Chapter 6
Work-Readiness of Indian Graduates: A Multi-stakeholder Approach to Assess Competence Deficits and Causes, and Possible Solutions

Sanjeev Kumar, Parth Patel and Verma Prikshat

Abstract This chapter presents a comprehensive picture of work-readiness and employability among Indian graduates transitioning from university to careers in the Indian labour market. More particularly, it presents macro and micro data from various industry sectors in India to chart the dimensions and trends in graduate work transitions in India. Furthermore, the chapter presents an empirical view of three main stakeholders' (policymakers, employers and educational stakeholders) assessments of the work-readiness competence deficits of Indian graduates and their possible causes. Finally, it discusses recommended solutions by these stakeholders for making Indian graduates work-ready.

Keyword Gradauate work-readiness · Indian graduates · Work-ready comptencies Multi-stakeholder approach

S. Kumar
Graphic Era University, Dehradun, India
e-mail: Ska231@gmail.com

P. Patel · V. Prikshat (✉)
Australian Institute of Business, Adelaide, Australia
e-mail: vermaprikshat@gmail.com

P. Patel
e-mail: parth.patel@aib.edu.au

V. Prikshat
Central Queensland University, Melbourne Campus, Norman Gardens, Australia

V. Prikshat
Batchelor Institute of Indigenous Tertiary Education, Batchelor, NT, Australia

S. Dhakal et al. (eds.), *The Transition from Graduation to Work*, Work, Organization, and Employment, https://doi.org/10.1007/978-981-13-0974-8_6

6.1 Introduction

Graduate work-readiness refers to the extent to which graduates are observed to acquire skills and attributes that provide them with the ability to succeed in the workplace and is increasingly being perceived as suggestive of graduate potential in terms of their job and career performance, and advancement (Caballero and Walker 2010). Preparing work-ready graduates is now seen by extant research as a major role of higher education (Green et al. 2009; Holmes 2013; Tomlinson 2010; Tymon 2011). As a construct, graduate work-readiness has become an important benchmark for making decisions relating to graduate recruitment and selection (Caballero et al. 2011). Accordingly, universities have engaged with the graduate employability agenda by re-examining what attributes their graduates should hold, and by focusing on imparting those skills that might make the students more appealing to employers across various industries and sectors (Bridgstock 2009). Although several studies have been undertaken on how graduate work-readiness and employability varies across various countries and their labour markets, most have been conducted from a developed country perspective (see Andrews and Higson 2008; Dacre Pool and Sewell 2007; Montague et al. 2008). Scant attention has been given to researching and understanding graduate work-readiness in developing countries (Tran 2015), including in less developed countries (Bhanugopan and Fish 2009). Although some studies from developing countries do exist, they have mainly looked at work-readiness from an international student mobility perspective; such as Chinese students in the United Kingdom (Huang 2013).

This chapter explores the issue of graduate work-readiness from an Indian perspective (Edakkandi Meethal 2014). India is one of the foremost developing countries in the world (Budhwar 2001). It ranks second after China in producing the largest number of STEM (science, technology, engineering and mathematics) graduates in the world (McCarthy 2017). This should be considered positive given India's 'demographic dividend'—that it has a young and growing population between 25 and 50 years old who are seeking white collar jobs (Khare 2014). However, despite this accomplishment, Indian graduates constantly struggle to get hired in the local labour market. For example, according to a report by the Wall Street Journal (2011), about 75% of technical graduates and more than 85% of general graduates are deemed unemployable by India's high growth industries. Although India has one of the largest education systems in the world, the employability of its graduates has remained one of the foremost challenges for the country (Khare 2014). As a result, this has impacted the transition of Indian graduates into their careers and the role they play in the labour market. A good supply of skilled and employable graduates is essential for national, economic and social well-being, and the failure to equip graduates with employability skills has far-reaching consequences (Wickramasinghe and Perera 2010).

6.2 Trends in Indian Graduates' Work Transition

Although the number of graduates with higher qualifications in India has been steadily increasing, the number of graduates who remain unemployed also remains relatively high. Accordingly, more and more graduates are registering themselves at the employment exchanges in the country, and a major share of these are those who are educated (Khare 2014). For instance, according to a report by the Labour Ministry in India, one in every three graduates up to the age of 29 is unemployed with the total employment rate being close to 12% (Sharma 2014). Accordingly, this has brought the problem of the quality and work-readiness of graduates in India to the forefront as the gross enrolment rates (GER) in higher education in India reached 21.5 percent between 2011 and 2012 (Mehrotra 2015). As such, there is a significant problem that India is likely to face in the future due to the lack of utilisation of its graduates, which will likely lead to major challenges associated with human resource skills and knowledge in the country (Prikshat et al. 2018). Interestingly, the Indian economy registered a high gross domestic product (GDP) growth rate during 2015–16 and is showing strong signs of growth in industrial and service sectors (ILO 2016), indicating that the country is ready to tackle the issue of the high levels of unemployment of its graduates. However, data indicate that this complex problem is far from resolved, as approximately 146 million of the workforce (of 485 million) in India were illiterate in 2012 (Mehrotra 2015). As illustrative examples, over 253 million of the labour force possesses education qualifications at secondary level, but only 15 million have a tertiary-level technical education which includes graduates with certificate or diploma-level qualifications (Mehrotra 2015). A recent report by the All India Council for Technical Education suggested that over 60% of students graduating from technical institutes remain unemployed (India Infoline 2017), while only 7% of graduates in top business schools are considered employable (The Economic Times 2016). Accordingly, there is a massive disconnect in the Indian education system between the demand and supply of graduates for employment resulting from the lack of work-readiness skills among university graduates (India Skills Report 2017).

6.2.1 Macro Versus Micro Trends in the Workforce

Although India today remains one of the fastest growing economies in the world, a major drawback of its labour market is that the majority of its graduates have been trained informally in their industry (Khare 2014, 2016). For example, in the agriculture sector, the most dominant source of informal training is hereditary (family businesses), while in the manufacturing sector training is conducted mainly on-the-job, and among the ones who are trained—i.e. 86% in agriculture and 91.7% in the manufacturing sector—many received no formal training (Khare 2016).

Table 6.1 Employability rates 2015–2016

Employability as per qualification	2015	2016
Engineering/MBA (%)	44.56	50.69
BA (%)	29.82	35.66
B. Com (%)	20.58	37.98
B.Sc. (%)	35.24	31.7
M.Sc. (%)	39.81	31.36
IT (%)	40.9	42.22
Polytechnic (%)	15.89	25.77
B. Pharma (%)	40.62	42.3

Source India Skills Report (2017, p. 18)

Table 6.2 Employability rates 2015–2016 (as per gender)

Gender wide employability	2014	2015	2016
Male (%)	34.26	36.01	40.12
Female (%)	37.88	39.95	40.88

Source India Skills Report (2017, p. 19)

On the other hand, there is a high demand for highly educated and formally trained employees, but it mainly in the fast-growing service sectors of India. As an example, information technology (IT) companies in India prefer hiring engineering graduates who bring with them strong analytical and technical skills including high levels of proficiency in problem-solving skills (Gokuldas 2010). Accordingly, it is the service sector of India that employs highly educated and formally trained workers and graduates, amounting to 60% of jobs in India (Khare 2016; Yang et al. 2014). Table 6.1 provides the employability rates for 2015 and 2016 as per the qualifications gained by Indian graduates; whereas Table 6.2 shows the employability proportions between males and females in India between 2014 and 2016.

Concerns about lack of work-ready graduates in India for both domestic and global organisations have sparked calls for reforms in its higher education system (Carter et al. 2016). Other observers have noted that there is also a need to change the curriculum in the Indian higher education system to tailor it more closely towards the requirements of industry–employer expectations (Chithra 2013; Gopalakrishnan and Sukumar 2013). Industry can also play a major role in shaping and reforming the Indian higher education system. For instance, some private companies in India such as in the IT sector now require potential candidates to sit for and complete aptitude and other skills-based tests to determine their work-readiness (Salmi 2017). However, a level of disappointment persists among employers and industry in the Indian labour market regarding the lack of graduates' work-readiness competencies and skills. A key component within the Indian higher education is the vocational education and training (VET) sector, which has been the blind spot for central and state governments in India for the past six decades (Gupta et al. 2016). According to a World Bank report on skill development in India, there are massive problems in the Indian vocational education system that relates to the

lack of private and industry participation in the management of institutions, their outdated curriculum, lack of funding models, and a significant mismatch between the demands of industry and the courses offered by VET institutes and colleges (World Bank 2008). Furthermore, from a societal perspective, Indian society has always traditionally seen the VET sector as suitable for those students who are academically poor (Kumar 2009), and this has created challenges for the planning and reform of this sector. The aim of the VET sector in India is to create employment opportunities and impart suitable skills for generating self-employment, especially in rural and unorganised sectors (Agarwal 2013).

6.3 Higher Education Policy Reforms

The Indian labour market has experienced persistent policy reforms, which have caused concern for policymakers and industrialists alike (Majumdar 2016). The Indian government's policy initiative for altering its education system reflected the shift in its economic ideology that includes an increasing reliance on market forces by emphasising liberalisation, with several national committees being established since 1980s to provide recommendations, ideas and policy proposals (Cloete et al. 2006). However, the main issue with the Indian higher education system is the lack of policy implementation, which lies in its failure to manage the trade-offs involved in pursuing various projects; such as not taking into account the institutional changes or not suggesting concrete measures for mobilising resources (Cloete et al. 2006). The Indian education system includes primary, secondary and higher education, with the latter commencing after passing the 12th standard, which in turn leads to 5 years undergraduate, 2–3 years of postgraduate studies (Gupta et al. 2016). The higher education system in India can be classified into three categories; namely, universities, colleges, and special institutes offering diploma courses (Venkatram 2016). Although there are several public universities in India that are funded by the country's University Grants Commission (UGC), there is also a major presence of private institutes offering specialist courses.

Presently, the Indian government is making efforts to improve its higher education system by implementing key macro initiatives to accelerate graduate work-readiness; namely, (1) adopting a public–private partnership model, (2) forming sector councils and the adoption of schools by the private sector, and (3) encouraging the private sector to participate in quality assurance systems (Majumdar 2016). In addition, changes are also being made through curriculum and examination reforms, and universities have adopted a semester system, while providing English language courses at the undergraduate and postgraduate level (Khare 2016). With the aim of enhancing graduate skills to capitalise on the 'demographic dividend', the government launched a comprehensive National Skills Development mission and an Inclusive Skills policy in 2009 to promote institution-based graduate skill development (Khare 2016). As such, an industry-wide approach and a shift from quantity to quality can be seen in all the reforms undertaken by the government to improve

higher education. In addition, several important initiatives have been undertaken at government level to address work-readiness concerns for graduates. They include the following:

- The Technical Education Quality Improvement Project (TEQIP-III) project signed between the Government of India and the World Bank aims to improve the quality of engineering education across several states at a cost of US$ 201.50 million to be implemented in a 3-year period until 2020.
- The All India Council for Technical Education (AICTE) has taken various steps to improve technical and higher education in line with the Central Government's initiative ('*Digital India*' and '*Skill India.*')
- Four new schemes—'*Unnat Bharat Abhiyan*'—for engaging with communities and using technologies for their upgrading; *'Trainee Teacher Scheme'*—recruitment of fresh graduate engineers as well-trained lecturers for the NITs, '*Adjunct Faculty Scheme*'—to have a strong and robust collaboration between the educational Institutions and industry, *and* 'Margdarshan or Mentorship scheme'—mentoring to institutes by a well performing Institute, have been launched to enhance the work-readiness of graduates.
- Other initiatives embarked upon by AICTE include *mandatory internships* for students (4–8 weeks during summer vacations), *training of teachers* (both induction and annual in-service training), *single entrance examination* for admission in undergraduate engineering programs, and *induction training* for first-year students (PCM, English, communication skills, ethics, values).
- *Regular revisions of curriculum* (annual feature); *industry interaction cells* in each institute; promoting innovation in study and startups; *exam reforms* with more emphasis on practical subject understanding and skills than mere subject knowledge; and *preparing perspective plan* for the country with inputs from all the states.

6.4 GWR Stakeholder Perspectives

Sin and Neave (2016) discussed the interpretations of work-readiness from the perspective of policymakers, academics, students and employers. Similarly, extant research has reported numbers of stakeholders in addition to the education stakeholders—employers and industry groups, government and policymakers, students and their parents/families (Crossman and Clarke 2010; Harvey and Shahjahan 2013; Jackson 2013; Kinash et al. 2016; Tran 2015; Walkington 2014). Different stakeholders may perceive work-readiness competencies differently in variable contexts (Tran 2015; Williams et al. 2016) resulting in inconsistencies between the perceived value and outcomes for students/graduates (Jackson 2013; Kinash et al. 2016; Male and Chapman 2005). It is important for all stakeholders to realise and develop a mutual understanding of the challenges and to work collaboratively to

enhance the work-readiness competence of graduates (Kinash et al. 2016; Tran 2015). Based on the above discussion, this chapter examines the work-readiness competence deficits of Indian graduates, the causes of these deficits, and possible strategies and solutions to improve them from the perspectives of three stakeholder groups; government policymakers, employers and educators.

The following research questions guided the study, based on graduate work-readiness (GWR) literature:

1. What are Indian graduates' requisite work-readiness competence deficits?
2. What are the causes of these deficits?
3. What possible strategies and solutions are appropriate to enhance Indian graduates' work-readiness?

6.4.1 Research Method

This study used a multiple design process of data collection and analysis involving three stakeholder groups—government policymakers, employers and educators—to contrast their views on Indian graduates' work-readiness status, causes and possible solutions. A qualitative research design was used to gain some preliminary insights and help shape future research. In-depth, semi-structured interviews were conducted to gain insights from the key stakeholders. Data generated were analysed in two stages according to key themes (Clarke and Braun 2013; Hesse-Biber and Leavy 2011). The researchers first examined each case on a stakeholder basis and used their experiences, insights and descriptions through words and written texts to find a pattern and themes discussed in the interviews (Creswell 2013). The transcriptions of the recorded in-depth interviews were analysed, followed by open coding and axial coding through close examination of the data; then aggregate themes were sought and subsequently reviewed, and for reporting purposes, these themes were defined and named. Particular quotations from interviewees are also presented, following conventions in qualitative research, throughout the main text to provide additional data to support our collated analysis in Table 6.4 (Pratt 2008).

To obtain data for the best possible information 22 participants in total, well placed to provide expert commentary on the current state of graduates, were selected. Due care was taken to include respondents from academia who had more than 10 years experience and were aware of the current work-ready issues faced by the graduates. The industry respondents comprised CEOs, managing directors and senior executive managers who were struggling to find work-ready graduates, and had formulated various strategies in their industry to meet this challenge. Most of the government respondents were involved in policymaking initiatives concerned with higher education. Of this sample, six responders were policymakers, eight were industry/employers and eight senior representatives from education sector. Semi-structured interviews were conducted with the respondents in the vicinity of

Table 6.3 Stakeholder participants

Stakeholders	Interview codes	Job title
Policymakers	PMD1	President, Industry Association of Uttarakhand
	PMD2	Director, Uttarakhand State Office Confederation of Indian Industry Uttarakhand
	PMD3	Vice-Chancellor (University)
	PMD4	Ex-Education Minister, State Government
	PMN1	Member, Technical Education
	PMC1	Basic Shiksha Adhikari (BSA), State Government
Employers	EN1	Chief Technology Officer (CTO), IT Company
	EN2	HR Head, IT Company
	EN3	General Manager, Textile Mill
	EN4	Vice President, International Bank
	EN5	Head-Institutional Sales and Online Sales, Beauty Products
	EC1	Country Sales Head, Capital Goods
	EC2	General Manager, IT Company
	EC3	Director, Export–Import Company
Education stakeholders	HD1	Professor & Ex. High Ranked Army Officer
	ND1	Assistant Professor and Training and Placement Head
	HD2	Dean-School of Engineering (University)
	HN2	Professor and Head of the Department (Management)
	HD3	Associate Professor and Adjunct Associate Professor (Foreign University)
	HD4	Senior Personality Development Program Trainer
	HD5	Professor and Head of the Department (Humanities)
	HD6	Pro-Vice-Chancellor (University)

the NCR (National Capital Region), Dehradun and Chandigarh in India during June and July 2017. These cities are education hubs and contain the offices of most of the well-known organisations in India (Table 6.3).

6.4.2 Research Findings

Table 6.4 outlines the various competence deficits identified by these stakeholders in Indian graduates.

It is evident from Table 6.4 that there was a consensus among all the stakeholders regarding the deficiency of soft skill competencies in recent Indian graduates. The communications skills of the graduates were the main area of concern for all the stakeholders. Government policymakers were specifically concerned about the practical orientation of graduates, whereas employers reported that the graduates

Table 6.4 Competence deficits in Indian graduates

Stakeholders	Competence deficits
Policymakers employers	Practical orientation (4), Lack of confidence (4), Communication skills (4), Conceptual understanding (3), Lack of innovation (3), Professionalism (2), Communication skills (5), Team-building skills (4), Interpersonal skills (4), Right attitude and aptitude (4), Lack of professionalism (3), Practical orientation (3), Lack of knowledge (2), Lack of global exposure (2), Lack of IT Skills (2), Personal hygiene or grooming skills (2), Lack of administrative knowledge (2), Perseverance (1), Not multi-skilled (1), Irresponsive (1)
Education stakeholders	Analytical skills (4), Decision-making skills (4) Communication (comprehension and English speaking) (4), Team-building (4), Practical problem-solving (3), Commitment (2) Business acumen (2), Attitude and Aptitude (2). Thinking out of box (1), Agile (1), Street smart (1), Discipline (1)

Note Numbers in brackets signify frequency of occurrence of competence deficit

were also deficient in team-building and interpersonal skills. The educators noted that graduates are not committed and dedicated enough to go through the courses in a planned approach to meet the demands of workplace requirements.

The following section presents the work-readiness competence deficits identified by all the three stakeholders, their causes and proposed solutions in detail.

6.4.3 Government Policymakers

6.4.3.1 Work-Readiness Competency Deficits

The key concerns raised by policymakers for the work-readiness of Indian graduates were in the competencies of practical orientation (being practically oriented towards accomplishing the tasks). Communication skills, especially English-speaking skills, were also highlighted as deficits in recent graduates. Policymakers also noted that graduates coming from remote areas usually lacked the communication skills and professionalism needed for the twenty-first century work culture. This also explained the lack of confidence of these graduates as they are not fluent in English, and usually, they are required to correspond and to some extent speak English for effective career prospects. Competencies of innovation and conceptual understanding were also reported as a deficit by the policymakers.

6.4.3.2 Causes of Competence Deficits

The main cause observed by policymakers for their lack of practical orientation was attributed to the fact that most of the universities' syllabus and teaching practices

are more theoretical in nature, and practical exposure relating to the industry is not provided to the graduates. This situation is further worsened with outdated an syllabus that has no connection with the practical needs of contemporary industries. Following are the observations of one of the policymakers regarding the old and obsolete syllabus:

> …is providing the syllabus, which is very old and doesn't conform to the standards of industry. Going through the course, following these obsolete syllabi, how you can train the graduates for industry.

Moreover, policymakers also noted that the higher education system also suffer from a resource problem, even if they want to develop the infrastructure needed to prepare students for industry. The policymakers also put some blame on graduates, as they observed that graduates are not willing to contribute to their educational institutions. Those graduates who excel in their studies and are successful in organisations usually do not contribute back to their alma mater in any way.

For the lack of communication skills and subsequent loss of confidence in graduates, the policymakers touched on the sensitive issues of national and regional languages. The medium of some graduate courses in regional languages, instead of English, was also mentioned as a possible cause for a lack of communication skills:

> So, if you are talking in a national language one should not feel shame in speaking national language starting from top to bottom level. But in India, if you see, extreme south people may not know Hindi, (whereas) when you come to the extreme north, the top official will only be comfortable in Hindi.

The ministerial system or minister responsible for education was another factor, which was brought up by the policymakers. They were quite apprehensive, considering that education portfolios are often run by ministers who are not educated themselves. This fact made their all efforts to increase the work-readiness of graduates redundant, as the ministers without any formal education do not understand their proposed innovations in the educational institutions. Following are the observations of one of the policymakers:

> Our education reforms largely depended on government systems. These systems are being ruled by ministers, who may be educated and who may not be educated. So obviously, such persons, if you are guided by such persons who don't know anything, so obviously they may not be able to understand these efforts because they don't have the requisite calibre.

The colleges affiliated with universities were also blamed for work-readiness issues. It was mentioned that though these colleges go through the accreditation process, and regulation processes are in place, but the quality of faculty as well as the quality of teaching offered is substandard. The following quotation reflects this view:

> On one hand, we have IIMs, IITs and NITs, and prestigious government universities, we have private universities, on the other hand we have got private universities and colleges affiliated to universities. There is a vast variation in our system education system that lacks consistency. There is a need for robust mechanisms to ensure consistency over all these institutions.

6.4.3.3 Strategies and Solutions

The policymakers generally favoured revising the syllabi of different courses according to the needs of industry, as well as the formulation of more innovative course designs based on the efforts of research and development (R&D) teams in universities and colleges. These teams must be funded by the government bodies and will ensure that state-specific indigenous courses can be developed that can cater to the industrial needs in those states. Following is the observation of one policymaker:

> The need is for enhancing the practically oriented infrastructure, through proper funding mechanism with the support of state or central governments so many ne innovative courses designed to fulfill the needs of the industry can be started based on the efforts of R&D teams.

Policymakers further observed that to address the work-readiness concerns of graduates, more innovative course-curriculum design is needed, and the faculty of universities and colleges should be instrumental and motivated to push that in their respective universities and colleges. Further, this type of initiative should be supported by government through a funding mechanism accompanied by regulations ensuring their accountability. To ensure proper implementation of regulations in affiliated colleges the need for more robust mechanisms and tight disciplinary action for those who do not conform to the regulations were suggested.

To address deficits in communication competence, ways to enhance the role of national language across different states and territories as a common language was emphasised. The policymakers were overwhelmingly in consensus when suggesting that only educated persons should be in charge of education portfolios so as to address the concerns of graduate work-readiness. Following are the observations of one of the policymakers:

> As governing bodies are supposed to make the system, therefore I will say before you assign education portfolio to a person, the ministry must ensure how much that person knows about global education, as well as aware about the present education system in the country.

6.4.4 Employers

6.4.4.1 Work-Readiness Competency Deficits

The employer stakeholders, while highlighting the existing demand–supply gap in employment, observed that there is perfect competition in the market for recent graduates to get good jobs. It was noted that, it is not that the jobs are not available, but the jobs are there for work-ready candidates and the number of these candidates is comparatively low. Reinforcing these observations, there was a consensus among all the employer stakeholders regarding the deficiency of soft skill competencies in

recent Indian graduates. A majority of them reported that most of the recent graduates employed by them were found to be deficient in communication, team-building and interpersonal skills. Following are the observations of a senior executive from a major organisation, which recruits fresh graduates every year:

> Every year, I face challenges in recruiting engineers who are good in soft skills. Almost all the fresh graduates lack basic professional writing skills, they can hardly write emails without making errors, they don't know how to work in teams and lack basic interpersonal skills.

Absence of the right attitude, a lack of professionalism and a practical orientation, and the absence of appropriate knowledge were other major competencies in which many Indian graduates were found to be deficient. Following are the views of one of the employers:

> They don't have practical knowledge, their basics are not clear, majority of the fresh graduates do not understand what they have studied and what are the implications of that in the industry, so the basic knowledge itself is lacking.

Some of the employers also reported that they were concerned about fresh graduates' lack of global knowledge, their personal grooming, lack of multi-skills and perseverance competencies.

6.4.4.2 Causes of Competence Deficits

The major causes for the lack of practical orientation and knowledge were attributed to the failure of educational institutions to upgrade and update the courses on a regular basis according to industry needs. They were blamed for not investing time in building their course-curriculum to industry standards, as well as lack of creativity and innovation in learning and teaching methodologies. Although the employer stakeholders observed that there has been a marked improvement in industry–education interaction, they asserted that more efforts are needed in this direction. Simply put, the students are not given adequate exposure to industry. Some of the employers mentioned a lack of competition among graduates to get admission in some professional courses due to the competition and mushrooming growth of private educational institutions. One employer observed:

> Initially there were competitive exams for entry into prestigious educational institutes, and only quality students could get into these programs ensuring good quality of graduates. These days the competition level is missing, any candidate can buy a seat regardless of his/her level, thus increasing number of non-work-ready graduates.

Moreover, it was noted that the employers, in the wake of stiff competition, do not have time to enhance the soft-skills of graduates. Another relevant point brought up by employers was the lack of work-readiness assessment measures for graduates leaving their institutions. Employers claimed that educational institutions seldom engage with graduates in identifying skills gaps. They felt that they do not seem concerned whether the graduate is work-ready and will be able to cater to the

needs of industry successfully. The priority of educational institutions appears to be on attracting the maximum number of candidates and passing them without taking seriously the work-readiness capabilities of their graduates according to industry needs. Another possible factor that might contribute to graduate skills deficiencies from the perspective of employers was their parents' role in influencing the career choices of college students. Many parents do not seem to appreciate what the college-level student is interested in, what are their aspirations, but rather force their wishes on their children to undertake studies in those fields in which they have no interest. They do not want to inspire their children to go for innovative and enterprising careers, but recommend that they choose more routine professional positions and career opportunities, thus limiting their choices. The employers also felt that many of the graduates who became new employees lack the qualities to survive and prosper in their industry and were not clear how to progress further in their careers. Note the remarks of one employer:

> Parents have a single agenda of proving in their society that that their kids are studying some prestigious courses, but they don't realise the interest and aspirations of their kids. They simply want to make them engineers or MBA graduates. Most of the graduates when interviewed lack the practical urge to sustain in their chosen qualifications.

6.4.4.3 Strategies and Solutions

The employers observed that the education institutions are often not training graduates in soft-skills and consequently many graduates have only academic skills. Following are the observations of one of the employers:

> If we can conduct small projects related to soft-skills, team-building exercises, then why can't it be done at graduate or post-graduate levels.

The need for more practically oriented curricula comprising internships, industrial visits and industry expert lectures was also suggested. Their emphasis was more on the length of internships (similar to those used in engineering and medical education), where the employers believed that the length of the internships should be around 6 months at least, so that the students can understand the challenges of their future job descriptions and grasp the details of industry competency requirements. One employer stakeholder observed the following:

> I think the internship duration should be of at least six months for every course as it gives chance to graduates to get connected to perspective employers and it improves the chances of getting the job. This can also generate many references for future job prospects.

The employer stakeholders observed that this is the time for all the stakeholders to synergise their activities, sit together and talk more frequently to solve the work-readiness issues of graduates. They suggested a need for frequent meetings between industry and educational institutions so that both parties can have the feel of what industry needs. Employers' roles could include conducting collaborative workshops with education institutions, walk-in lectures from industry experts; and

more active roles of key industrial experts in revising the curriculum of different offerings was recommended. Further, the stakeholders proposed that the teaching and learning processes need to be more practical and application-oriented rather than theoretical. Moreover, it was underlined that educational institutions should be aware of the competency needs of the industry in their vicinity and develop graduate skills according to the demands of that industry.

6.4.5 Educators

6.4.5.1 Work-Readiness Competency Deficits

The educational stakeholders, while observing that the knowledge base of students coming into graduate courses (MBA, Engineering) is very poor, also suggested that the general awareness of most of the graduates is very low. They suggested that the reading and comprehension skills of graduates are poor as they rarely read or go through newspapers and magazines to analyse current affairs. Most of the education system stakeholders believed that graduates are not committed and are not dedicated enough to raise their levels to meet the workplace requirements. That is why they get a shock while starting work and immediately put the blame on the education system. These stakeholders noted that most graduates lack analytical, decision-making, team-building and problem-solving skills, and are poor in communication skills. Other reported deficiencies in competencies were in the areas of business acumen, right attitudes, aptitude, being agile, 'street smarts' and discipline.

6.4.5.2 Causes of Competence Deficits

For the lack of proper analytical, decision-making and problem-solving skills, interestingly some of the educational stakeholders blamed it on the 'Jugaad' mindset of most of graduates, where they want to find quick-fix solutions to the problems instead of devoting time and learning the inherent capacity to solve life as well as business problems. Following are the observations of one of the stakeholders:

> I would blame it on the role of home and society on the development of students coming to us who have a 'Jugaad' mindset. Students want an easy way through short-cuts and without any hard work, thus impacting their critical analytical skills.

Moreover, partial blame for graduates' lack of work-readiness was put on parents as well. It was noted that the parents often discouraged work exposure by current graduates. It was suggested that parents seldom entrust any responsibilities to their children from the early stages, which hinders their abilities to cope with the real world. Most parents will not give a child the simple responsibility to go and buy vegetables or groceries from the nearby store as this is likely to interfere with

their studies. Moreover, educational stakeholders observed that in Indian society, working while studying in menial or routine jobs is considered a social taboo impacting the social status of families. Thus, the graduates become part of a system where they lack work exposure and have only academic knowledge. Following are the words of one educational stakeholder:

> Parents pamper their kids and don't encourage them to work while studying, and instead measure their success in terms of marks which they get. This ends up with passing graduates who have higher percentage of marks, but oblivious to work culture needed at industry level.

Lack of industry–academic interaction also resonated with these stakeholders. It was observed that just accommodating graduates for 2–3 months in the internship program without close mentoring and monitoring, does not serve the purpose, and industry must contribute more to this important activity.

Another important observation made by one of the education stakeholders in reference to a book by Prof. Srikant Datar (2010), '*Rethinking the MBA*', was considered the reason why educational institutions tend to focus on 'knowing' dimensions (theories, facts, models, definitions) of learning; and to neglect the 'doing' (developing the skills, capabilities, techniques which lie at the heart of practice of any field), and 'being' dimensions (taking responsibility for executing change, developing depth as a person, considering the balance between a career and commitment towards organisation, understanding one's own limitations, developing learning attitude) in their curriculum and pedagogy. Another prominent factor which was discussed was the absence of work-experienced faculty in many educational institutions. It was observed that most faculty members are academics or researchers and not business practitioners, as required in today's competitive business world.

6.4.5.3 Strategies and Solutions

All the education stakeholders were in agreement that a systematic and continuous interaction with industry is the key strategy that can considerably enhance graduates' work-readiness skills. They also suggested that course curricula and pedagogy should be designed in consultation with industry representatives. More fusion of the experience of academics (having industry experience) along with specialist industry personnel who can enhance exposure to graduates, is an important need. Further, they recommended that the Indian education system must move away from rote learning and memorisation of concepts and instead focus on the application of theories and concepts, complemented with meaningful work-related interventions.

More practical curriculum, intended to increase students' industry exposure, and involving more responsibility and accountability for graduates, must be incorporated in the mainstream educational institutions. Equipping them with lateral thinking and multi-tasking features and assignments will surely add more competencies and produce 'street-smart' graduates.

Following are the observations of one educational stakeholder:

> Today the country wants street smart graduates not professional course toppers. Get the graduates be absorbed in more practical curriculum having tasks involving lateral thinking and multi-tasking features around industrial mainframe duties to make them used to working under pressure with time bound tasks.

Some educational stakeholders asserted that the admission eligibility and process for some courses (MBA, Engineering) needed re-evaluation. It was considered that there is a dire need to assess the potential and suitability of the candidates for professional courses. The emphases during these professional courses must be on developing the analytical and decision-making skills of graduates. Shifts from classroom-based instruction to an industrial-experiential learning system were recommended. Further, they suggested solution-centred team and group assignments and activities in the course-curriculum, in order to enhance the analytical and decision-making skills of graduates, and more properly designed internship programs with suitable time-frames aimed at solid exposure to industry practices. Another innovative solution offered by education stakeholders was regarding 'inter-disciplinary integrated programs', jointly taught by academics from two or three different disciplines, thus enhancing integrated thinking for the graduates across organisational boundaries.

6.5 Discussion

The empirical analysis based on the observations of all the three main stakeholders showed many similarities concerning the work-readiness competence deficits in Indian graduates, their causes and recommended solutions. The stakeholders were in agreement that Indian graduates are way behind industry needs in terms of the development of soft-skills. Extant research has reported that soft-skills are an important predictor of employability (Gokuldas 2010; Lievens and Sackett 2012; Nickson et al. 2012), and new graduates who demonstrate soft-skills (effective communication and interpersonal skills) will be more competitive in the marketplace than those who do not (Finch et al. 2013). The results of the empirical analysis show that almost all the stakeholders are in agreement about the lack of communication, team-building and interpersonal skills in Indian graduates which considerably reduce their competitiveness or work-readiness. Often these competencies are considered as a pedestal at the point of appointment (Hinchliffe and Jolly 2011). Educational stakeholders specifically pointed out a lack of analytical and decision-making skills in recent Indian graduates. Policymakers and employers also observed a 'skills gap' between conceptual understanding and the practical orientation and application of these concepts towards the job tasks assigned to new graduates. The 'skills gap' concept sees the challenge of the university curriculum to be conceived largely in terms of a bridging of 'the disparity between industry needs and higher education provision' (Jackson 2013, 778). The primary

responsibility for employability rests with individual students and graduates (Leong and Kavanagh 2013; McQuaid and Lindsay 2005; Van Buren 2003). Education stakeholders were sceptical of graduates conforming to these responsibilities. Many observed that the recent crop of fresh graduates is not committed, lack agility and lack the capacity to think 'out of box' and are not 'street smart'. The need for them to be proactive in preparing themselves for a changing world by actively improving their knowledge and skills to meet the demands of the modern workplace (Bridgstock 2009) was emphasised. They considered that this ability for 'thinking out of the box' can give them more prominence and provide an edge over other graduate candidates. Employer stakeholders also felt that the graduates lack general awareness and global exposure, and at the same time they are not multi-skilled and are non-responsive to the needs of the business. Policymakers also brought to the attention that the graduates lack innovative skills and professionalism to make a transition to the workplace.

The most prominent reason for these competence deficits was attributed to a lack of industry–education interface, outdated syllabi and course-curriculum, the relatively poor quality of affiliated colleges, lack of employability assessment, the *'Jugaad'* mindset and attitudes of parents. Policymakers put the onus on resource challenges and the failure of alumni to cater to the needs of the educational institutions. Another important observation by policymakers concerned a lack of communication skills, due to the sensitive issue of national and regional languages. With more focus on the medium of education in their graduate courses on national languages, the graduates lack ability to write and converse in good English. Employers do give due consideration to language skills at the point of appointment (Hinchliffe and Jolly 2011) and similar expectations can be there in the case of Indian graduates. The substandard quality of education offered by university-affiliated colleges was also observed by policymakers. Employers were generally unsatisfied by the course-curriculum offered by educational institutions and the lack of creativity and innovation in the content matter and teaching methodologies. Another relevant point made by employer stakeholders was the absence of work-readiness assessments of graduates in their final year of study. The recommendation was for universities to encourage more employer involvement in the selection of employability criteria and for greater employment-based training and experience (Mason et al. 2009). They also held parents responsible for coercing graduates into popular courses without considering their children's aptitude and interest in these courses. Many educational stakeholders felt that some colleges and universities tend to focus on the 'knowing 'dimension instead of the 'doing' dimension, and that greater focus on the latter might give an extra edge to graduates to become work-ready. The relative absence of industrial experience of faculty members in many educational institutions was also highlighted by educational stakeholders.

All the stakeholders agreed that it is time to synergise their efforts and discuss these issues more frequently to enhance the work-readiness of Indian graduates. They all recommended a drastic change in course-curriculum of programs offered at graduate levels to meet the practical demands of industry, as well as greater focus

on more innovative and practical course design. This observation resonates well with Hager and Holland's (2006) observation that academics need to re-design their curricula and introduce new methodologies to enhance graduate capabilities. Greater employer involvement in curricula design and increased practicum experiences in employment was also suggested, which concurs with observations of Mason et al's (2009) study. A more active role of government in creating R&D teams across the ministry and education institutions, supported by sufficient funding arrangements, to boost innovative and indigenous courses (products) was envisaged. They also underlined the role of robust internship programs in all courses with proper time-frames, as in medical and engineering programs, together with frequent industrial visits and industry expert lectures to enhance the work-readiness levels of graduates. Moreover, they observed that admission eligibility processes needed tightening up, so that only quality candidates with the right aptitudes can get entry into professional courses thus ensuring better quality graduates.

6.6 Conclusion

Based on suggestions from the literature—that the significant gap which exists between what is provided by the university and what is expected from graduates in the labour market will be best addressed by the support and cooperation between the university and the employer (Artess et al. 2011; Lowden et al. 2011; Rust and Froud 2011)—this chapter investigates this gap in terms of the work-readiness competence deficits of Indian graduates, and further explores the support and cooperation among the three important stakeholders. Considering that the alignment of subjective work-readiness competencies between graduates and employers is vital for smooth transitions from university to work, this study found a range of competence deficits based on the observations of the stakeholders. In doing so, this chapter develops a foundational understanding of the perspectives of the three main stakeholders concerning competence deficits of Indian graduates, causes, and recommended solutions to address them. The findings are similar to those discovered in many of the other countries discussed in this book.

References

Agarwal, T. (2013). Vocational education and training programmes (VET): An Asian perspective. *Asia-Pacific Journal of Cooperative Education, 14*(1), 15–26.

Artess, J., Forbes, P., & Ripmeester, N. (2011). Supporting graduate employability: HEI Practice in Other Countries. *BIS Research Paper Number 40*. London: BIS.

Andrews, J., & Higson, H. (2008). Graduate employability, 'soft skills' versus 'hard' business knowledge: A European study. *Higher Education in Europe, 33*(4), 411–422.

Bhanugopan, R., & Fish, A. (2009). Achieving graduate employability through consensus in the South Pacific Island nation. *Education + Training, 51*(2), 108–123.

Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development, 28*(1), 31–44.

Budhwar, P. (2001). Doing business in India. *Thunderbird International Business Review, 43*(4), 549–568.

Caballero, C. L., & Walker, A. (2010). Work readiness in graduate recruitment and selection: A review of current assessment methods. *Journal of Teaching and Learning for Graduate Employability, 1,* 13–25.

Caballero, C. L., Walker, A., & Fuller-Tyszkiewicz, M. (2011). The work readiness scale (WRS): Developing a measure to assess work readiness in college graduates. *Journal of Teaching and Learning for Graduate Employability, 2,* 41–54.

Carter, M. J., Marmolejo, F. J., & Spaid, R. L. (2016). Relating theories to practice in an international context. *New Directions for Community Colleges, 174,* 75–84.

Chithra, R. (2013). Employability skills: A study on the perception of the engineering students and their prospective employers. *Global Journal of Management and Business Studies, 3*(5), 525–534.

Clarke, Victoria, & Braun, Virginia. (2013). Teaching thematic analysis: Overcoming challenges and developing strategies for effective learning. *The Psychologist, 26*(2), 120–123.

Cloete, N., Maassen, P., Fehnel, R., Moja, T., Gibbon, T., & Perold, H. (Eds.). (2006). *Transformation in higher education: Global pressures and local realities*. Springer, Netherlands.

Creswell, John W. (2013). *Research design: Qualitative, quantitative, and mixed methods approaches*. London: Sage Publications.

Crossman, J. E., & Clarke, M. (2010). International experience and graduate employability: Stakeholder perceptions on the connection. *Higher Education, 59*(5), 599–613.

Dacre Pool, L., & Sewell, P. (2007). The key to employability: Developing a practical model of graduate employability. *Education + Training, 49*(4), 277–289.

Edakkandi Meeethal, R. (2014). Towards building a skill-based society in India. *International Journal of Sociology and Social policy, 34*(3/4), 181–195.

Finch, D. J., Hamilton, L. K., Baldwin, R., & Zehner, M. (2013). An exploratory study of factors affecting undergraduate employability. *Education + Training, 55*(7), 681–704.

Gokuldas, V. K. (2010). Technical and non-technical education and the employability of engineering graduates: An Indian case study. *International Journal of Training and Development, 14*(2), 130–142.

Gopalakrishnan, S., & Sukumar, V. (2013). An empirical study on assessment of employability skills implication for university industry linkage. *IOSR Journal of Business and management, 4,* 67–69.

Green, W., Hammer, S., & Star, C. (2009). Facing up to the challenge: Why is it so hard to develop graduate attributes? *Higher Education Research and Development, 28*(1), 17–29.

Gupta, V., Raman, C., & Krisanthan, B. (2016). Secondary (9–10) and higher secondary education (11–12). In M. Pilz (Ed.), *India: Preparation for the world of work*. Wiesbaden: Springer VS.

Hager, P., & Holland, S. (Eds.). (2006). *Graduate Attributes, Learning and Employability* (Vol. 6). Berlin: Springer Science & Business Media.

Harvey, N., & Shahjahan, M. (2013). *Employability of Bachelor of arts graduates*. Sydney: Office for Learning and Teaching, Department of Industry.

Hesse-Biber, S. N., & Leavy, P. (2011). *The practice of qualitative research*. Sage.

Hinchliffe, G. W., & Jolly, A. (2011). Graduate identity and employability. *British Educational Research Journal, 37*(4), 563–584.

Holmes, L. (2013). Reconsidering graduate employability: Beyond possessive instrumentalism. In *Paper presented at the 7th International Conference on HRD Research and Practice across Europe*, 22–24 May, University of Tilburg, Netherlands.

Huang, R. (2013). International experience and graduate employability: Perceptions of Chinese international students in the UK. *Journal of Hospitality, Leisure, Sport & Tourism Education, 13,* 87–96.

ILO. (2016). World employment social outlook: Trends 2016. Accessed: http://www.ilo.org/wcmsp5/groups/public/—dgreports/—dcomm/—publ/documents/publication/wcms_443480.pdf.

India Infoline. (2017). India's over 60% engineering graduates remain unemployed. Accessed March 19, 2017. https://www.indiainfoline.com/article/news-top-story/india-s-over-60-engineering-graduates-remain-unemployed-117031800319_1.html.

India Skills Report. (2017). Accessed November 13, 2016. http://www.in.undp.org/content/india/en/home/library/poverty/india-skills-report-2017.html.

Jackson, D. (2013). Business graduate employability—Where are we going wrong? *Higher Education Research & Development, 32*(5), 776–790.

Khare, M. (2014). Employment, employability and higher education in India: The missing links. *Higher Education for the Future, 1*(1), 39–62.

Khare, M. (2016). Higher education/university: Taking the skills march forward in India—Transitioning to the world of work. In M. Pilz (Ed.), *India: Preparation for the world of work*. Wiesbaden: Springer VS.

Kinash, S., Crane, L., Judd, M. M., & Knight, C. (2016). Discrepant stakeholder perspectives on graduate employability strategies. *Higher Education Research & Development, 35*(5), 951–967.

Kumar, K. (2009). *The curriculum: Theory and practice* (6th ed.). Sage: London.

Leong, Raymond, & Kavanagh, Marie. (2013). A work-integrated learning (WIL) framework to develop graduate skills and attributes in an Australian University's accounting program. *Asia-Pacific Journal of Cooperative Education, 14*(1), 1–14.

Lievens, F., & Sackett, P. R. (2012). The validity of interpersonal skills assessment via situational judgment tests for predicting academic success and job performance. *Journal of Applied Psychology, 97*(2), 460–468.

Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). Employers' perceptions of the employability skills of new graduates. London: SCRE Centre/Edge Foundation, university of Glasgow.

Majumdar, S. (2016). Reflections on opportunities and challenges of skills development in India. In M. Pilz (Ed.), *India: Preparation for the world of work*. Wiesbaden: Springer VS.

Male, S., & Chapman, E. (2005). Assessing the generic competencies of engineering graduates: Preliminary report from an ongoing research program. In *4th ASEE/AAEE global colloquium on engineering education* (p. 1074). Australasian Association of Engineering Education.

Mason, G., Williams, G., & Cranmer, S. (2009). Employability skills initiatives in higher education: What effects do they have on graduate labour market outcomes? *Education Economics, 17*(1), 1–30.

McCarthy, N. (2017). *The countries with the most STEM graduates*. Forbes. Accessed February 2, 2017. https://www.forbes.com/sites/niallmccarthy/2017/02/02/the-countries-with-the-most-stem-graduates-infographic/#4c0ceaac268a.

McQuaid, R. W., & Lindsay, C. (2005). The concept of employability. *Urban Studies, 42*(2), 197–219.

Mehrotra, S. (2015). The employability of tertiary-level graduates in India. In N. V. Varghese & G. Malik (Eds.), *India higher education report 2015*. New York: Routledge.

Montague, A., Connell, J., & Mumme, B. (2008). Graduate employability in Australia. In R. Cameron, S. Dhakal, & J. Burgess (Eds.), *Transitions from education to work: Workforce ready challenges in the Asia Pacific*. London: Routledge.

Nickson, D., Warhurst, C., Commander, J., Hurrell, S. A., & Cullen, A. M. (2012). Soft skills and employability: Evidence from UK retail. *Economic and Industrial Democracy, 33*(1), 65–84.

Pratt, M. G. (2008). Fitting oval pegs into round holes: Tensions in evaluating and publishing qualitative research in top-tier North American journals. *Organizational Research Methods, 11*(3), 481–509.

Prikshat, V., Kumar, S., & Raje, P. (2018). Antecedents, consequences, and strategic responses to graduate work-readiness: Challenges in India. In R. Cameron, S. Dhakal, & J. Burgess (Eds.), *Transitions from education to work: Workforce ready challenges in the Asia Pacific*. London: Routledge.

Rust, C., & Froud, L. (2011). 'Personal literacy': The vital, yet often overlooked, gradaute attribute. *Journal of Teaching and Learning for Graduate Employability*, *2*(1), 28–40.

Salmi, J. (2017). *The tertiary education imperative: Knowledge, skills and values for development*. Rotterdam: Sense Publishers.

Sharma, Y. (2014). What do you do with millions of extra graduates? *BBC News*. Accessed July 1, 2014. http://www.bbc.com/news/business-28062071.

Sin, C., & Neave, G. (2016). Employability deconstructed: Perceptions of Bologna stakeholders. *Studies in Higher Education, 41*(8), 1447–1462.

The Economic Times, 2016. Only 7% of India's B-school graduates employable: Study. April 27, 2016. Accessed: https://economictimes.indiatimes.com/industry/services/education/only-7-of-indias-b-school-graduates-employable-study/articleshow/52008920.cms.

Tomlinson, M. (2010). Investing in the self: Structure, agency and identity in graduates' employability. *Education, Knowledge and Economy, 4*(2), 73–88.

Tran, J. (2015). Vietnamese higher education and the issue of enhancing graduate employability. *Journal of Teaching and Learning for Graduate Employability, 3*(1), 2–16.

Tymon, A. (2011). The student perspective on employability. *Studies in Higher Education, published online.*. https://doi.org/10.1080/03075079.2011.604408.

Van Buren III, H. J. (2003). Boundaryless careers and employability obligations. *Business Ethics Quarterly, 13*(2), 131–149.

Venkatram, R. (2016). (Technical) colleges: Technical education in India—The strengths and challenges. In M. Pilz (Ed.), *India: Preparation for the world of work*. Wiesbaden: Springer VS.

Walkington, H. (2014). Enhancing the STEM student journey: Students as researchers. In *HEA STEM Conference* (Vol. 30). Edinburgh.

Wall Street Journal. (2011). India graduates millions, but too few are fit to hire. Accessed April 5, 2011. https://www.wsj.com/articles/SB10001424052748703515504576142092863219826.

Wickramasinghe, V., & Perera, L. (2010). Graduates' university lecturers', and employers' perceptions towards employability skills. *Education + Training, 52*(3), 226–244.

Williams, A. N., Simmons, C., Levett-Jones, T., Sher, W., & Bowen, L. (2016). *Facilitated work-integrated learning through skills-enabled e-portfolios in construction and nursing. Final report. Office of Teaching and Learning*. Sydney, Australia: Department of Industry.

World Bank. (2008). *Skill development in India*. Report No. 22, Accessed https://datatopics.worldbank.org/hnp/files/edstats/INDwp08c.pdf.

Yang, L. T., Partlow, C. G., Anand, J., & Shukla, V. (2014). Assessing the competencies needed by hospitality management graduates in India. *Journal of Hospitality and Tourism Education, 26*(4), 153–165.