A REPORT ON AUSTRALIAN ENGAGEMENT WITH INDIA'S SKILLS AGENDA

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OVERVIEW OF FINDINGS

This report summarises the research on bilateral skills engagement between Australia and India, conducted by the Australia India Institute for the Commonwealth Department of Education and Training. Its key research findings are provided below.

1. India’s skills system has significant diversity in vocational training, trainee assessment and certification across central and state/UT government institutions and private sector providers. The Government of India’s ambitious agenda for reforming the skills sector includes establishing a coherent framework for skills development and expansion of programs in industry sectors with high demand for skilled workers.

2. The Indian government invites participation of foreign skill providers in emerging industries and niche industry sectors where Indian skill providers lack training capacity; i.e., it invites foreign skill providers to complement, rather than duplicate or replace, the programs offered by Indian skill providers. The preferred industry sectors for foreign skill provider participation include aviation, mining, ports, smart city infrastructure, agricultural technology, and allied health services. Central and state/UT government representatives are also keen for foreign skill providers to offer skills training and orientation that enable international migration pathways for Indian nationals.

3. Australia’s vocational education and training (VET) system is well-regarded in India for its breadth of coverage across multiple industry sectors. It is particularly admired for its model of training and apprenticeship combining off- and on-the-job training over an extended period, and industry involvement.

4. Australian registered training organisations (RTOs) have substantial market opportunities to collaborate with Indian government agencies, Industrial Training Institutes (ITI), and other Indian skill providers for building capacity and adding value in areas where they hold special expertise. This includes professional development for trainers, assessors, institutional leaders and professional staff. They can seek collaborations with the newly established India International Skills Centres across the country. They can collaborate with the Indian Skills Sector Councils (SSCs) and other state/UT and central government agencies to develop and embed quality and risk management frameworks for further expansion of skills training under the National Skill Development Council (NSDC). Other market opportunities for engagement include government-funded skill development schemes such as PMKVY and DDU-GKY.

5. The research provides five recommendations for effective engagement between Australia’s skills sector and the Skill India Agenda.
   1. Establish an ‘Australian VET brand’ in India.
   2. Deliver tailored industry- and company-specific programs in partnership with Australian companies operating in India.
   3. Work with Indian skill providers, the Central Staff Training and Research Institute (CSTARI), and the National Instructional Media Institute (NIMI) to develop new course curriculum for emerging industries and niche industry sectors with specialised or unmet demand.
   4. Develop AQF recognised training programs for Gulf country employment in collaboration with newly-established India International Skills Centres.
   5. Collaborate with Indian skill providers involved in targeted Indian government skills development schemes such as PMKVY and DDU-GKY.
INDIA’S 21ST CENTURY SKILL DEVELOPMENT AGENDA: A BRIEF BACKGROUND

India’s growth aspirations are heavily invested in its anticipated demographic dividend. Its population in 2015 was estimated at roughly 1.3 billion, with nearly two-thirds falling within the working age group of 15-64 years.¹ Varying projections of industry demand for skilled workers signal the challenges the country faces in reaping this dividend. The Government of India has set a target for skilling 400 million people by 2022 through the Skill India campaign and related initiatives such as the National Skills Development Mission (NSDM) and State Skill Development Missions (SSDMs). Large human resource requirements have been projected for major industry sectors that include building, construction and real estate; retail; transportation and logistics; and beauty and wellness.²

In addition to meeting internal demand, Prime Minister Narendra Modi has called for India to become a global capital for the production of skilled workers who can find employment anywhere in the world.³ He envisions skills development as a means for young Indians to become economically mobile through migration within India and internationally for employment. His perspective reflects recognition of the large outward flow of Indian nationals working in developing (4.2 million) and emerging economies (10 million in 2013),⁴ whose remittances make a significant contribution to India’s gross domestic product (GDP).

India’s skills development targets encompass young people currently enrolled in school education as well as school-leavers who are working or aspire to enter paid or self-employment after secondary schooling and/or higher education. More than 80% of employment is currently in the informal or self-employed sector, including employment in almost all construction and trade industries.⁵ About 10% of India’s existing workforce is estimated to have received vocational training of any kind.⁶ Formal, school-based vocational education and post-school vocational training are limited and of variable quality.⁷ Of this 10%, roughly 2% have obtained qualifications through formal vocational training. The remaining 8% have received training by being apprenticed from an early age to family/kin members in artisanal, traditional, and hereditary occupations. India’s skills system has, therefore, to be responsive to the needs of both formal and informal sectors and accommodate people from diverse language and socio-economic backgrounds, including those with little or no formal schooling and low levels of functional literacy.

There are many challenges facing the Government of India’s Skill India agenda. Despite the huge projections for unmet human resource requirements for skilled workers across entire industry sectors, there is low demand for vocational training due to the longstanding “inherited prejudices … against working with one’s hands”.⁸ Parents with middle-class aspirations seek education pathways for their children in white-collar jobs. There are also challenges in the scalability of skills development and mismatch between youth aspirations and employment opportunities.⁹

¹ World Bank, 2017a.
² Government of India, 2015.
³ The Times of India, September 7, 2016.
⁵ KPMG, 2016.
⁷ Pillay and Ninan, 2014, p. 36.
⁹ KPMG & FICCI, n.d., p. 17.
India’s skills system is complex and until recently, highly dispersed across central government ministries, and between central and state/UT governments. Five central ministries have significant involvement in the skills system in both policy and regulatory capacities. These include: Ministry of Skills Development and Entrepreneurship (MSDE); Ministry of Human Resource Development (MHRD), Ministry of Rural Development (MRD); Ministry of Corporate Affairs (MCA), and Ministry of External Affairs (MEA). Other central ministries such as the Ministry of Agriculture and Farmers Welfare, Ministry of Social Justice and Empowerment, Ministry of Food Processing Industries, Ministry of Micro, Small and Medium Enterprises, Ministry of Electronics and Information Technology, Ministry of Textiles, Ministry of Tourism, Ministry of Commerce and Industry, Ministry of Minority Affairs, Ministry of Tribal Affairs, Ministry of Women and Child Development, and Ministry of Development of North Eastern Region play facilitative roles in skills development.

Under India’s federal system of government, states/UTs also maintain responsibility for skills development. Most states have established skills development institutions, training programs, entrepreneurship and employment-generation initiatives. A few states like Himachal Pradesh\(^\text{10}\) have gone further in formulating their own skills development policy. The central government allocates funding for programs implemented through State Skills Development Missions.

The Ministry of Skill Development and Entrepreneurship (MSDE) was established in November 2014 to provide a coherent approach to post-school vocational training, skills development and entrepreneurship. In the following year, the central government introduced its policy agenda for reforming the skills sector in its National Policy for Skill Development and Entrepreneurship 2015. Here, it stated its aim to address “aspiration, advocacy, capacity, quality, synergy, mobilisation, global partnerships, outreach, ICT enablement [and] inclusivity”,\(^\text{11}\) for the country’s burgeoning workforce population. The National Skills Development Mission was charged with the responsibility to “create a demand for skilling across the country; correct and align skilling with required competencies; connect the supply of skilled human resources with sectoral demands; certify and assess in alignment with global and national standards; [and] catalyse an ecosystem wherein entrepreneurship germinates”.\(^\text{12}\) These objectives were translated into seven sub-missions: institutional training, infrastructure, convergence, trainers, overseas employment, sustainable livelihoods, and leveraging public infrastructure.

Although the MSDE has brought many elements of the country’s skills development programs under one umbrella, the structure of the skills system is still elaborate and multi-layered. As Figure 2 shows, the two major central ministries involved in skills development alongside MSDE are the Ministry of Human Resources Development (MHRD), and the Ministry of Rural Development (MRD). The MHRD is responsible for regulatory oversight of school education and school-based vocational education, apprenticeship training, and adult, technical, and higher education. The MRD oversees various rural employment programs (such as the MGNREGA), self-help groups, and rural self-employment training centres. In addition to the three ministries shown in Figure 2, the Ministry of Corporate Affairs administers the Corporate Social Responsibility

\(^{10}\) See Government of Himachal Pradesh, 2016.  
\(^{11}\) Agrawal, 2017, p. 5.  
\(^{12}\) Agrawal, 2017, p. 5.
(CSR) Rules which require companies to allocate a proportion of their profits towards CSR obligations such as education and training for socially disadvantaged groups. The Ministry of External Affairs facilitates pre-departure preparation and training for workers migrating overseas for employment.

**Figure 2. Key Government of India Ministries with responsibility for skill components in their National Missions**

<table>
<thead>
<tr>
<th>Ministry of Skill Development and Entrepreneurship [National Skills Development Mission]</th>
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<tbody>
<tr>
<td><strong>Directorate General of Training</strong></td>
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<tr>
<td>• Long term vocational training programs</td>
</tr>
<tr>
<td>• Apprenticeships (through industry)</td>
</tr>
<tr>
<td>• Industrial Training Institutes, Advanced Training Institutes, Regional Vocational Training Institutes (government, private and PPP)</td>
</tr>
<tr>
<td>• National Council on Vocational Training, Mentor Councils, Central Apprenticeship Council</td>
</tr>
<tr>
<td><strong>National Skill Development Agency</strong></td>
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<tr>
<td>• National Skills Qualifications Framework</td>
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<tr>
<td>• Labour Market Information System</td>
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<tr>
<td>• Skills Innovation Initiative</td>
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<tr>
<td><strong>National Skill Development Corporation</strong></td>
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<tr>
<td>• Short-term employability and livelihood programs (e.g. PMKVY scheme)</td>
</tr>
<tr>
<td>• National Skills Development Fund</td>
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<tr>
<td>• Training partners, training centres and model training centres (PMKK)</td>
</tr>
<tr>
<td>• Sector Skills Councils</td>
</tr>
<tr>
<td><strong>National Institute for Entrepreneurship and Small Business Development (NIESBUD, Noida)</strong></td>
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<tr>
<td>• Institutes/private agencies</td>
</tr>
<tr>
<td>• Mentorship programs</td>
</tr>
<tr>
<td>• Entrepreneurship programs</td>
</tr>
<tr>
<td><strong>Indian Institute of Entrepreneurship (IIE), Guwahati</strong></td>
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<tr>
<td>• - Entrepreneurship programs</td>
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<tr>
<td><strong>Ministry of Human Resource Development [National Literacy Mission]</strong></td>
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<tr>
<td><strong>Department of School Education and Literacy</strong></td>
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<tr>
<td>• Vocationalisation of Secondary Education program</td>
</tr>
<tr>
<td>• National Institute of Open Schooling</td>
</tr>
<tr>
<td><strong>Department of Higher Education</strong></td>
</tr>
<tr>
<td>• Technical education</td>
</tr>
<tr>
<td>• Adult education</td>
</tr>
<tr>
<td>• Polytechnics</td>
</tr>
<tr>
<td><strong>All India Council for Technical Education</strong></td>
</tr>
<tr>
<td>• Regulates technical institutions</td>
</tr>
<tr>
<td><strong>Boards of Apprenticeship Training</strong></td>
</tr>
<tr>
<td>Apprenticeships</td>
</tr>
<tr>
<td><strong>Ministry of Rural Development [Shyama Prasad Mukherji Rural Mission]</strong></td>
</tr>
<tr>
<td><strong>National Institute of Rural Development and Panchayati Raj</strong></td>
</tr>
<tr>
<td>• Skill development and entrepreneurship</td>
</tr>
<tr>
<td><strong>Rural Self Employment Training Institutes</strong></td>
</tr>
<tr>
<td>• Skill development and entrepreneurship</td>
</tr>
<tr>
<td><strong>Rural Skills Development</strong></td>
</tr>
<tr>
<td>• Deen Dayal Upadhyaya Grameen Kaushalya Yojana</td>
</tr>
<tr>
<td><strong>Rural Self-Help Groups</strong></td>
</tr>
<tr>
<td>• Swarnajayanti Gram Swarozgar Yojana</td>
</tr>
</tbody>
</table>
The MSDE has the largest role to play in the current government’s Skill India agenda. It encompasses an array of departments, agencies, corporations, and institutes and funds that tackle different aspects of the Skill India policy objectives (see Figure 2). Briefly,

- The Directorate General of Training maintains regulatory oversight of older and ongoing vocational and apprenticeship training.
- The National Skills Development Agency (NSDA) is responsible for liaising between central and state/UT-level skills development missions and establishing the National Skills Qualification Framework (NSQF).
- The National Skills Development Corporation (NSDC) has set up Skill Sector Councils (SSCs) which are industry-led and responsible for developing national and international occupation and skill standards, gap analysis, quality assessment and certification.\(^\text{13}\)
- The National Skills Development Fund (NSDF) resources the various centres and initiatives undertaken the NSDA, NSDC, and state skills development missions.

These new institutional structures are providing the impetus for India’s expanding skills system towards increased standardisation despite language variation across states/UTs and differences between urban and rural locations. The National Skills Qualifications Framework (NSQF), approved in 2013, is progressively being implemented through the National Skills Qualifications Committee at the NSDA. The framework organizes qualifications according to ten levels of knowledge, skills and aptitude, and specifies pathways within and between vocational education, vocational training, general education and technical education. The Sector Skills Councils (SSCs) are developing National Occupational Standards (NOS) and Qualification Packs (QPs).\(^\text{14}\)

In addition to these NSDA initiatives, the Central Staff Training and Research Institute (CSTARI) has developed syllabi for many central government vocational training programs, such as the Craftsmen Training Scheme (CTS), Centre of Excellence (COE) initiative, and Modular Employable Skills (MES) program. The National Instructional Media Institute (NIMI) has developed instructional material packages (IMPs) and additional resources to cater for flexible delivery of distance and online training, including massive online open courses (MOOCs) and the new Space-based Distance Learning Programme (SDLP). These are complemented by content developed by other providers such as the Million Lights Programme. Some programs anticipate the problems of limited ICT connectivity in urban settlements and smaller towns and provide students with learning devices preloaded with content and training materials, enabling access regardless of connectivity capacity. This is particularly important given the profile of the different social groups accessing skills development.\(^\text{15}\)

\(^{13}\) MSDE, 2016.  
\(^{14}\) Government of India, 2013.  
\(^{15}\) Varghese, n.d.
SKILL PROVISION COMPONENTS

The current institutional system has five components of skills provisioning: providers, programs, assessors, financial support and corporate engagement.

Providers: A range of central and state/UT government institutions and private providers offer skills development. These include centrally-supported entrepreneurship institutes, Advanced Training Institutes, public and private Industrial Training Institutes (ITIs), polytechnics, and higher education colleges affiliated to public universities. Some secondary schools also deliver vocational education in grades 9-10 and 11-12. Most major skill providers like the ITIs and polytechnics have their own purpose-built establishments and facilities, while other private skill providers may operate from rented premises or mobile operations for delivering training in rural settlements. Figure 3 illustrates the different pathways for post-secondary vocational education.

Figure 3: Structure and educational pathways for skill development

<table>
<thead>
<tr>
<th>Age</th>
<th>Grade</th>
<th>Academic / General education</th>
<th>Technical education</th>
<th>Vocational education</th>
</tr>
</thead>
<tbody>
<tr>
<td>17-18</td>
<td>11-12</td>
<td>Higher secondary education (2 years)</td>
<td>Engineering degree programme (4 years)</td>
<td>Apprenticeship Training (1 - 2 years)</td>
</tr>
<tr>
<td>15-16</td>
<td>9-10</td>
<td>Lower secondary education (2 years)</td>
<td>Polytechnic diploma programme (3 years)</td>
<td>Courses offered by vocational training providers and SSGs (2 months - 2 years)</td>
</tr>
<tr>
<td>6-14</td>
<td>18</td>
<td>Elementary education (compulsory)</td>
<td>ITI courses (1 - 2 years)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adapted from NSDC, 2017.

Government providers of vocational training are required to administer reservation schemes to increase participation of targeted groups such as Scheduled Caste/Scheduled Tribes/Other Backward Castes. Some offer training in women-only institutes, such as Women’s ITIs, or training to self-help groups and study centres. There are other innovative rural-based and community-led initiatives such as the Barefoot College in Tilonia, Rajasthan, which provide skills training for women.16

In addition to the above, new ‘skills universities’ have been set up by several state/UT governments, private entities, and sometimes as joint public-private partnership ventures. Examples include TeamLease Skills University in Gujarat, Rajasthan ILD Skill University, Maharashtra Skill Development & Open University.

16 See https://www.barefootcollege.org
Programs: There are two types of formal skills provision programs based on the ‘old’ and ‘new’ systems. The ‘old’ system, which until recently formed the backbone of India’s skills system, is based on longer-term occupation-oriented programs delivered by ITIs and certified by the National (and State) Council for Vocational Training. The emerging ‘new’ system is based on short-term programs aligned to the NSQF with a narrower focus on job roles and delivery of Qualification Packs developed by SSCs. A list of the current range of programs is provided in the appendices.

Financial support: Most skills development delivered in public institutions is funded by central or state/UT government grants. Trainees pay minimal or no fees, and programs are often designed for low-cost and high-volume delivery. Private providers and industry may receive government funding as grants or loans for delivering skills programs.

Assessors: Long-term programs offered by the ITIs and NSDC approved skill providers are assessed by external assessment agencies.¹⁷ In the case of short-term programs, assessment agencies are screened by the relevant SSC for performing assessments of designated NOS and QPs for industry sectors and job roles.

Corporate engagement: Industry are being increasingly involved in the Skill India agenda. Some leading vocational training providers have established formal partnerships with companies, particularly in the engineering sector. In these instances, providers offer spaces for industry trainers to deliver standardised or bespoke curriculum. The industry partners provide the specialised technology and equipment (e.g., machines, tools and infrastructure) for trainers to demonstrate and operate during training. Industry partners also provide on-the-job training for students and directly recruit program graduates. Such partnerships are considered attractive because they enable program graduates to transition directly into employment with industry-relevant skills and knowledge. This approach is seen as particularly favourable in niche industry areas such as aviation, shipping, electronics, telecommunications, and textiles, where both public and private ITIs partner with companies to deliver specialised training.¹⁸

Some Indian and foreign companies with production facilities in India provide their own customised training specific to their industry needs. Examples include TATA, Wipro, Maruti-Suzuki, Ford, Cisco, Hyundai, Toyota, Michelin, and Schneider.

Under the Indian Government’s Corporate Social Responsibility Rules, applicable companies must allocate 2% of average net profits to promote education, employment and livelihood enhancement projects. Some companies meet their obligations by supporting vocational training initiatives in rural areas or socially disadvantaged groups. In 2015, the highest ranked companies for corporate social responsibility included various businesses within the Tata Group (e.g., Tata Steel, Tata Power Company), UltraTech Cement, Mahindra & Mahindra, and Shree Cement.¹⁹ The highest actual spending for CSR obligations in 2015 was in the following industry sectors: banking and finance; oil, drilling and refineries plus petrochemicals; computers (software and hardware); steel; pharmaceuticals; and automotive and automotive ancillaries.²⁰

¹⁸ Agrawal, 2017.
¹⁹ Majumdar, Rana & Sanan, 2016.
²⁰ NGOBOX, 2016.
CONTRASTS AND CHALLENGES FOR SKILL INDIA

The Skill India agenda is dynamic and forward-looking for meeting current skills shortages and projected demand for skilled workers within the country and beyond. There are, however, many structural constraints and institutional challenges that need to be tackled. These include:

- Social factors such as caste, gender, and religion, which can constrain participation and progression in vocational training.\(^{21}\)
- Mismatch between youth aspirations and employment opportunities.\(^{22}\)
- Poor labour market outcomes for vocational training graduates, due to mismatch between training and industry needs.\(^{23}\)
- The existence of a large informal sector and wage structure which lowers the value and remuneration for formally trained and qualified skill workers.\(^{24}\)
- Lack of labour laws that cover workers, skilled or unskilled, in the informal sector.\(^{25}\)
- Institutional challenges in terms of student recruitment, financial support, availability of qualified trainers across key industry sectors, and capacity for scaling-up programs.
- Geographic differences, in terms of access and distribution of training centres and facilities between urban and rural areas, between large cities and smaller towns, and between states/UTs.
- High variability in skills gaps between and within states/UTs in relation to required formal skill levels.

The new institutional framework and approaches for skills provisioning are aimed at addressing these challenges.

INTERNATIONAL PLAYERS IN INDIA’S SKILL DEVELOPMENT AGENDA

The Government of India is actively pursuing an internationalisation policy aligning various skills development strategies with national and state/UT priorities. Formal agreements may be established between multilateral institutions and national and state governments, between international governments and key institutions in India’s skills system, between foreign companies and Indian institutions, and between foreign skill providers and Indian institutional counterparts.

The major niche industry sectors prioritised by the NSDC for setting up skill development institutes with international collaboration include aviation, ports, mining, smart cities and agriculture.\(^{26}\) The NSDC has also identified building and infrastructure construction, the transport and logistics industry in passenger road transport and road freight, and various segments of the retail sector as areas for skills development with international collaboration. Various employer surveys and studies have noted demand for international collaboration in skills training in sectors such as mineral exploration and mining, tourism and hospitality, ICT and financial services.\(^{27}\)

\(^{21}\) Aggarwal, Kapur & Tognatta, 2012.
\(^{22}\) KPMG & FICCI, n.d., p. 17.
\(^{23}\) Agrawal, 2012; World Bank, 2008; Aspiring Minds, 2016.
\(^{24}\) Agrawal, 2012.
\(^{25}\) OECD, 2017.
\(^{26}\) Kumar, 2017.
\(^{27}\) KPMG, 2016; OECD, 2017.
demands are particularly acute in states such as Maharashtra, Tamil Nadu, Uttar Pradesh and Andhra Pradesh, and projected to increase in Haryana, Gujarat, Kerala, Himachal Pradesh and Punjab.

Several multilateral agencies such as the World Bank, Asian Development Bank, UNESCO and the European Union have been involved in shaping the new skills agenda and funding the development of its system architecture. The agencies have funded the establishment and implementation of national frameworks for qualification standards and quality assurance (NSQF and NQAF), the Labour Market Information System, and other monitoring and evaluation programs. Multinational consulting firms such as E&Y, PWC, and KPMG have conducted reviews and assessments of human resource requirements at national and state/UT levels.

The World Bank Technical Education Quality Improvement Project has funded surveys of youth aspirations, graduate employment and destination tracking studies. It has also funded consolidation of ITIs and apprenticeship training through its Skills Strengthening for Industrial Value Enhancement Operations, or STRIVE program. UNESCO’s International Centre for Technical and Vocational Education and Training has funded capacity building for national institutes. The Asian Development Bank and EU have supported leadership and trainer capacity building through funding international study tours for institution leaders, trainer training programs, as well as programmatic initiatives in some states (e.g., Himachal Pradesh, Kerala, Odisha).

Foreign governments with well-established vocational training systems have also sought bilateral engagement in India’s skills agenda. These include Australia and major Anglophone countries, USA, UK, and Canada; Germany and France from the European Union; and East Asian countries such as Japan, Korea, China and Singapore.

The clearest manifestation of international involvement is in industry- and company-specific human resources development for transnational companies that have set up manufacturing or other large-scale processing operations in India. Companies from USA, Japan, South Korea, China, Germany, and France are dominant players in establishing skills development partnerships and initiatives with local institutions in engineering and technology, healthcare/life sciences, and food processing sectors. In many instances, these skills development partnerships also fulfil the companies’ CSR obligations in India.

Transnational automotive industry companies are the biggest players in the engineering sector, with company-specific skills development programs, training centres and infrastructure. German manufacturer Bosch offers the BRIDGE program at PAN India training centres; Siemens, also German, has SITRAIN India, its main skills training centre in Mumbai. French manufacturer Michelin has its Michelin Technology Centre in Gurgaon. USA’s Ford, Japan’s Toyota and Maruti Suzuki, and South Korea’s Hyundai and their Indian subsidiaries have established skill training partnerships with ITIs PAN India.

The next largest involvement of transnational firms is in the ICT sector. Here, US companies play a lead role in digital literacy training programs, job search platforms, and start-up technologies. Examples include Google’s Android fundamentals training program and Microsoft’s Project Sangam. Cvent, a US software company leading in

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event management technology, has introduced the India Employability Enhancement Program in partnership with the National Association of Software and Services Companies (NASSCOM). Companies such as Adobe and IBM fulfil their CSR obligations by subsidising the costs of training software for vocational training institutions.

Some IT company initiatives involve partnerships with universities as well as vocational training institutions. China’s Huawei Technologies has partnered with some engineering colleges and universities to provide ICT skills development in telecommunications. South Korea’s Samsung has established partnerships with ITIs in Delhi, Bihar, Kerala, Rajasthan and Bengal for skills training in electrical and electronics. In the emerging priorities aviation sector, Airbus Group India and Aerocampus Aquitaine France are involved in the Centre of Excellence for aerospace skills development in Hyderabad.

In healthcare/life sciences, the US company GE Healthcare implements skills development programs for medical staff including doctors, nurses and allied health professionals. In food processing, Pepsico has established an agreement with the Maharashtra government to support skills development in the company’s food processing plants and modernisation of food processing training at ITIs. In transport and logistics, Uber has partnered with Maruti Suzuki to sponsor driver training, generic skills development and on-boarding programs.

**International CSR obligations and engagement in skills development**

Dilip Chenoy, former CEO, NSDC, has identified five models for international companies to fulfil their CSR obligations by supporting skills development initiatives.30

1. Establishing a company foundation or financing a training provider and/or NGO to deliver skills development and employment placement services targeting specific social groups. An example is the Dr Reddy Foundation and training providers funded by L’Oréal.
2. Sponsoring ITIs and vocational training institutes to upgrade infrastructure, technology and support services, and train trainers. In such instances companies may directly fund and deliver off- and on-the-job training with an Indian partner institution. An example is the Mercedes Benz partnership with Don Bosco ITI in Pune.
3. Creating opportunities for employment in rural areas through microfinance projects to supplement skills development and access to online markets. Examples include the partnership between HSBC, the Mann Deshi Foundation, and Indian e-Commerce platforms Snapdeal and Flipkart.
4. Supporting scaling up of skill provider institutions like the ITIs by sponsoring capacity building, providing managerial support, and providing careers advice and candidate mobilisation.
5. Funding or mentoring start-ups, self-help groups and micro-enterprises. This may also involve supporting entrepreneurs through the incubation stage.

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30 See Dubey, 2016.
Australia’s engagement with India is spearheaded through the Australian High Commission in Delhi, and offices of the Australian Trade and Investment Commission (Austrade) and Department of Education and Training. Trade, education and migration legislation, policy and agreements frame Australia’s engagement with India. Several state governments have in-country trade offices and have developed their India engagement strategies. The federal government has established the Australia-India Skills Missions for bilateral engagement. The most recent meeting was conducted in April 2017 in Delhi during the visit of the Prime Minister and Education Minister to India.

The bilateral relationship for VET is driven by the Australian India Education Council’s (AIEC) Skills Working Group (SWG) work plan. The work plan includes collaboration with Indian SSCs for benchmarking Indian qualifications, informing policy governing skilled migration, the development of transnational skills standards, the development of trainer/assessor courses for offshore delivery, and the delivery of the Vocational Education and Leadership Training (VELT) program with TAFE Directors Australia. The National Centre for Vocational Education Research (NCVER) has partnered with India’s NSDA to increase VET research and statistical capacity.

Internationalisation of education is guided by the federal government’s National Strategy for International Education 2025, developed by the Coordinating Council for International Education. The strategy encompasses all education levels, including VET, and explicitly supports development of in-market delivery opportunities through “partnership arrangements with local providers, onshore presence of Australian education providers or through distance learning”. International students are enrolled in VET programs delivered both within Australia and by Australian VET providers overseas. VET providers operate within the context of established government structures and regulatory mechanisms, and comprehensive system architecture and programmatic options. This includes locally recognised courses, national training package qualifications, skills-sets, nationally recognised accredited courses, and higher-level qualifications (e.g., applied bachelor’s and master’s degrees at AQF levels 8-9).

Current Australia-India VET sector engagement

Australia’s successful export education market generates $22.4 billion income annually. In 2016, 15% of a total of 187,801 student enrolments in Australia’s VET sector were from India. Over the last decade, the high demand for Australian skills qualifications from Indian students has led many Australian Technical and Further Education (TAFE) institutes and other providers to enter the Indian market for skills development. Their engagement in India has spanned partnerships with industry to establish a vocational training centre, offshore delivery, licencing, teaching/trainer training, student mobility, and assistance establishing skills development centres.

Examples of TAFEs in India include the Kangan Institute, Canberra Institute of Technology, Central Institute of Technology in Western Australia, Brisbane North Institute of TAFE, Challenger Institute of Technology, Holmesglen Institute of TAFE,

31 Australian Government, 2016, p. 5.
Metropolitan South Institute of TAFE, Polytechnic West, Metropolitan South Institute of TAFE, TAFE NSW, and TAFE South Australia. Other Australian providers with an established presence in India include the Australian Retail College, UDAY (AVTEG Private Limited), and AAMC Training Group. A group of providers operates as the Queensland Skills & Education Consortium Australia.

**Competitive advantages of the Australian VET sector**

Australia’s VET system is highly regarded by Indian government skills agencies, ITIs, and other private sector skills providers. Interviews conducted in March-April 2017 with representatives from these organisations underscored the key strengths of the VET system, particularly its breadth of curriculum, industry engagement, competency-based training and high teacher/trainer standards. Some salient advantages highlighted in the interviews are given below.

*Industry engagement:* Industry informs curriculum; validates the VET delivery and assessment strategy; is engaged in system architecture/framework development; is incentivised to accept apprentices/trainees; is involved in on-the-job training for apprenticeships and traineeships, that complements off-the-job training; and finally, partners with providers.

*Teachers/trainers:* trainers with industry experience; currency of trainer experience; trainer/assessor training; philosophy of lifelong learning.

*Infrastructure:* well-equipped laboratories/teaching and learning spaces; industrial standards; established libraries; high safety standards and safety management.

*Operations:* student management system; work-placement co-ordination.

*Curriculum:* breadth across diverse industry sectors and institutional settings including schools, post-school providers and industry; capacity to adapt standardised programs to local circumstances/requirements.

*Pedagogy:* student centred learning; good student/teacher ratios; blended model involving on- and off-the-job training and in some instances, simulation; recognition of prior learning (RPL) assessment expertise and approach.

*Student recruitment and support:* positive community perceptions regarding VET; capacity to recruit/mobilise candidates; merit- and aptitude-based admission; career counselling.

Indian respondents expressed substantial praise for recent initiatives involving international exchanges and delivery of trainer/assessor programs, and collaborative ventures such as the Automotive Centre of Excellence between Kangan Institute and Maruti-Suzuki, and the Australian Retail College India.

**Some challenges faced by Australian VET providers in India**

Interviews with Australian VET providers and government authorities highlighted various challenges accessing the Indian market. Some noted that compared to their ventures in other international markets like China and Vietnam, they were limited in their ability to...
introduce Australian VET products into the Indian market for onshore delivery and making them commercially viable. Respondents identified various challenges, including the difficulties of navigating India’s complex skills system and regulatory environment; bureaucracy and business practices; identifying appropriate in-country partners; pricing models; receiving payment; trainer capacity; and ASQA audit costs. They also pointed to the inbuilt competition between providers in Australia’s VET system which diminished both ‘brand Australia’ and capacity to up-scale product delivery.

From the perspective of Indian respondents, most international skill providers have misinterpreted the invitation to participate in the Skill India agenda as an invitation to introduce pre-packaged VET products without adaptation or understanding of Indian needs and institutional environment. They noted that such products, which are based on high-cost and small student volumes, cannot be deployed without reconfiguring and adapting to India’s high volume and low price vocational education environment. Some interviewees expressed interest in skill training for international migration to Australia, but noted that demand for these programs would be affected by Australia’s immigration policies.

OPPORTUNITIES FOR SUCCESSFUL ENGAGEMENT IN INDIA

Both Indian and Australian interviewees highlighted the importance of having a long-term perspective towards business relationships, openness to adapting and reconfiguring VET products to Indian industry needs and conditions, listening to Indian voices and experience, and capacity to accommodate initial losses. Given the NSDA’s prioritisation of sectors for international collaboration, interviewees pointed to advantages in targeting niche industries within these sectors, and developing value-adding products and services for capacity development in the institutional skill sector. They also emphasised advantages of consortium approaches to skill provision to overcome scalability, volume and price constraints.

Partnership opportunities identified by the NSDC at the Australia-India Skills Mission in April 2017 include:

- delivering skills development trainer/assessor programs through the SSCs;
- providing professional development for trainers and assessors, institutional leaders and professional staff;
- providing RPL for skills experience based on transnational standards;
- offering guidance for coordinating and managing work placements;
- delivering quality improvement systems and occupational health and safety training;
- collaborating with SSCs, CSTAR, NIMI, and other state/UT government agencies to develop and embed quality and risk management frameworks for further expansion of skills training under the National Skill Development Mission;
- establishing Skill Development Institutes in preferred emerging industry sectors such as aviation, ports, mining, smart cities infrastructure, and agriculture;
- enabling and funding student exchange scholarships and internships with Australian training providers and businesses;
- participating in World Skills and India Skills competitions.34

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34 Kumar, 2017.
In addition to the above, there is substantial market opportunity for Australian RTOs to deliver Australian Qualification Framework (AQF) aligned vocational training, skills development and orientation for international migration purposes. To pursue this opportunity, Australian RTOs need the Commonwealth government to provide clear narratives regarding skill-based migration pathways to Australia.

Australian companies operating in India have excellent opportunities to partner with ITIs, other Indian skill providers and Australian RTOs to deliver customised programs specific to their industry needs and recruit successful program graduates. They can set up state-of-the-art, fully-equipped, workshops and work with Australian training providers to offer on-the-job training and professional development for Indian skill provider training staff.

Australian RTOs have opportunities to leverage the Corporate Social Responsibility (CSR) obligations of Indian and Australian companies by partnering with them to deliver training programs that meet these obligations. They could do this in collaboration with ITIs and other skill providers and with support from Australia India Business Council and Austrade.

RECOMMENDATIONS FOR FUTURE ENGAGEMENT

The following recommendations arise from evidence-based research and provide strategic direction for effective engagement between Australia’s skills sector and the Skill India agenda.

Recommendation 1: Establish an ‘Australian VET Brand’ in India

Australia’s engagement with the India’s skill agenda can be more effective by pursuing a cohesive consortium approach, similar to the Queensland Skills & Education Consortium Australia. The National Strategy for International Education 2025 recognises that competition within the Australian VET system diminishes ‘brand Australia’ in overseas markets. It recommends models whereby “Australian training providers [increase capacity through partnership or consortia arrangements with one another].” The recommendation of a consortium approach for developing Indian mining skills and occupational health and safety awareness also emerged from the Third Energy and Resource Services Forum held in Queensland in May 2017.

Key Australian VET providers who have established successful relationships with Indian skill providers could form a consortium and identify areas where each has comparative advantage in the emerging industries and niche industry sectors prioritised by the NSDC and state/UT governments. They could also contribute where they have strength in building capacity and adding value to India’s skills system. The consortium would present a cohesive ‘Australian Brand’ identity and offer a robust range of training and value-adding options where members would not compete against each other. Each member could target their efforts on one or two priority sectors identified by the NSDC and state/UT governments, and work with the relevant Sector Skill Councils (SSC) and Indian skill providers and/or companies to develop training programs.

Recommendation 2: Deliver tailored industry- and company-specific programs in partnership with Australian companies operating in India

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35 Australian Government, 2016, p. 5.
Australian VET providers can establish partnerships with Australian companies operating in India and relevant Indian skill providers to deliver industry- and company-specific programs using company-specific infrastructure, technology, expertise and on-the-job training. They can offer merit-based incentives for high-achieving graduates to pursue exchange experiences or higher-level qualifications in Australia. This collaboration can also offer bespoke professional development and refresher courses for industry employees.

**Recommendation 3: Work with partner Indian skill providers, CSTARI, and NIMI to develop new course curriculum for emerging industries and niche industry sectors with specialised or unmet demand**

Australian VET providers and companies can collaborate with Indian skill providers, CSTARI, and NIMI in areas where demand and capacity in India is emerging and develop training programs that are currently not offered by Indian skill providers. Key niche industry sectors include aviation, mining, ports, smart city infrastructure, agricultural technology, allied health services, building and construction, transport and logistics, and retail. These training programs could draw on products offered by Australian VET providers in the Indo-Pacific region and potentially be marketed to rapidly growing economies in East Africa that have strong trade links with India.

**Recommendation 4: Develop AQF recognised training programs for Gulf country employment**

Australian VET providers can deliver AQF recognised training programs including pre-departure orientation for migrating Indian nationals seeking work in Gulf countries, with special focus on occupational health, risk and safety procedures. They can be provided in collaboration with the newly-established India International Skills Centres across the country.

**Recommendation 5: Collaborate with Indian skill providers involved in targeted Indian government skills development schemes such as PMKVY and DDU-GKY.**

India’s vast informal sector employs a majority of the country’s working population, and includes a wide spectrum of people with low functional literacy, those working in ancestral occupations and artisanal trades, and others with high-school or college education who are either self-employed or in casual, contractual jobs with small businesses. Most have developed skills through work experience, but these skills are not valorised in the labour market because they have no formal recognition. Australian VET providers can collaborate with Indian skill providers involved in Indian government-funded skill development schemes such as the Pradhan Mantri Kaushal Vikas Yojana (PMKVY) and the Deen Dayal Upadhyay Grameen Kalyan Yojana (DDU-GKY) targeted at young men and women in smaller cities and towns. Additional policy-oriented research could be used to develop scalable products that enable these groups to acquire further competencies that increase their employability and earning capacity in regional labour markets.
REFERENCES


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KPMG & FICCI (n.d.). Skilling India: A look at the progress, challenges and the way forward. KPMG.

Kumar, M. (11 April 2017). PPP in skill development. Presentation at the Australia-India Skills Mission, New Delhi, India.


Pillay, H. K., & Ninan, A. (2014). India’s vocational education capacity to support the anticipated economic growth.


APPENDIX 1: PROGRAMS WITHIN INDIA’S SKILLS SYSTEMS

India’s skills system spans a broad range of training approaches, programs and initiatives, including:

- employment-placement (e.g., job fairs)
- informal learning including “ancestral trades or occupations” system, the ‘guru-shishya’ model, and development of skills and knowledge in family business environments
- entrepreneurship programs
- school-level vocational education (e.g., Vocationalisation of Secondary Education program and flexible learning)
- short-term vocational training programs (e.g., programs provided by NSDC accredited training providers such as IL&FS Skills, B-Able)
- long-term vocational training programs (e.g., the Craftsmen Training Scheme)
- on-the-job Apprenticeship Training Scheme programs regulated by the Apprentices Act, 1961
- ‘top-up’ skills development for employed persons
- bespoke skills development
- vocational training and certification for overseas migration (e.g., Pravasi Kaushal Vikas Yojana, or pre-departure orientation training programs)
- recognition of prior learning
- trainer/assessor/master training for instructors (e.g., through the Central Training Institute for Instructors, Chennai and multiple other providers)
- technical level training (e.g., delivered by Advanced Training Institutes)
- diplomas (e.g., delivered by polytechnics)
- non-award courses (skill development) delivered by higher education institutions
- Bachelors of Vocational Education (B.Voc)
- Masters in Vocational Education (M.Voc).

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36 Pillay and Ninan, 2014, p. 28. This includes building and construction; butchery; tailoring, stitching and embroidery; carpet making; beekeeping.
APPENDIX 2: INTERVIEWS ON SKILLS, VET SECTOR, AND TECHNICAL EDUCATION

IN INDIA

Indian government: Central and State/UT

- Regional Directorate of Apprenticeship Training (RDAT) (Government of India, Ministry of Skill Development and Entrepreneurship, Directorate General of Training) (Mr R Senthil Kumar, Regional Director/Regional Central Apprenticeship Advisor) (Chennai, Tamil Nadu)
- Tamil Nadu Skill Development Corporation (TNSDC) (Mr B Musthafa, Project Director, TNSDC) (Chennai, Tamil Nadu)
- Employment Generation and Marketing Mission, Government of India (Mr Madhukar Babu), with Mr Kranthi Bommu, Australian Retail College in attendance (Hyderabad, Andhra Pradesh)
- Karnataka German Multi-Skill Development Centre (part of state government Department of Employment and Training) (Mr Raghupathy) (Bangalore, Karnataka)
- Department of Higher Education and Technical Education (Dr Apoorva Palkar, Convenor, Task Force on Globalisation) (Mumbai, Maharashtra)
- Ministry of Skill Development and Entrepreneurship (MSDE) (Government of India) (Ms Deepti Srivastava, Director) (New Delhi, Delhi)
- National Skill Development Corporation (NSDC) (Government of India) (Mr Shahbaz Khan) (New Delhi, Delhi)
- Universities Grants Commission (Government of India) (Mr Avichal Kapoor, Joint Secretary)
- Ministry of Skill Development and Entrepreneurship (MSDE) (Government of India) (Dr Divya Nambiar) (New Delhi, Delhi)
- Higher and Technical Education Department, Government of Maharashtra (Mr Sitaram Kunte, Additional Chief Secretary) (Mumbai, Maharashtra)

Indian skills institutions and providers

- National Instructional Media Institute (NIMI) (Mr Madha P Nair, Director) (Chennai, Tamil Nadu)
- Advanced Training Institute Chennai (Government of India, Ministry of Skill Development and Entrepreneurship, Directorate General of Training) (Mr S Mathivanan, Joint Director) (Chennai, Tamil Nadu)
- Central Training Institute for Instructors, Chennai (Government of India, Ministry of Skill Development and Entrepreneurship, Directorate General of Training) (Mr C Chandra Sekhar, Principal) (Chennai, Tamil Nadu)
- Chellammal Women’s College (Dr R Sreelatha, Associate Professor of English & Head) (Chennai, Tamil Nadu)
- Sri Sarvodaya Industrial Training Institute (Mr Nagendra Babu, Principal) (Chennai, Tamil Nadu)
- Kovida Limited/Lotus National Schools (Mrs Renuka Raju, Director) (Hyderabad, Andhra Pradesh)
- Lotus National School (Mrs D Arthri, Principal, Mr Anthri Vedi, Administrator and Mrs Meena Ishwar) (Hyderabad, Andhra Pradesh)
- Youth4Jobs (Ms Meena Shenoy, Director) (Hyderabad, Andhra Pradesh)
- Government Women’s Industrial Training Institute, Hosur Road (Mrs B Sunanda, Principal) (Bangalore, Karnataka)
- Government Industrial Training Institute (Men’s), Hosur Road Near Dairy Circle (Mr S. Gowreesha, Vice Principal; Mr Gabriel Pradeep, Junior Training Officer; Mr S Umashankar Bhargava, Junior Training Officer; Mr R Emmanuel Mary, Training Officer) (Bangalore, Karnataka)
- National Institute of Advanced Studies, Bangalore (Dr Shivali Tukedo, Assistant Professor) (Bangalore, Karnataka)
• Government Ramnarayan Chellaram College of Commerce & Management (Dr Sudha) (Bangalore, Karnataka)
• Government ITI, Peenya (Ms Laxmi Shetty, Training Officer; Mr Laxmaiah, TRG Officer) (Bangalore, Karnataka)
• Tolani College of Commerce Mumbai (Dr Vijaya Krishna, Principal; Dr Sachin Pendse, Dr Vasudev Iyer, Ms Shalini Hemanthkumar, faculty) (Mumbai, Maharashtra)
• TATA Institute of Social Science (Professor Madhushree Sekher, Chair, internationalisation committee) (Mumbai, Maharashtra)
• PUKAR, Mumbai (Dr Anita Patil-Deshmukh, Executive Director) (Mumbai, Maharashtra)
• Advanced Training Institute (Mr Ravi, Deputy Director) (Mumbai, Maharashtra)
• St. Joseph’s ITI (Mr Ahmed Praboo, Principal) (Mumbai, Maharashtra)
• IL&FS Education & Technology Services (Mr Kaviraj Kataria, Regional Training Anchor/Master Training and Ms Aashima Kochhar, Regional Training Anchor/Master Training; Mr Ketul Acharya, Sr. Vice President and Group Head, Skills, and Mr Gaurang Dayal, Senior Manager and Head – New Initiatives) (New Delhi, Delhi)
• JD Tytler School (Mrs Jenifer Tytler, Principal, Ms Geeta Choudhary, Ms Christie Sahni, Ms Anjali Anand, teachers) (New Delhi, Delhi)

Australian government: Commonwealth and State/Territory
• State Government of Victoria, Australia (Ms Annie Santhana, Regional Director – Education) (Bangalore, Karnataka)
• Australian Consulate-General, Mumbai (Ms Mohaa Vyas, Mr Varun Sainani and Mr Bhavin Kadakia) (Mumbai, Maharashtra)
• Australian Consulate-General, Mumbai (Mr Tony Huber, Consul General) (Mumbai, Maharashtra)
• Australian High Commission (Dr Amanda Day, Counsellor, Education) (New Delhi, Delhi)
• Australia India Skills Mission, New Delhi (Skills Mission)

Australian institutions/providers
• Australian Retail College (Mr Sam Freeman, Director) (Hyderabad, Andhra Pradesh)

Other
• World Bank (Mr Francisco Marmolejo, Lead Tertiary Education Specialist and Coordinator of its Network of Higher Education Specialists) (New Delhi, Delhi)

IN AUSTRALIA
• Study Canberra (Mr Oliver Harrap, Manager, Investment and Enterprise Development)
• Victorian Department of Economic Development, Jobs, Transport and Resources (Ms Amanda Pickrell, Director, International Education Section, and Ms Jaffa McKenzie in attendance)
• Tasmanian Department of Education Tasmania (Ms Anne Ripper, Director, Tasmanian Government Education and Training International)
• Canberra Institute of Technology (Ms Jayne Miller, Director, Business Growth and Transformation)
• TAFE NSW (Ms Patricia Thompson)
• South Australian Department of State Development (Mr Chintan Bharwada, Manager, Business Development International Education)
• ACPET (Ms Paula Johnston, International Engagement Manager)
• TAFE Directors Australia (Ms Jen Bahen, Director, International Education)
• First Impressions Resources (Ms Sue Freeman, CEO and Managing Director, and Leader, Queensland Skills and Education Consortium)
• Australia India Institute-Melbourne (AII) (Mr Jim Varghese, Executive Director, Business Development)
• VELT participants (Indian institutional leaders) Dr Renu Gupta, Model Institute of Engineering and Technology (MIET), Jammu; Prof. Joshi, Banasthali University, Rajasthan; Dr Sarishar, Gujarat Polytechnic; Dr Manju, DAV College Chandigarh (note: telephone interview while VELT participants in Sydney, Australia).