implementation*. In the second and third case studies, the focus is on *provision of training service*s. Nine interviews were conducted with project managers and educators involved in the selected projects, and annual reports, offshore project documentation, and published reports from a range of sources were also analyzed.

## Regulation of the Australian VET System

The current Australian VET system is considered one of the most advanced in the world. The fact that a system can be *nationally regulated*, *industry led*, and *client focused* has been commented on by international reviewers including the OECD (DEEWR 2009). In the system, goals of national consistency and local flexibility are pursued through three related sets of rules and standards. The first is through the *Australian Qualifications Framework* (*AQF*), which classifies all recognized education and training qualifications. The second is the Standards for Registered Training Organisations, which provides "a set of nationally agreed standards to ensure quality of vocational education and training services" (DEEWR 2009). The third

regulatory device is the Australian Industry Training Package comprising sets of nationally endorsed industry skill standards and assessment guidelines "packaged" AQF qualifications.

As the Australian government explains, these sets of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework qualifications provide a mechanism "for recognizing and assessing people's skills in a specific industry, industry sector or enterprise" (DEEWR 2009). There are currently 81 training packages (76 industry packages and 5 enterprise specific packages)[2] developed by Industry Skills Councils and endorsed by the Council of Australian Government's Industry and Skills Council. The latest available Commonwealth Government report (DEEWR 2011) claimed that the skills specifications in the 2011 total of 75 training packages covered 80 % of the skill needs, from basic to paraprofessional, of the Australian workforce.

In the Australian context, the training package works as a technology for translating information about skill standards in three stages: from myriad enterprise specific practices into regulatory standards and from these single sets of standards back into myriad education and training practices. Effective deployment of training packages as a technology of knowledge transfer requires the collaboration of stakeholders and units from inside and outside and at different levels of the VET system. The complexity embedded in these collaborations is magnified in transnational transactions. Even implementing individual components of the system such as a single training package qualification offshore is complex, because each component carries with it its regulatory relationship with other components.

## The Case Studies

Three cases have been selected for an empirical analysis. The first is a 5-year China-AusAID funded project in China involving Australian and Chinese institutions piloting VET reform across five industries in Chongqing, with the aim of developing a VET model that can be replicated on a national basis in China (AusAID 2007). The second case is the Australian College of Kuwait (ACK) which is a cooperative venture between Australian TAFE[3] institutes and universities and international companies and investors to deliver Australian accredited VET programs. The third case involves the provision of training for employees of an Australian registered mining company operating in Laos. In this case the Laotian employees receive Australian certificates at AQF 3 which are delivered by an Australian training provider which employs local trainers to work alongside Australian trainers. These cases have been identified as three different models of transnational knowledge transfer as described in the following section of the chapter.

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[2] http://training.gov.au/

[3] Technical and Further Education (TAFE) institutions are the government providers of VET in Australia.

## Three Models of Knowledge Transfer

*Model A. Government-government cooperation: Transfer of Australian VET knowledge through a reform project – Case: The Australia-China Chongqing Vocational Education and Training Project (ACCVETP)*

The ACCVETP started in early 2002 as a pilot project in the municipality of Chongqing and continued until 2007. The ACCVETP aimed to develop a VET system to address changing skill needs of industries in the rapidly developing province of Chongqing, with a population of more than 32 million, and to influence skill development more widely in China (AusAid 2007). The Australian government and the government of the People's Republic of China contributed to ACCVETP, with Australia contributing AUS$20 million of the total budget of AUS$25 million (Barnaart 2007; AusAid 2007). The Chongqing project which was the subject of agreements between governments aimed to influence the structural and regulatory arrangements of the host system (as distinct from the cases in models B and C which have more instrumental economic and business goals). The Australian training package was used as an exemplar for the design of Chinese qualifications for which graduates would receive a Chinese qualification.

The project was implemented by Hassall and Associates International (HAI) in association with RMIT University (Barnaart 2007; AusAid 2007) and involved two main phases. The first phase from Feb. 2002 to Feb. 2005 included initiatives implemented at school, municipal, and national levels. The second phase, from March 2004 to August 2007, included an additional international component. Based on a "vertical slice" project design, phase two aimed to replicate the successful outcomes of phase one and work on the development of four key components (Barnaart 2007). These components and related key activities are summarized in Table 7.1.

During the ACCVETP Australian and Chinese team members used Australian Training Packages to develop more than 410 units of competency in the Chinese language and add them to the Chinese curricula. In other words, information about *Australian* industry competency needs, collected and collated by *Australian* industries, became a formal part of the Chinese training curricula, and Australian apprenticeship and on-the-job training practices were identified for adoption in the Chongqing pilot colleges.

However, in the design of curriculum and delivery of training, there was no evidence that the Australian outcome-based training system was in fact being implemented by the Chinese Chongqing training managers. And although teachers at the pilot schools in Chongqing practiced Australian competency-based assessment as part of their teaching (and, according to officials interviewed as part of this case study, were quick to develop Australian style teaching and assessment practices),[4] a

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[4] The fact that the teachers adapted quickly and effectively was, according to officials interviewed, largely due to the quality of the Australian educators involved in the project and their capacity to work in a cross-cultural setting.

**Table 7.1** Components and activities in Australia-China Chongqing VET project (ACCVETP)

| Component | Key activities |
|---|---|
| **Phase I** | |
| *School based* | Three secondary VET schools and two tertiary VET colleges were selected as the pilot schools of the project. School-based planning, developing, and piloting competency-based curriculum, teaching and learning material development, professional development of school staff, and equipment procurement to assist pilot activities |
| *Municipal* | Establishment of five Industry Coordination Committees (ICCs) in the automotive, business services, electronics, hospitality and tourism, and construction industries, being modeled on Australia's Industry Skills Councils (ISCs). The Chongqing Normal University (CQNU) was chosen as to develop trainers' knowledge and skills in VET pedagogy |
| *National* | The Ministry of Education and the Central Institute of Vocational and Technical Education (CIVTE) were enabled to observe and review municipal school-based activities, to choose those outcomes that would assist China to better incorporate industry participation in VET, and to be more innovative in the design of VET policy |
| **Phase II** | |
| *School based* | Competency-based courses developed in the industry areas during phase one were expanded from 5 to 21 and now range from entry level certificate to diploma programs. A number of linkages between schools and some of key industry enterprises established |
| *Municipal* | All of the eight municipal ICCs led the development and review of new competency standards, which were approved. The VET teacher reform activities were expanded by CQNU. 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 |
| *National* | Establishment of a national ICC made up of national ministry representatives from related industries. This national ICC is working with the eight municipal ICCs, observing and reviewing the reforms they are putting in place. A draft national VET teacher competency standards and an associated quality framework were developed |
| *International* | Linking Chongqing schools to Australian Registered Training Organizations (RTOs) in each state by establishing a Sino Australia VET Network in 2005 and expansion of this network to include linkages between ISCs in Australia and Chongqing ICCs |
| | Swan TAFE in Western Australia was linked with the automotive tertiary pilot college, and the IIlawarra TAFE Institute in New South Wales was linked with the electronics tertiary pilot college as two Sino Australia Cooperative Model TAFE colleges |

Extracted and modified from Barnaart (2007)

final examination was still required after completion of the qualification in order for individuals to be recognized in the Chinese system.

*Model B: Transfer of Australian VET knowledge via business partnership arrangements – Case: The Australian College of Kuwait (ACK)*

The Australian College of Kuwait was sponsored by an Arab consortium, which established an investment partnership with the Boeing Company in 2004.

The college is managed by a consortium of Arab and Australian partners. The University of Tasmania, TAFE Tasmania, the Central TAFE in Western Australia, and Kangan Batman Institute of TAFE in Victoria (now Bendigo-Kangan) collaborated to deliver Australian accredited programs to Kuwaiti and international students, using Australian and local instructors. The ACK is introduced as the first private educational institution to start its operations from its purpose-built campus in Kuwait. Specialized equipment at ACK includes a ground-based Boeing 737–200 aircraft, aviation test benches and other sophisticated engineering equipment, a 57-foot boat, a state of the art marine simulator, and computer laboratories with the latest software. A broad range of short course, diploma, and degree programs in engineering and maritime programs in business, aviation, and English language are delivered at the ACK.

Both Kuwaiti and Australian teachers are employed to deliver programs at ACK. Through completion of the Certificate IV in Training and Assessment qualification (TAA04), local teachers became familiar with Australian VET regulatory frameworks and program design, delivery, and assessment practices. When they have completed the Cert IV-TAA, they undertook teaching practice in Australian training colleges for a period from a few months up to a year.

In Model B, the focus of transfer is the Australian qualification, and the agents who perform this transfer are the training managers and teachers. Neither the Australian industry organization role in determining standards nor the VET system role in endorsing standards is significant here. Unlike Model A where projects are driven by government agreements for systemic reform, in Model B the driving factors are business related and located within the operations of the training institution. The role of the Australian training package in this model is as a framework for the issuing of a nationally recognized Australian qualification. The use of the training package forms a bridge between Australian industry as the sources of technical information about skill formation and training institutions operating in a broad range of offshore contexts. "Business development" is the key promoter of the activities in this model, conducted by Australian universities and TAFE institutes. Offering Cert IV-TAA to local teachers of offshore programs can be regarded as a mechanism for developing Australian VET standards alongside local VET teaching practices.

While the training package technology was used by teaching staff as the basis for design of training programs and for delivery and assessment of training, it was not used explicitly as a source of standards relevant to local conditions. In other words, it is the Australian teaching and administration staff who are the key actors in fostering utilization of training packages, at institutional and individual levels, in the host context. Local Kuwaiti industry is not an actor in this transfer. The college is an offshore vehicle for Australian education and training

*Model C: The transfer of Australian VET knowledge via outward Foreign Direct Investment – Case: The Sepon mine project by OZ Minerals in Laos*

This model of transnational transfer refers to the use by Australian firms operating across national borders of the Australian VET system, as a framework for train-

**Table 7.2** Training programs delivered at the Sepon mine site

| Australian VET certificate programs | Other (nonaccredited) training programs |
|---|---|
| Cert. II and III in electrical trade skills and knowledge, metal TSK, building and construction, and automotive mechanical repairs | Computer skill training including MS Word, Excel, Access, Outlook, and PowerPoint |
| Cert. II, III, IV, Diploma in Metalliferous Mining Operations (processing) | Vehicle licenses and operating permits for heavy machinery and equipment |
| Certificate II in business | Unexploded explosives demolition |
| Certificate III in business administration | Exploration and geological surveying |
| Cert. III and IV in business (frontline management) | Safety training programs, including general safety, safety for forklifts, occupational H and S, risk assessment |
| Certificate IV in business (human resources) | English language skill training with five levels |
| Certificate IV in training and assessment. | Lao language skill training to improve the literacy levels of local employees |

Extracted and modified from Matzdorf (2007, p. 23)

ing local workers. The case studied in this model is a mining project conducted by the Australian mining and exploration company OZ Minerals (known as Oxiana Ltd before 2008) in the Sepon district in Central Laos. OZ Minerals acquired Sepon gold and copper mines in the Lao PDR through its Laos subsidiary company, Lane Xang Minerals (LXML), in 2000. As a key strategy, OZ Minerals has opted to train and recruit local workers in its projects. The Sepon mine project is the largest foreign direct investment (FDI) project in Laos to date and has created a considerable number of employment opportunities for local workers. In 2006, a total of 3,372 full-time and casual employees worked at the Sepon mine site (Matzdorf 2007, p. 17).

With limited resources to spend on educational and industrial infrastructure, skill development programs in Laos have always been dependent on donations from overseas (Boupha 2007). The absence of a qualified and skilled Laotian workforce in mining and education prompted OZ Minerals to establish its own training operation. Table 7.2 includes a list of the training programs delivered by OZ Minerals at the Sepon mine site.

In July 2006, OZ Minerals initiated a Mining Apprenticeship Training Program for Sepon workers and signed a contract with RMIT University[5] to implement the required training for the apprenticeships under the auspice of the Australian national VET framework (Matzdorf 2007). The program provided 110 apprenticeship places to Lao workers over a 4-year period, the first program of its kind in Laos (Oxiana Limited 2006). Over the period of training delivered by RMIT University, Lao workers at Sepon received a total of 71,326 hours of technical training. In addition 2,928 h of cultural awareness training was delivered at Sepon and 1,152 h were delivered at the Golden Grove operation (Oxiana Limited 2006, p. 18).

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[5] Bendigo-Kangan TAFE was also involved in the training as a subcontractor to RMIT University.

Whereas Model A involves systemic reform and Model B involves the offshore delivery of Australian qualifications to enrolled individuals, Model C involves the transfer of technical skills within a single company which is using Australian training package qualifications as a framework for company level training. In contrast to Model B, Model C has no host institute or local industry involvement. Individual Australian teachers and training managers play a major role in the transfer of knowledge by delivering training programs to non-Australian students in their own locale and at the point of practice. In this way, an Australian industry VET stakeholder and a registered training organization (RTO) are transferring Australian VET knowledge overseas via a foreign investment project.

Model C is uniquely an extension of the Australian VET system because it involves all three regulatory mechanisms in quality assurance. Trainers qualified under AQTF requirements deliver AQF qualifications, and the Australian registered training provider is audited according to AQTF standards. This has been a source of some controversy. There are Australian VET specialists and offshore project managers who find it hard to imagine how an Australian apprenticeship can be implemented in an offshore program. They are skeptical about the extent to which the outcomes of the program and the qualifications issued will be actually recognized by all aspects of the VET system: government, industry, and training providers.

## A Classification of Transnational VET Activity

The key purpose of this study has been to explore and analyze transnational VET. The outcome of the study is the identification of three models that classify transnational VET according to six dimensions of activity: mechanism of transfer, drivers, key actors, purpose, context, and outcomes. This classification together with the implications for interactions between Australian and host country actors is shown in Table 7.3.

As a result of these different transactions, the form in which Australian training packages are transferred as Australian VET knowledge varies from one model to another. In the different settings, under different circumstances, this transfer saw the training package being the vehicle for:

– Transfer of regulatory and institutional knowledge for the operation of training as happened to some extent in Model A
– Transfer of knowledge and skills to individual learners (Models B and C)
– Transfer of new certification arrangements and training practices to teaching and administration staff (Model B)
– Transfer of Australian qualifications and quality standards (Models B and C)

All the studied models also involved the transfer of English language to non-English contexts. Model A includes some programs taught in English at the time of project implementation. In Model C, in the case studied here, interpreters were involved in training delivery. Programs in Model B have a stronger mechanism for

**Table 7.3** A classification of transnational Australian VET activity

| | Model A | Model B | Model C |
|---|---|---|---|
| | International educational reform project | Transnational college-based training | |
| Model type | | | Transnational company training |
| Model Description | Education and training policy as a vehicle for education reform | Training as a commodity being traded in a global market | Training as a tool for labor force development offshore |
| Mechanism for transfer of Aust. VET Knowledge | Intergovernmental project | Offshore training partnerships between Australian RTOs and local institutions in the host country | Outward foreign direct investment. No Australian host country institutional partnerships |
| Policy driver | Government policies in a global economic context | Transnational business strategies of investors and training providers | Host government foreign investment policies and corporate growth strategies in a global market |
| Funding driver | Australian aid agency and local government | Partnered institutes and (in some cases) sponsoring enterprise investment | Investing company facilitated by host country's government (i.e., removal of financial and policy impediments) |
| Key actors | Governments and government agencies | Australian VET providers, locally registered training institution and perhaps international companies | Australian/international company, Australian registered training provider |
| Purpose and context | Macro policy making | Institutional administration | Training practice |
| | Institutional administration | Training practice | |
| | Training practice | | |
| Outcomes for students | Students may receive a host country qualification on successful completion. Receiving an Australian qualification is not the goal | Students may receive an AU nationally recognized qualification which may be recognized within Australia by job seekers | Trained workers receive an Australian nationally recognized trade qualification |

**Table 7.3** (continued)

|                          | Model A | Model B | Model C |
| --- | --- | --- | --- |
|                          | International educational reform project | Transnational college-based training |  |
| Model type               |  |  | Transnational company training |
| Level of interaction between Australian and local training actors | Highly political | Less political | No political intervention in training practice |
|                          | Highly institutional | Highly institutional | No local institutional involvement |
|                          | Individual engagement mediated by government policy, local institutional involvement, and enrollment as a student (*a vertical slice through the host system from policy making to local training practice*) | Individual engagement mediated by enrolment in training as a student | Individual engagement mediated by company as employer |

fostering English learning at the global context as they are delivered in English, and they generally consider IELTS[6] as a prerequisite for enrollments.

The study revealed that Australian VET knowledge was being used in two different modes. The first mode involved the use of the Australian regulatory arrangements and practices to update, reform, and enrich local regulation and practice (model A). The second involved the use of the training package as a "*technology of trust*," *that is*, *an agent* which manages to hold the face value of its components (e.g., units of competency and qualifications) intact in different settings and under different training and assessment practice regimes (models B and C). Finally, the development of transnational activities according to each of these modes acts as a catalyst for the development and the expansion of the Australian VET approach to training regulation, in different forms and with different degrees of effectiveness in a global context.

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[6] IELTS is a widely accepted English language test that assesses candidates' skills in four skill categories of listening, reading, writing, and speaking. The candidates will be given a score from 1 to 9 for each part of the test and the average produces an overall band score. The acceptable score bands for academic and professional organizations generally start from 6 for "competent user." The scores 7–9 refer to "good user, showing the candidate maintains an operational command of the language", "very good user, explaining the candidate has a fully operational command of the language"; and "expert user, showing the candidate has a full operational command of the language." IELTS is jointly owned by the British Council, IDP: IELTS Australia, and Cambridge English Language Assessment (British-Council 2014).

## Transnational VET and Global Standards

Since this research project concluded, international VET activity has continued to increase. At the same time, there has been a growing recognition of the need for skills policies and mechanisms to enable a globally mobile labor force to access quality training and recognition in multiple regulatory jurisdictions (OECD 2011; UNESCO 2015). Both the OECD and UNESCO are currently leading projects aimed at addressing these needs.

Since 2011, the OECD has been designing and consulting on a global skills strategy, the aim of which is to support member and nonmember countries to improve VET provision. The strategy addresses responsiveness, quality and efficiency, flexibility, transferability, ease of access, and lowering costs through credit accumulation, credit transfer, and modular instruction (Towards an OECD Skills Strategy 2011, p. 3). At the same time, UNESCO has been engaged in global action to facilitate international comparison and recognition of technical and vocational education and training (TVET) qualifications. This work is an important outcome of the 3rd International Congress on Technical and Vocational Education and Training, held in Shanghai in May 2012. This Congress recommended that UNESCO explore the development of international quality assurance guidelines for the recognition of qualifications based on learning outcomes and identify a set of world reference levels (WRLs). The aim of the WRLs would be to facilitate international comparison of TVET qualifications to enable mutual recognition and support labor market mobility by offering a neutral, independent, and international reference point against which the level of learning can be compared and against which qualifications can be pegged.[7]

### *Implementing Global Standards: The WorldSkills Project*

As international agencies move through the process of securing international policy agreements across diverse regulatory systems, a global skills organization, WorldSkills,[8] has moved into the global skills standards space through the development of specifications for all 50 skill areas represented at the biennial WorldSkills International Competition.[9] Since 1947, when the WorldSkills organization was launched in Spain to promote skills training to young people during the period of postwar reconstruction, it has grown into a global movement. The biennial international competition attracts over 1000 young people from its 73 member countries

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[7] World Reference Levels of Learning Outcomes Experts Meeting 23–24 April 2015 IIEP Institute 7–9 rue Eugène-Delacroix, 75116 Paris Draft agenda

[8] https://www.worldskills.org/

[9] https://www.worldskills.org/what/competitions/worldskills-competitions/

and regions,[10] and WorldSkills is supported by major global corporations and industry associations. Competitions held by individual member countries and regions are similarly supported by global, national, and local enterprises, and WorldSkills is increasingly seen as a global resource for the promotion of excellence in skill development.

The WorldSkills Standards Specification (WSSS) for each skill has been developed in close consultation with leading industry associations and enterprises. Each specification identifies the skills, knowledge, and understanding that constitute international best practice in the work roles represented in the WorldSkills Competition.[11] In recognition of the importance of interpersonal attributes and so-called soft skills[12] to the development of expertise and conduct of the twenty-first-century work roles, the WSSS identifies broad vocational/employability skills[13] as well as specialist applications of broad skills[14] and specialist technical skills.[15]

Standards specifications and associated assessment strategies for all skill areas were implemented for the first time at the WorldSkills 2015 Competition held in Sao Paulo, Brazil. Outcomes are currently being analyzed by WorldSkills assessment advisors as part of a review and continuous improvement project through which WorldSkills aims to establish and promote a critical awareness of and capacity to work with, global vocational standards. Ongoing work on the WSSS and associated WorldSkills projects aimed at relating the standards specifications to national and international qualification frameworks and recognition and licensing systems is being followed closely by UNESCO as a possible model for the development of world reference levels.

As part of its commitment to the development of skills excellence, WorldSkills has made its standards specifications freely available[16] to education and training providers and interested individuals, for use as a reference point for growing and rewarding vocational performance, a benchmark for national and regional standards and a resource to support young people and adults working in an international context. Importantly this means that any training provider or system that chooses to use the WSSS as benchmarks for the delivery of training can also use the standards as a

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[10] https://www.worldskills.org/about/members/

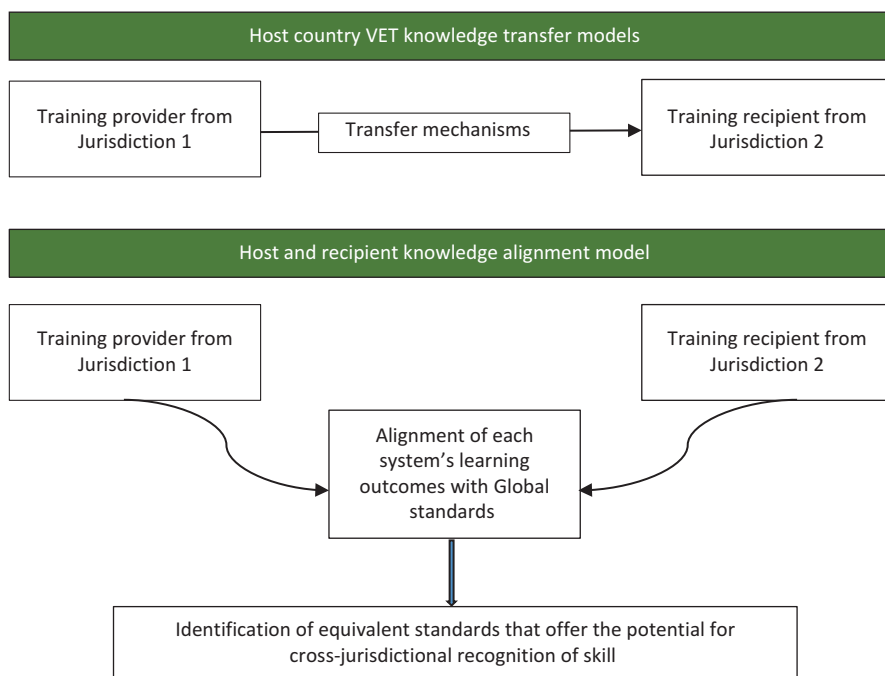[11] https://www.worldskills.org/internal/competition-documentation/worldskills-standards-specification/

[12] Finnish research into the attributes and characteristics associated with vocational excellence (Nokelainen and Ruohotie 2002, 2009) and a subsequent study of competitors at the 2011 WorldSkills International Competition showed that medal winners scored higher on attributes such as perseverance, time management, self-reflection and motivation, and interpersonal and intrapersonal skills than non-medal winners (Nokelainen et al. 2012).

[13] Represented in each specification under the categories of Work Organization and Management and Communication and Interpersonal Skills

[14] For example, problem-solving in visual merchandizing, innovation creativity, and design in graphic design

[15] Such as fabrication and assembly in mobile robotics and using industrial controllers in mechatronics

[16] See https://www.worldskills.org/what/education-and-training/wsss/

**Table 7.4** A potential post-transfer model

| Host country VET knowledge transfer models |
|---|

| Training provider from Jurisdiction 1 | → Transfer mechanisms → | Training recipient from Jurisdiction 2 |
|---|---|---|

| Host and recipient knowledge alignment model |
|---|

| Training provider from Jurisdiction 1 | | Training recipient from Jurisdiction 2 |
|---|---|---|
| | Alignment of each system's learning outcomes with Global standards | |
| | Identification of equivalent standards that offer the potential for cross-jurisdictional recognition of skill | |

framework for aligning training standards. In this way the WSSS can play a role in the negotiation of international VET delivery to meet the standards of both host and recipient jurisdictions.

This leads us to propose a post-transfer model for the delivery of VET across jurisdictions. In this model the technology of trust is not bound to an individual jurisdiction, as, for example, the training package is bound to the Australian VET regulatory system. Instead the global standards constitute a multi-jurisdictional technology of trust – and a voluntary code to which participating entities subscribe. Such global standards, devised by a nongovernment organization, can act as an independent benchmark against which to align different sets of standards and identify equivalent standards that can facilitate skills recognition across national boundaries without affecting either set of national standards. In other words, rather than having to shoehorn the standards of one jurisdiction into the regulatory framework and practical conditions of another,[17] a set of general (and nonregulatory) standards can broadly reference a range of specific regulations and work practices. At the same time, the training in question can be certified against the practice standards of a global organization dedicated to the promotion of skills excellence. This model is illustrated in Table 7.4.

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[17] See, for example, Chap. 9 of this volume (Dempsey and Tao 2017) concerning the challenges of adapting Australian training package qualifications in a Chinese context.

## Conclusion

Reducing the dependency on curriculum that is specific to local contexts is regarded by Ziguras and Rizvi (2001) as a common approach to developing international programs in higher education. By definition, as a set of standards that are not tied to mandated instructional sequence, course content, or assessment instruments, the Australian training package does offer a strategy to reduce the dependency on curriculum. However, the training package has developed a paradoxically bilateral nature. On the one hand, its flexible foundation for the design of training qualifications encourages its globalization, fosters implementation in quite widely different contexts, frees teachers and students from the constraints of a centrally prescribed curriculum, and enables a range of delivery and assessment options to suit local needs and preferences. On the other hand, the training package has become more and more tightly tied to an Australian industrial and business context through the inclusion of workforce standards and regulations specific to Australian conditions (e.g., occupational health and safety, construction codes, licensing requirements) and through audit regimes that have come to demand forms of training institution governance, management, and training delivery that may be quite inappropriate outside Australia. This regulatory inclination to tie the training package to Australian settings and conditions is not likely to decrease in the near future.[18] Accordingly it is likely that the Australia-centric orientation of the audit regime will continue to be problematic in non-Australian settings. Further, the mode of competency-based training represented by the training package is likely to sit uneasily with nations that maintain or are adopting curriculum-based vocational systems as a tertiary education for school leavers and for workers deepening their skill base.

We suggest that it is the profit motive of global and transnational businesses (including training businesses) operating in and from Australia, and their capacity to reproduce Australian training and regulatory microsystems in their offshore premises, that will continue to be the main force fostering the transnational transfer of training packages and their regulatory framework. The value of the training package for such enterprises is also enhanced by the fact that Australian competency standards can be mapped readily to those of industries such as information technology which are driven by global/interoperable standards for design, production, and skill development and to transnational enterprise standards.

The question of the possible benefits and pitfalls of global standards – for individuals, national jurisdictions, and transnational enterprises – remains an arena for critical analysis. The hegemonic power of national standards over practices and behaviors within a jurisdiction may well pale into insignificance in the face of global standards endorsed and regulated by nations of the global north.

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[18]Australian training has been quite radically deregulated over the past decade. As more private, for-profit training institutions gain national accreditation *and* access to state and commonwealth government funding, regulators are responding with ever-tighter regulatory requirements in order to address a scandalous level of corruption (ABC 2015a, b; ASQA 2016).

The impact of global standards designed and implemented by nongovernment agencies is less predictable – but likely to be less hegemonic than standards endorsed and utilized by government agencies and transnational corporations – because they are essentially voluntary codes, binding only on members and subscribers. Moreover, it will be necessary to account for WorldSkills as a not-for-profit movement promoting skills excellence and respect for those young people who choose to pursue craft rather than academically based careers. In this context global skills standards may offer a set of benchmarks with utility for individual and institutional advancement.

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