

Key Points

- The government has a vital role in initially funding and establishing effective technical and vocational education and skills development systems.
- Partnerships with the private sector that promote training contracts with mandatory placements improve job prospects of trainees.
- There is a need to increase the share of students benefiting from apprenticeships and traineeships with employers.
- Policies that enable user choice in training for employers and trainees help to increase competitiveness and effectiveness of training.
- Workforce development funds to finance training are powerful means of linking training with the world of work and improving relevance of training.
- The prestige of technical and vocational education and training can be enhanced through new credentials such as applied degrees as well as through higher wage realization for skilled workers—partnerships with employers is thus crucial.
- Several pathways for skills development need to be available to youth with flexibility and opportunity to acquire skills through modular qualifications.
- Flexibility and responsiveness of training institutions to the evolving needs of industry are crucial attributes of successful skills development systems.

Skills Development: Promising Approaches in Developed Countries and Emerging Economies

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Introduction

The ADB International Skills Development Forum held in ADB headquarters in Manila in December 2012 provided a platform to share the knowledge and experience of advanced countries in their journey in setting up successful skills development institutions. The experiences of Australia, Germany, the Republic of Korea, and Singapore were shared by leading practitioners and policy makers. Initiatives and programs of a number of developing countries in Asia were also shared. This brief has been prepared by drawing on presentations and discussions at the 2012 forum and other related materials. Links to forum resources are provided on the last page of this brief.

Recent trends and reports indicate that availability of talent is a key component of the long-term competitiveness of companies and nations. Corporations are thus very much concerned with attracting, developing, and retaining suitable talent. This has been far from easy. The Hays 2013 global skills index finds that 18 of the 30 countries surveyed are experiencing skills shortages, with employers reporting difficulties in recruiting skills labor (Hays plc 2013). In most countries, skilled labor markets have tightened. The *Global Talent Index Report* of the Economist Intelligence Unit (EIU 2012) reveals that more than half the employers surveyed are devoting more resources than 2 years ago to invest in talent development—a phenomenon more pronounced in Asia, with 60% of employers spending more on developing employees.

The Hays global skills index incorporates seven indicators that provide an assessment of the efficiency of the skilled labor market in countries and whether employers find it easy or difficult to recruit skilled labor (Hays plc 2013):

- **education flexibility:** whether education systems can adapt to meet organizations' future talent needs, particularly in the fields of mathematics, science, and literacy;
- **labor market participation:** measures the degree to which a country's talent pool is fully utilized;
- **labor market flexibility:** assesses the legal and regulatory environment faced by businesses in filling talent gaps;
- **talent mismatch:** measures the mismatch between skills needed by business and skills possessed by the labor force;
- **overall wage pressure:** whether wages are keeping pace with historic trends;
- **wage pressure in high-skills industries:** the rate at which wages in high-skills industries outpace those in others; and
- **wage pressure in high-skills occupations:** a measure of wage premium paid in high-skills occupations, indicating shortages of key talent.

The analysis arising from the Hays index suggests that there is need for flexibility not only in education systems (i.e., whether the education system can adapt to meet the changing needs of employers) but also in labor market policies that allow employers to determine wages, adopt measures for short-term employment, and draw talent through immigration.

Policies and Practices of Effective Skills Development Systems

A special panel in the 2012 ADB International Skills Development Forum discussed the experiences of countries that have successfully forged ahead in terms of skills development. A key lesson from the experience of these countries is that they systematically aligned education and employment policies with economic and industrial policies (backed up by good forecasting of industries of the future, or picking “winner” industries to become competitive in and develop human capital for).

Other pointers from successful systems are that the role of government is key to strengthening the foundation of technical and vocational education and training (TVET) and skills development systems. In countries with effective skills development systems, governments consistently led the process to establish those systems. Partnership with industry is found to be fundamental to securing relevance of training: industry must play an active role and TVET and skills development need to be aligned with workforce needs. Availability of financing from different sources—government, students and employees, and the private sector—is vital for the success of TVET and skills development systems. Finally, since continuously matching supply and demand is never easy, crucial attributes of successful systems are flexibility and responsiveness to the evolving needs of industry.

Other key issues arising from the experiences of countries that have effective skills development systems is that they have raised the prestige of technical education. TVET is usually considered less prestigious than tertiary degrees, leading to the growing phenomenon of graduate unemployment even in developing countries. The Republic of Korea and Singapore have raised the prestige and the signaling value of technical education in the market. Singapore raised the quality of the Institute of Technical Education to world standards. Recently, the Singapore Committee on University Education Pathways has recommended adding 3,000 university places by 2020, which will be in a new “applied degree” pathway linked to real-life applications in the Singapore economy. The Republic of Korea has created “Meister schools” at the secondary level that provide work experience for students as part of the course of study, and the graduates will have the prestigious label of young master craftsman.

Table 1 provides brief descriptions of the historical journey and key features of skills development systems of Australia, Germany, the Republic of Korea, and Singapore.

Partnership with industry is found to be fundamental to securing relevance of training: industry must play an active role and TVET and skills development need to be aligned with workforce needs

Table 1 Evolution and Key Features of Successful Skills Development Systems^a

Republic of Korea	
Historical background	<ul style="list-style-type: none"> ▪ It took the Government of the Republic of Korea only around 40 years to have a good skills development system, essentially because of a state-led system and enabling policies for private sector participation for training workers. ▪ In the 1960s, company high schools were established to allow employees to work in factories during the day and study at night. ▪ From the mid-1970s to the early 1990s, the government provided incentives in the form of exemption from tax levies, and in return companies were required to train the workers. ▪ The training support was supplemented with employment insurance that included a job placement service, skills and training service, and unemployment assistance service.
Key policy priorities and initiatives that helped successful skills development	<ul style="list-style-type: none"> ▪ The government has a comprehensive economic plan together with effectively combined economic and industrial forecasting and labor force planning. Industry forecasts of promising sectors in a 5–10 year horizon were combined with labor force planning. Forecasts of future demand in specific sectors were linked to investments in the education subsectors to expand and improve primary and secondary education. The government played a very important role in promoting skills development to match the economic aspirations of the country. ▪ Government policies enhanced the prestige of vocational education, continuing this policy to strengthen secondary vocational and technical training. Twenty-one Meister high schools were opened first in 2010, with 38 in operation in 2013. The aim is to encourage students to see Meister schools as a high-status alternative where students are labeled young “Meisters,” the German term for master craftsman. As additional incentives, students enjoy free tuition and room and board. Meister schools account for less than 7% of all vocational high schools in the Republic of Korea, yet the early results are promising. At least 90.8% of the first generation “young Meisters” have jobs lined up, even though they have not yet graduated (McKinsey & Company 2013). Students learn both in school and in a practice environment. Students are also taught “soft skills.” They graduate with the equivalent of 2 years’ work experience and/or community college experience, which is an attractive blend. The Meister program can be a pathway to university as well as to the workforce. ▪ In 2011, responding to high rates of college graduate unemployment, the government introduced the “work first, study later” policy, which included incentives to companies to hire well-prepared high school graduates and offered counseling for students.
Singapore	
Historical background	<ul style="list-style-type: none"> ▪ Singapore’s industrialization program started in the 1960s. A number of initiatives were undertaken, and an important landmark was the establishment of the Industrial Training Board as a statutory board. Greater autonomy and flexibility were given to technical education, allowing a more coordinated and strengthened system of specialized education focusing on technical skills rather than on general vocational education. ▪ The government offered incentives through the Economic Development Board for the establishment of government training centers in collaboration with multinational companies in the 1970s. The government also received technical assistance from France, Germany, and Japan to establish institutes of technology in the late 1970s and early 1980s. ▪ This gave rise to Singapore’s current vocational and technical education (VTE) model. Another crucial policy change was the decision by the Ministry of Education to upgrade and reposition VTE as a postsecondary educational institution, which led to the establishment of the Institute of Technical Education (ITE) in 1992 and its transformation as a world-class educational institution.

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Table 1 continued

Key policy priorities and initiatives that helped successful skills development	<ul style="list-style-type: none"> ▪ Singapore continues to invest heavily in education and training, including VTE. ▪ Through the ITE, it exerts special efforts to address the needs of the lowest 25% of a school cohort who are less academically inclined. The ITE model added choices, diversity, and robustness to the Singapore education system. Various industry-based training schemes (i.e., traineeship, approved training centers, and certified on-the-job training centers) were established to ensure relevance and cost-effectiveness. ▪ The government helped to improve the image of TVET through campaigns on “using the hand,” “Top of the Trade” television competitions, and “Apprenticeship of the Year” awards. The government helped ITE to transform through organizational excellence and modern campuses.
	<ul style="list-style-type: none"> ▪ Similar to the Republic of Korea, Singapore put in place policies to align education systems with economic development. The economic development board identified key “winner” industries for which targeted efforts were made to develop the requisite skilled labor force. Although Singapore had its share of challenges, there were many successful areas, such as electronics, chemicals, precision engineering, and biomedical technology. ▪ In addition to the ITE, the government also set up a vibrant and responsive polytechnic sector to offer industry-relevant and demand-driven programs to train technologists to meet the changing workforce needs of industry as it moved up the value chain. ▪ The joint establishment of centers of excellence in various technologies facilitated exchange of technology, expertise, and training resources. ▪ The government funds and supports employment training for school graduates and school dropouts to continue their education and training. The Workforce Development Agency formed in 2003 was mandated to assist people in finding productive employment by providing new opportunities for training to augment skills. The government provides subsidies to cover 80%–90% of the training cost and the employee pays the rest. Singapore provides several government incentives for companies to send people for training.
Australia	
Historical background	<ul style="list-style-type: none"> ▪ Australia’s TVET system has a long history, beginning with apprenticeships (in the tradition of the medieval guilds) and working-men’s colleges and schools of mines dating back to the 19th century. Traineeships in a wide range of occupations were introduced in the 1980s to complement apprenticeships in the trades. Large public technical colleges and further education colleges now compete with large numbers of private registered training organizations following the opening up of the training market. Reforms in the late 1980s and 1990s centered on the introduction of competency-based training and harmonization of state-based systems to form a national system.
Key policy priorities and initiatives that helped successful skills development	<ul style="list-style-type: none"> ▪ One of the defining features is industry leadership. Before the reforms in the 1990s, TVET was built more around the provision of education and training by the technical and further education institutes. Industry helped the move to competency-based training and the use of “training packages” as the mechanism to define competencies. Competencies are defined in Australia to specify the skills required in the workplace, rather than merely academically oriented education and knowledge. Eleven national skills standards councils cover the whole economy. ▪ The Australian Qualifications Framework (AQF), introduced in 1995, is a single national framework incorporating qualifications from schools, TVET, and higher education institutes. The AQF provides learning pathways and procedures for accrediting institutional and student credentials. ▪ Apprenticeships and traineeships engage industry through training contracts between an employee (the apprentice or trainee), the employer, and a training provider. ▪ Investments in training by industry and the private sector are important. User choice has been introduced whereby employers of apprentices and trainees are able to choose any training provider for off-the-job training. Australian states are also introducing “entitlement models” where the training money is tied to the students and they (or their employer) can choose the type of training and provider. ▪ The workforce development fund enables employers to bid for training funds with “co-investment” channeled through industry skills councils. ▪ The Australian system relates training to the labor market and focuses on having a good education embedded within the TVET system and ensuring broad, rather than very narrow, vocational schools.

Table 1 continued

Germany	
Historical background	<ul style="list-style-type: none"> Germany's TVET system has been heavily based on apprenticeship for centuries. Over time it has been modified and transformed as a very flexible and stable system. In Germany, because of the very long tradition and good reputation of the TVET system, TVET graduates can play important roles in the community or government. TVET graduates are highly skilled, and they enjoy increased labor market access and incentives. People trained are loyal to the company and vice versa because both benefit from this economically stable and profitable situation. Loyalty to a company means the return on investment of training has already been paid with two-way benefits.
Key policy priorities and initiatives that helped successful skills development	<ul style="list-style-type: none"> Germany's TVET system has great appeal, unlike other countries where TVET systems lack attractiveness. In Germany, TVET covers between 50%–60% of an age cohort. The image and reputation not only of the TVET institutions but also of TVET graduates are excellent. The high salaries earned by TVET graduates and their many job opportunities contribute to the attractiveness of the system. The most important feature of the system is the role that companies play—it is basically a company-driven system. The companies share 75% of the costs of training while 25% comes from the government, which allows apprentices and trainees to be paid a salary that increases from year to year. Modular qualifications were introduced in order to make it easier for young people to enter training and gradually progress in qualifications. They are mainly aimed at socially disadvantaged young people and those who find learning difficult. The TVET system allows permeability along several pathways for skills development. In recent years, permeability improved, but in detail there are still some obstacles. Generally speaking, however, students can switch from one channel to another, such as from TVET to general education or vice versa. Another unique feature is the task sharing among companies, industry chambers, public institutions, and TVET schools. The TVET system is very integrated; students spend 1.5 days in school and 3.5 days in actual workplaces. A program called "Completion and transition—education chains leading to vocational qualifications," launched in the summer of 2010, includes career-start counseling, a vocational orientation program, and the Job Starter program for initial vocational training to reduce dropout rates. The Employment Opportunities Act of 2010 introduced Training Bonus, a financial subsidy that decreases the cost of initial vocational training and is provided to employers that offer additional training places for young people (UNESCO–UNEVOC 2013).

^a Table 1 draws mostly from the Forum's Panel Session on Learning from Successful Skills Development: Best Practices from the Republic of Korea (Park 2012), Germany (Baur 2012), Australia (Karmel 2012), and Singapore (Chan 2012).

Toward Promising Approaches in Skills Development

ADB has a growing portfolio of TVET projects. It has ongoing skills development projects in Bangladesh, Cambodia, the People's Republic of China, India, Indonesia, the Kyrgyz Republic, the Lao People's Democratic Republic, Nepal, Timor-Leste, and Viet Nam; and planned skills development projects in Mongolia, Sri Lanka, Tajikistan, and the Pacific Region. In 2012, TVET projects constituted 33% (\$95 million) of ADB's education lending. In 2013, when this brief was prepared, the share of TVET lending stands at 43% (\$220 million) of the total education sector lending portfolio.

The 2012 Skills Forum highlighted the importance of moving from policy to practice and translating promising policies that

have been implemented in advanced countries into concrete actions in developing countries. In terms of actualizing new and innovative approaches to skills development and to increase the effectiveness of skills development policies, the need for building up a repertory of "how to" operational policies with concrete actions and initiatives was stressed.

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The following table provides examples of specific actions countries can undertake to address priority objectives in skills development. A number of these examples are from

various ADB skills development projects. The links to the ADB projects under reference are provided at the end of the table.

Table 2 Skills Development for Developing Asia–Pacific: Toward Promising Approaches

Issues and Areas for Action	"How To"	Country/ADB Project Examples
Developing skills required for economic growth and moving from low to middle income and from middle to high income levels	<ul style="list-style-type: none"> – Focus skills development in sectors that are identified as leaders for the country’s competitiveness and align skills development policies with economic and industrial policies. 	<ul style="list-style-type: none"> – Skills development priorities focused on key sectors identified in the economic master plan for specific regions (Indonesia) – Partnerships between polytechnic institutions, vocational schools, and employers established in economic centers; National Skills Fund to support demand-driven adjustment of training programs in public and private polytechnics in the six economic corridors in line with the National Economic Master Plan (Indonesia) – Skills highlighted in the rectangular government strategy that promotes growth, employment, equity, and efficiency (Cambodia) – Plans to upgrade vocational colleges to deliver priority occupational programs (Viet Nam)
Strengthening the base of higher-order skills in the workforce	<ul style="list-style-type: none"> – Invest in science, technology, engineering, and mathematics at secondary and postsecondary education levels. Invest in postsecondary and tertiary skills with appropriate qualifications that attract students. 	<ul style="list-style-type: none"> – Introduction of a technology stream in secondary schools (Sri Lanka) – Establishment of a center of excellence in engineering in a polytechnic and promotion of applied research programs for tertiary skills in cooperation with polytechnics, community colleges, and local companies (Indonesia)
Enhancing private sector participation and partnerships to scale up training provision and increase relevance of training and job placements	<ul style="list-style-type: none"> – Provide skill vouchers to finance training of target groups by private sector providers. – Establish training contracts with private providers with placement-based payments. – Develop skills assessment systems that incorporate industry requirements. 	<ul style="list-style-type: none"> – A national public–private partnership model to create the National Skills Development Corporation that funds private providers for training and placements (India) – Employment fund to finance placement-oriented contracts with private providers (Nepal) – Industry-led bodies and board of technologists regulate, monitor, and accredit all relevant technical training programs (Malaysia) – School–industry linkages established at the local level and production units established in secondary vocational schools (Indonesia)
Increasing opportunities for training for the disadvantaged and promoting TVET for inclusive growth	<ul style="list-style-type: none"> – Undertake affirmative action to increase access to training for students and workers from poor and disadvantaged backgrounds. – Support training of workers for the informal labor markets. – Increase opportunities for training in high-growth sectors for the rural youth. 	<ul style="list-style-type: none"> – Vocational Training Development Strategy has the dual objective of high-tech training with high economic payoff and skills development for disadvantaged people (Viet Nam) – TVET for social services, such as early childhood education teachers, nurses, and elderly care providers (People’s Republic of China) – Gram Tarang and Centurion University model combines entry-level skills with high-tech skills at the tertiary level for disadvantaged youth from Naxalite-affected and poor zones (India) – Expansion of provincial training centers; use of skills vouchers in all provinces to increase access to training for the disadvantaged (Cambodia)

Issues and Areas for Action	"How To"	Country/ADB Project Examples
Strengthening soft skills, language skills, and information and communication technology (ICT) skills along with technical skills to improve job readiness	<ul style="list-style-type: none"> – Incorporate into the curriculum the teaching of soft skills and ICT skills at the secondary stage with appropriate assessment mechanisms. 	<ul style="list-style-type: none"> – Introduction of English and other languages, ICT as a subject and as a tool, and use of collaborative and interactive pedagogy at secondary stage (Sri Lanka)
Developing skills development pathways that enable acquisition of training and updating of qualifications	<ul style="list-style-type: none"> – Introduce modular training programs for skills updating and upgrading. – Put in place recognition of prior learning and pathways between formal and informal learning and institutional and workplace-based training. – Develop qualifications based on competencies required by industry. 	<ul style="list-style-type: none"> – The national qualification framework synchronizes formal education, industry experience, professional certification, and societal experiences (Indonesia). – The national vocational qualifications framework developed with strong industry participation (Sri Lanka)
Improving employment services and job placements	<ul style="list-style-type: none"> – Reform and privatize employment exchanges; focus on ancillary services that link training with actual job placement. 	<ul style="list-style-type: none"> – "My First Job" project under the Employment Facilitation for Inclusive Growth technical assistance project will increase access to jobs for youth through counseling and life skills training (Philippines) – Improving employment services and job placements; institutionalized regular "job fairs" at secondary vocational schools where students present their skills and knowledge to local and national companies (Indonesia)

Links to a selection of ADB projects referred to in Table 2:

China, People's Republic of: Guangxi Nanning Vocational Education Development Project
<http://www.adb.org/sites/default/files/projdocs/2012/46047-001-prc-pptar.pdf>

Cambodia: Third Education Sector Development Program
<http://www.adb.org/sites/default/files/projdocs/2012/43260-013-cam-rrp.pdf>

India: Supporting Human Capital Development in Meghalaya
<http://www.adb.org/sites/default/files/projdocs/2013/46166-001-ind-rrp.pdf>

Indonesia: Polytechnic Education Development Project
<http://www.adb.org/sites/default/files/projdocs/2012/42099-013-ino-rrp.pdf>

Nepal: Skills Development Project
<http://www.adb.org/sites/default/files/projdocs/2013/38176-015-nep-rrp.pdf>

Sri Lanka: Education Sector Development Program
<http://www.adb.org/sites/default/files/projdocs/2013/39293-037-sri-rrp.pdf>

Sri Lanka: Technical Education Development Project
<http://www.adb.org/sites/default/files/projdocs/2005/35197-SRI-RRP.pdf>

Philippines: Employment Facilitation for Inclusive Growth
<http://www.adb.org/sites/default/files/projdocs/2013/46481-001-phi-tar.pdf>

Viet Nam: Second Upper Secondary Education Development Project
<http://www.adb.org/sites/default/files/projdocs/2012/42275-013-vie-rrp.pdf>

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Links to Forum paper and related resources:

Skills for Inclusive and Sustainable Growth in Developing Asia-Pacific: An International Forum 2012.

<http://www.adb.org/sites/default/files/skills-forum-2012-agenda.pdf>

Skills Development for Inclusive and Sustainable Growth in Developing Asia-Pacific

<http://www.adb.org/publications/skills-development-inclusive-and-sustainable-growth-developing-asia-pacific?ref=sectors/education/publications>

ADB Brief: Skills for Inclusive and Sustainable Growth in Developing Asia and the Pacific

<http://www.adb.org/publications/skills-inclusive-and-sustainable-growth-developing-asia-and-pacific?ref=sectors/education/publications>

ADB Skills Development Blog

<http://adbskillsdevelopment.wordpress.com>

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