GLOBAL TALENT

Challenges and Opportunities for Skills Development in Higher Education - 2nd Edition, 2019



GLOBAL TALENT IN INDIA:

CHALLENGES AND OPPORTUNITIES FOR SKILLS DEVELOPMENT IN HIGHER EDUCATION – 2nd EDITION

2nd edition, 2019, presented by

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BIC classification JNM/JNMN/JNF/JNT/JNK/JFFS/1FKA

978-1-9163130-0-2

ISBN

Design by

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PREFACE TO REPORT

This report is the second in a longitudinal study on the higher-level skills development challenges facing Higher Education (HE) in India. This report draws on a range of perspectives from key stakeholders and explores current perceptions of the challenges and opportunities for skills development in India.

Higher-level, or graduate-level skills, are a key differentiator for economies globally. It is estimated that a skilled workforce can contribute over \$150 billion to the global economy and over \$9 billion in India alone. HE institutions are hubs for global talent development and indeed central to reaping the economic returns from the human resource development of a country.

Research into the concept of global talent and global talent development is at the very core of the Global Talent Lab. The Global Talent Lab is a young, new platform for the research and development of future global talent. The Lab's core mission is to expand the repertoire of research practice for global talent development. To deliver against this purpose, we conduct and curate collaborative research into global talent development which can inform and impact both policy and practice.

This report, in its 2019 edition is a flagship product of the Lab and presents a deep dive into the current state of higher-level skills and talent development in India and how this is impacting upon the future workforce and workplace.

Selecting India to commence our global research on talent development was an easy choice. India is now the world's fastest-growing large economy, and the country ranks 43rd among the world's most competitive economies in the world (IMD World Competitiveness Rankings 2019). However, while the economy is growing, there is a higher-level skills gap and a gap which is estimated to cost the Indian economy as much as \$8.61bn (INR 556 billion) in lost productivity (PwC 2014).

There has been a major skills focus in India through initiatives such as Skill India and the inception of the Ministry of Skills Development and Entrepreneurship (MSDE). HE reforms are underway through the

Professor Sonal Minocha

Global University Systems

introduction of a draft National Education Policy in 2019. However, a greater focus on higher and graduate-level skills is necessary to understand and close the productivity gap.

It is here that our report aims to contribute by:

- Providing multi-stakeholder insights into the current state of the graduate-level skills development agenda in India and the role of HE within this.
- 2. Identifying current challenges and opportunities for improving workforce productivity and capacity building through skills development via HE.
- 3. Offering data-driven findings for consideration by educators, employers and policymakers in tackling India's graduate-level skills development challenge.

Although the skills landscape is multi-faceted and complex, we do nevertheless firmly believe that the role of Higher Education is fundamental in addressing this skills mismatch and its ultimate impact on the economy.

This report provides first-hand insights into the issues surrounding higher-level skills development in India. The next steps are to refine and repeat this study over the next five years and to potentially undertake a comparative study with other countries. It is our intent that through the Global Talent Lab, this research holds potential to inform and influence higher skills development policy and practice in India.

The Indian context is vast and complex, and the skills development challenge messy and constantly evolving. We hope, however, that this research navigates this complexity and presents clear implications and insights for our audiences while preserving the authenticity of the challenge ahead!

We hope you find this report and its findings useful. We look forward to working with you in the future to deepen and widen this study and its impact.

> Dr Dean Hristov Global Talent Lab

FOREWORD

"Education in India is at a crossroads. Big changes are coming from the government to help modernise the sector. But the job market is changing. Notwithstanding the buzz around Indias start-up ecosystem, 206 of the world's unicorns are in China, 203 in the USA and 21 in India (still the world's thirdlargest ecosystem). The nature of jobs is changing and the skills the workforce needs are transforming at a rate not seen in India before. While this brings with it immense opportunities for the agile layer of India's workforce to become a world leader in tech and deep tech skills, it also poses the very real risk of turning a demographic dividend to a demographic timebomb for the vast majority of the workforce.

This second edition report goes beyond the inaugural edition to building a larger dataset and identifying the nuance of the changes required in higher-level skills development in India. To achieve the depth and breadth this report does is to be commended. It offers a high-level overview of the changing landscape in India for policymakers; but also a bottom-up analysis of the push and pull factors contributing to these changes, and what might need to happen to realise the dividend.

Such changes will inevitably need to be a combination of pedagogical, regulatory, technologyand driven initiatives, a greater focus on nontechnical and transferable skills, a more deep-rooted enthusiasm for the industry and international collaborations, and more informed "buyers" – the parent and student themselves. Educators play a crucial role too, with greater industry collaborations helping course development be more responsive to the needs of the changing job market. Liberal arts, creativity, communication, critical reasoning and multi-stakeholder management skills will be at a premium in facilitating innovation and new growth in the jobs market in the future, with coding, rote learning and technical skills being rewarded increasingly marginally in job descriptions. Employers will prioritise "why" and "how" students know, not "what" they know.

The 'India Story' abroad is often presented through a narrow lens, be it focusing only on business and the economy, society or policy landscape. Given its diversity, everything about India, and it's polar opposite is true in unison. This report highlights celebrates and critically appraises this nuance, to help those inside and outside the country understand the rapidly changing skills development landscape better."

Pratik Dattani, Managing Director, EPG Economic and Strategy Consulting

INTRODUCTION TO INDIA

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INTRODUCTION TO INDIA

Socio-economic profile of India

In 2019 India is the world's fastest-growing large economy for a second consecutive year, having outpaced China over the past two years. The World Bank (2016, 2019) predicts a robust growth rate of 7.3% over the 2018-19 financial year and in 2020, India's GDP is projected to grow to 7.5%. India now ranks 43rd among the world's most competitive economies according to the latest IMD World Competitiveness Rankings 2019. In times when global growth in 2019 is expected to slow to 2.6%, the Covernment of India has ambitious plans to transform the country into a competitive, high-growth, high productivity middle-income country (World Bank 2019). As India embraces globalisation and international links in shaping a more competitive and open economy and society, the country needs a well-rounded, future-ready graduate workforce, which is capable of contributing to productivity and capacity building across key sectors of the economy. Key challenges in scaling up workforce productivity and economic development initiatives are often related to the quality of the graduate workforce. Unemployable graduates would negatively affect workforce productivity levels, which in turn poses challenges to capitalising on the rapid economic growth of the country over the past years.

Reaping the demographic dividend

India is a young country. With a population of 1.35bn people (IMF 2019), India is the second-most populous country in the world only behind China, and more than half of the country's population is under the age of 25. India is projected to remain a nation of the young with a median age of 31 to 2030; unlike many ageing nations in the rest of the world, including China (WEF 2019).

India's demographic dividend is predicted to have huge implications for the future workforce, not just in India but also on a global scale. The country adds 12 million people to its workforce every year, and it is estimated that by 2030, a third of the world's working population will be from India alone. India will add more working-age population to the world than any other country in the world (WEF, 2019). Great opportunities lie ahead for Young India. With as many as 711 million people in the active working-age group of 15-59, India is already the largest workforce in the world. While economic and demographic changes are leading to a growing demand for education in the country, skill development and capacity building of Indian talent have also been at the forefront of Modi's agenda.

Amidst India's demographic dividend and large workforce, the challenge of scalability and sustainability of the provision of education and skills development opportunities remains, as the country's HE gross enrolment ratio (GER) at 27.5% is currently well below the global average of 38% (UNESCO 2019). This difference is even starker when India's GER is positioned against China and Brazil with a GER of 51% and 50% respectively (UNESCO 2019).

Progress on skills development in India

The Government of India has made significant changes to the governance of skills development in the country, in what is already a complex skills landscape. The creation of the Ministry of Skill Development and Entrepreneurship (MSDE) in 2014 was a significant statement of intent to address this challenging landscape and an opportunity to develop the next generation of globally-aware and workforce-ready talent for India. Following the establishment of MSDE, the Skill India initiative launched in 2015 with the aim to skill and up-skill over 400 million people in different areas (British Council 2016). Initiatives under Skill India include the National Skill Development Mission, National Policy for Skill Development and Entrepreneurship 2015 and the Skill Loan scheme. The new certification and assessments systems are implemented alongside efforts to improve the quality, capacity and standardisation of training (British Council 2016).

More recently, the Government has launched 50 India International Skill Centres (IISC) set up through the National Skills Development Corporation (NSDC) with courses in foreign languages to prepare the young Indian workforce for global careers. The MSDE's aspirations for IISCs include reaping the demographic dividend by bridging the global shortage of a skilled workforce (Economic Times 2016).

The dominant emphasis in research, policy and practice in India has been on the development and delivery of vocational training and mainstream skills which, while important, are not enough in addressing the multitude of challenges and opportunities that the country is facing. Recent initiatives by MSDE suggest that higher-level and graduate-level skills should be given equal if not greater attention as they can play a significant role in developing the capacity of the Indian workforce to address the country's priorities and challenges across the social, economic and environmental agendas.

Evidence from research and practice points to India's graduate unemployment challenge and poor graduate-level skills record. The 2019 India Skills Report by the Confederation of Indian Industry (CII) and other partners highlights that as many as 52% of graduates from Indian HE institutions are considered unemployable with subject-level graduate unemployment reaching as high as 70% in the case of commerce graduates and 64% for MBA graduates (Confederation of Indian Industry 2019).

Higher education and skills development in India

With its 36.6 million students across tens of thousands of colleges and universities, India has the second-largest higher education (HE) system in the world, only second to China (All India Survey on Higher Education 2018). The skills development agenda is well placed to play a positive role in improving the workforce productivity and capacity building of India through addressing the prevalent talent mismatch (Hays 2017). Indian HE institutions have a key role to play in the process of developing skills, attributes and competencies that are relevant for the industry, not just in India but also internationally.

Amidst current challenges related to graduate unemployment and the scaling up of HE provision, universities are central to the response to India's growing knowledge economy needs to develop industry-ready talent with a combination of technical, entrepreneurial and soft skills. In 2019 the country aims to revamp its education system and the launch of a draft National Education Policy in June 2019 is an attempt to make Indian education fit for the future. Strengthening professional and vocational education, emphasis on skills development for the 21st century and the introduction of a more broadbased and inter-disciplinary education and skills development opportunities are on the Government's agenda. These reforms are expected to accelerate progress toward India's graduate unemployment challenge.

The graduate unemployment challenge is particularly acute outside of a very small number of

top-tier HE institutions in the country, such as Indian Institutes of Technology (IITs) and India Institutes of Management (IIMs). Outside of that elite group, both average salaries and the proportion of students and graduates on placements and internships fall sharply (ICEF Monitor 2015).

In addition to the expansion and focus on graduate employability, the quality of HE provision will also be imperative in moving forward, particularly with India's opportunity to become a key source of global graduate talent. India's aspirations to develop highly employable talent to join the global workforce, particularly in economies that are likely to face an acute shortage of talent towards 2030 were highlighted by the Federation of Indian Chambers of Commerce & Industry (FICCI) (FICCI & EY 2016).

Fast forward - India's working-age population is forecast to grow to over a billion by 2050 (UNDP 2016), yet this demographic dividend can quickly turn into a demographic disaster (Financial Express 2019). This puts more emphasis on scaling up the country's efforts, including channelling HE as a means to develop work-ready graduates to join India's workforce. Challenges lie ahead, due to the lack of skills development opportunities and targeted employability interventions across the majority of HE institutions across India. As FICCI advocated in their Envisioning India 2030 Report, mainstreaming skills development opportunities and blending them with education at different levels is the key to preparing India's future workforce (FICCI 2018).

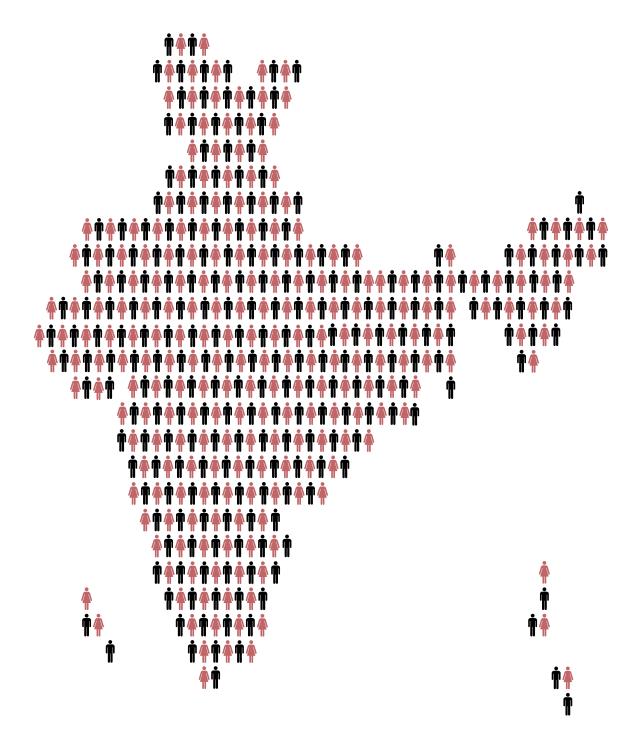
The role of skills development in workforce productivity and economic competitiveness

Building on the challenges for the Indian HE sector in the provision of education and skills development opportunities, independent reports and global employer surveys highlight the skill shortages (and talent mismatch) in India as an issue (e.g. Manpower's 2018 Talent Shortage Survey, Manpower Group 2018). India's reported skills shortages (standing at 56% in 2018) have worsened after following the path to improvement when compared to previous years. The country is still experiencing shortages above the global average, which in 2018 stood at 45% according to ManpowerGroup's authoritative 2018 Talent Shortage Survey (ManpowerGroup 2018).

According to the 2018 FICCI Envisioning India 2030 Report, the country should strive to develop an education system that produces 'new-age' skilled workforce to address underlying skills shortages (FICCI 2018). These perceived and real skills shortages and India's talent mismatch, affect workforce productivity and capacity building and have a negative effect on the economy and society at large. Poor talent alignment costs the Indian economy and businesses as much as \$8.61bn (INR 556bn) in lost productivity (PwC 2014). The lack of a skilled workforce, which is a key driver for productivity on a local, state and national level, also affects the competitiveness of the Indian workforce and economy on a global stage.

This is evident in India's position on global indices, such as the 2019 Global Talent Competitiveness Index (GTCI). Despite being among the 50 most competitive economies in the world, India is 80th out of 125 countries when the competitiveness of its talent is measured against other global economies in GTCI (GTCI 2019). This points to some key fundamental challenges for the Indian HE system and its skills development initiatives to improving the quality of the graduate workforce. This report explores the current state of the HE and skills development agenda in India and the role of Indian HE in skills development from a cross-stakeholder perspective.

SCOPE, RESEARCH APPROACH AND KEY FINDINGS



SCOPE OF REPORT

Current evidence on the role of HE to address Indian workforce productivity and capacity building through higher and graduate-level skills, particularly in light of the Government's aspirations, is limited. This stance has been reflected in an authoritative joint study commissioned by FICCI and EY – Higher Education in India: Vision 2030 (FICCI & EY 2016).

This second edition of the 2018 report builds on the current, albeit fragmented evidence into the role of HE and higher-level skills development in improving Indian workforce productivity and capacity building. Its purpose is four-fold:

- 1. Provide insights into the current state of the higher and graduate-level skills development agenda in India and the role of HE through the perspective of HE leaders, educators, students, employers, and NGOs:
 - The conceptualisation and application of skills development and the state of institutional employability practice from a HE angle.
 - The state of workforce readiness of Indian graduates from an employer perspective.
 - The policy and planning of skill development and the Indian workforce from the perspective of policymakers.
 - The societal and community aspects of workforce productivity and capacity building from a third-sector perspective.

- 2. Identify current challenges and opportunities for improving workforce productivity and capacity building through graduate-level skill development by HE from the perspectives of HE leaders and students, employers, policymakers, and third sector and community organisations.
- Offer initial insights and actions for consideration by Indian HE and other key stakeholders involved in tackling India's higher and graduate-level skills development challenge.
- 4. Offer preliminary ideas for the future of internationalisation and skills development of Indian HE – provide ideas on how Indian HE can improve to become:
 - more industry-relevant and meet the demands of the rapidly evolving world of work more international and globally-competitive
 - These insights are supplemented by five individual case studies, providing deeper insights into the challenges and opportunities around skills development in India from the perspective of key stakeholders from across organisations such as the British Council, the Confederation of Indian Industries, alongside global employers, academics and students.

RESEARCH APPROACH

Profile of participating organisations

- Higher Education leaders and academic staff included representatives from the University of Mumbai, University of Delhi, Tata Institute for Social Sciences, IITs and IIMs, as well as staff from independent technical, liberal arts and engineering colleges affiliated to over 15 universities across India.
- Students in HE institutions included undergraduate and postgraduate level students at the University of Pune, University of Mumbai, University of Delhi, Symbiosis International University, IITs, IIMs, in addition to independent technical, engineering, social sciences and liberal arts colleges.
- Employers included senior representatives from large international organisations, such as Alibaba India, Deloitte, Google India, Tata Motors, Michael Page and a range of small and medium-sized

businesses established in India across key sectors of the economy.

- **Policymakers** included representatives from the Department of Education in Delhi and Madras, the National Skills Development Corporation (NSDC), Ministry of Skills Development and Entrepreneurship (MSDE), Sector Skills Councils, the Ministry of Human Resources Development (MHRD) and other government organisations.
- Third sector organisations included representatives of NGOs involved in education and skills development, social entrepreneurship, gender and minority empowerment, arts and culture, where prominent organisations included the International Labour Organisation, British Council India, Teach for India, U and I Foundation, E and H Foundation.

Study sample and profile

A total of 55 semi-structured interviews with the following stakeholders have been conducted (featuring at least ten interviews for each group):

- Higher Education (e.g. senior leadership and student representatives).
- Policymakers (e.g. representatives of various governmental bodies).
- Employers (e.g. employers from key sectors of the Indian economy).
- Third sector organisations (e.g. NGOs and community organisations).

Building on the semi-structured interviews, 1010 survey questionnaires were collected through online participation by representatives from each of the five stakeholder groups. Data were collected in early 2019 and builds on focus group discussions with students held during June 2018.

Note: Detailed methodology and sample details are provided in Appendix 2 of this report.

KEY CROSS-STAKEHOLDER FINDINGS

Amidst India's booming economic development and current progress in HE, the state of higher skills development in the country points to several key challenges that require a proactive and collaborative approach to addressing them and this is evident in the key findings from the five stakeholder groups. Such an approach will enable HE and skills development to play a positive role in improving the workforce productivity and capacity building of the Indian workforce and ensure that future graduates are employable and can confidently navigate through the world of work, either in India or internationally.

- 1. Academic staff and HE leaders pointed to the current gap between the university curriculum and current developments in the world of work. 74% of them argued that students in Indian HE are unable to demonstrate that they have had the opportunity to apply graduate-level skills and competencies and gain industry exposure. This figure represents an increase of nine percentage points from the first edition of the Global Talent in India report. Academic staff highlighted the value of internationalisation in Indian HE, with 90% of them agreeing that there is significant value in establishing international collaborations and partnerships. Only 48% of academic staff felt that Indian HE is international and globally-relevant. Challenges remain ahead as a British Council report highlighted that with only 631 partnerships with international HE institutions. Indian HE institutions have been slow to progress meaningful collaborations to date (British Council 2015).
- 2. Students in Indian HE reflected on the nature of teaching at Indian universities and colleges, which they argue remains primarily theory-based. A 2016 joint study by FICCI and EY on the future of jobs and its implications for Indian HE also points to the outdated curriculum as among the key educational framework challenges in India (FICCI and EY 2016). Students lamented the lack of exposure to practice-based HE curriculum and pedagogies, with just over half or 54% of students agreeing that the curriculum and pedagogy at Indian universities offered relevant training development opportunities. Students felt that universities have a key role to play in preparing them to navigate through an ever-changing world and equip them with key graduate-level

skills and attributes. Only 34% of students agreed that their course is offering such opportunities for employability development. This figure reflects a drop of 7% on the 2018 data.

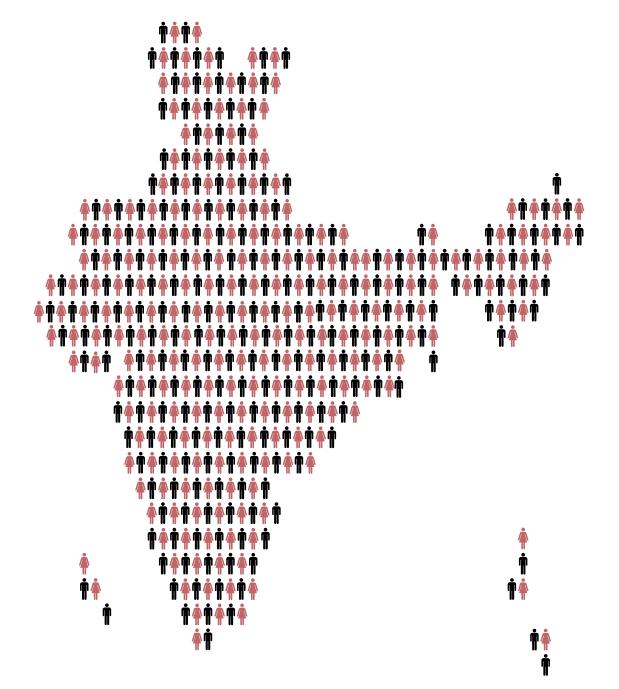
- 3. Employers and industry representatives highlighted the lack of preparedness of Indian graduates for the world of work, with just over half or 57% of them agreeing that graduates can demonstrate the necessary higher-level skills and knowledge that they are looking for in their industry. This figure, representing an improvement of 24% on last year's data supports the findings of a recent report that highlights the high levels of unemployment among Indian graduates due to the lack of skills development opportunities that address current and future skills required by industry (FICCI 2018). Industry representatives made a strong case for introducing a range of courses and programmes influenced by recent technological developments in Big Data, Blockchain, AI and Robotics. Employers also felt that the Indian HE sector's relationship with industry is closed and isolated from the world of work. Nevertheless, 86% of the surveyed employers indicated that they are willing to partner with academic institutions to help train students through mentoring, voluntary placements or internships - though this figure represents a mild downward trend (of 4%) when compared with the equivalent data from the first edition of the report.
- 4. Policymakers suggested that a move in Indian HE towards firmly embedding entrepreneurship and innovation, together with the provision of future skills development opportunities related to Big Data, AI, Robotics and Blockchain has the potential to scale up and support the Government's efforts in up-skilling India and developing a future-ready workforce. Only 48% of policymakers agreed that Indian universities have the necessary academic and professional staff to provide students with new and industryrelevant knowledge and other higher-level skills development opportunities. This figure highlights an improvement of 18% when compared with data from the inaugural report yet it is evident that over half of policymakers agree that universities do not have access to a sufficient pool of faculty talent. Policymakers also reflected on the 'brain drain' from India, with 86% of them highlighting

that there is currently a challenge in making sure India's skilled graduates stay in the country – an increase of 27% when compared with the 2018 data.

5. NGOs, whose main focus is providing training and skills development opportunities, have a key role to play in improving the employability and capacity building of the Indian workforce, particularly amongst rural and other marginalised communities, which may otherwise have only limited access to such opportunities. 46% of the sampled NGOs agreed that HE fails to prepare students for the rapidly-changing workforce and workplace, indicating a 2% improvement on the 2018 data. Retention of graduate talent was also seen as a challenge by NGO representatives with 87% of them agreeing on the intensity of this challenges albeit with a mildly positive (3%) improvement on last year's data. NGOs also emphasised the importance of driving a widening participation agenda that will enable India's tertiary age population, expected to reach 119 million by 2025, to access HE and higher-level skills development opportunities.

The next section highlights key challenges and opportunities for skills development within the HE context. Drawing on the detailed findings of this report, key ideas for the future of Indian HE and its role in skills development are provided at the end of each stakeholder section. The report concludes with some preliminary insights for academic staff and HE leaders, students, employers, policymakers and NGOs interested in tackling the skills development challenge in India.

STAKEHOLDER PERSPECTIVES ON CHALLENGES AND OPPORTUNITIES



SUMMARY AND OVERVIEW

This section of the report highlights key challenges and opportunities for higher-level skills development and how HE can help overcome these. The findings represent the collective voice of the five stakeholder groups who participated in this study.

Suggestions for how Indian HE can scale up its efforts in skills development and capitalise on opportunities to improve its workforce productivity and capacity building were underpinned by five dominant themes:

- Improving the relevance of Indian HE curriculum and pedagogy to fit the world of work and international developments.
- 2. Embedding entrepreneurship, innovation and world-leading research culture to improve the Indian HE system.
- 3. Embedding internationalisation at the core of Indian HE.
- 4. Providing an employer engagement framework for collaboration and input into the design, development and delivery of Indian HE.
- 5. Enabling widening participation and equality to educate and skill India's youth talent.

1. Improving the Relevance of Indian HE Curriculum and Pedagogy to the World of Work and International Developments

Overall, respondents highlighted that improving the relevance of Indian HE curriculum and pedagogy across universities and colleges will enable them to address the rapidly-changing world of work and incorporate key international developments. Views from individual stakeholder groups revealed the following:

• With the future of work in mind, *academic staff* felt that the Indian government should rethink how curriculum development at universities is approached. Staff highlighted that policy level interventions are needed to take account of developments in technology, environment, economy and society on local, regional, national and global levels so that HE curriculum and pedagogy can be adapted to respond to these developments.

- With Indian HE courses being still largely theorybased, the development of practice-based HE curriculum and pedagogies stood as an important consideration for the future of Indian universities from the perspective of students. Some students felt that the introduction of extra-curricular activities, compulsory industrial experience and entrepreneurship development programmes may contribute to improving the relevance of Indian HE curriculum and pedagogy.
- Considering the relevance of Indian HE curriculum and pedagogy to the future world of work and international developments, employers felt that the setting of international standards in Indian universities and the standardisation of skills developed at university can contribute to a better fit of the Indian HE system to current international developments. Employers advocated the inclusion of 'new age' skills and courses in the disciplines of Al, Automation, Robotics, Big Data and Blockchain to prepare a graduate workforce that is fit for the future world of work.
- Equally, policymakers suggested that the Indian HE curriculum and pedagogy alongside the skills development framework are lagging behind other countries' education frameworks and skills systems. Building on employer perspectives, policymakers also highlighted that aligning India's education and skills development standards with international standards is an important consideration in moving forward. This will enable the Indian HE sector to become more competitive and develop graduates who are fit for both the Indian and international labour markets.
- NGOs felt that there are some fundamental challenges that the sector needs to focus on in line with taking actions to ensure that Indian HE is fit for the rapidly evolving world of work. Alongside taking steps to improve the relevance of curriculum and pedagogy associated with the future workplace and international developments, NGO respondents suggested that ensuring equality in the improved curricular and pedagogic provision is of key importance.

2. Embedding Entrepreneurship, Innovation and World-leading Research Culture to Improve the Indian HE system

All respondents highlighted that initiatives aimed at embedding entrepreneurship, innovation and the promotion of a world-leading research culture will contribute to a more competitive Indian HE system with more employability and skills development opportunities for students. These recommendations are in line with the 2019 draft National Education Policy proposed by the Indian Government, which emphasised the importance of creating a research culture at the institutional level. Individual views were as follows:

- Academic staff and senior leadership in HE highlighted that government spending on education and research is important for the future of Indian universities, particularly in light of opportunities for HE to address India's 'grand challenges'. Staff felt that HE should serve as a platform for students to transform India through innovation in education and research. Staff highlighted the importance of coordinated and enabling institutional leadership to oversee such interventions aimed at improving the HE system.
- In addition to highlighting the importance of developing relevant and industryshaped professional and vocational courses in universities, *students* emphasised the importance of a provision of opportunities for them to develop their entrepreneurship and innovation potential and acquire hands-on experience through real-life projects. Students highlighted these opportunities, which they felt should be embedded in Indian HE which, according to them, is still largely theory-driven.
- Building on the perspectives provided by staff and students, *employers* also suggested that entrepreneurship modules should be embedded into HE degrees to narrow the gap between the provision in Indian HE and the rapidly evolving world of work and improve the Indian HE system in general. Employers concluded that increased entrepreneurial activity at universities will play a positive role in creating more employment opportunities through start-ups created by graduates.
- Entrepreneurship, innovation and quality research are important areas of work that *policymakers* felt have the potential to scale up and support the Government's efforts in skilling

India and improving the productivity of the country's workforce. Alongside higher-level skills development, policymakers felt that research and innovation hold a prominent place in the HE sector and that more resources should be channelled at these two initiatives to enable improvements in the Indian HE system.

 NGO representatives suggested that innovation, which is currently falling behind, should be deeply rooted in the HE sector in India moving forward. This innovation in the Indian HE system, according to NGOs, should be enabled through the provision of a better learning environment, challenging and internationally relevant curriculum and graduate employment opportunities that are open to a larger pool of students beyond a small group of elite HE institutions.

3. Positioning Internationalisation at the Core of Indian HE

Amidst current challenges and the lack of innovation and good practice in the curriculum, skills development and employability across the Indian HE sector, respondents highlighted the importance of embedding elements of comprehensive internationalisation and best practice from abroad at the core of the institutional mission, vision and practice. The importance of internationalisation of Indian HE and the importance of developing globally-engaged institutions, faculty, staff and students is discussed in detail in a separate section of this report – Internationalisation in the spotlight. Key internationalisation and global engagement perspectives included:

- Despite the progress which has been made in introducing internationalisation and developing international and professional standards in Indian HE, academic staff and senior leaders in HE felt that progress on such initiatives is limited. Consequently, staff called for the scaling up of initiatives aimed at internationalisation on an institutional and sectoral level including the development of an inward and outward student and staff mobility framework to support at home internationalisation building on similar policies in other nations such as Germany and Australia.
- Students emphasised the importance of embedding internationalisation in their courses and the introduction of more internationallyinformed programmes, courses and teaching. They highlighted that the top three higher-

level skills that they feel they do not have the opportunity to develop at university are increasingly under the 'global' banner and are a global mindset, creativity, and critical thinking. Internationalisation of Indian HE will have an important role to play in developing such internationally-focused skills and competencies.

- Employers also highlighted the importance of embedding internationalisation by suggesting that international exposure of faculties and students would contribute to the introduction of international standards and the adoption of good practice by Indian HE institutions. Industry representatives also felt that students in Indian universities should be given more opportunities to take part in outward mobility programmes and acquire global skills, knowledge and practice from international immersion.
- Policymakers felt that global awareness and exposure to international affairs and developments are important determinants that will help students understand how to navigate an international work environment. However, at present, the majority of students in India do not have access to such opportunities. Similar to academic staff, policymakers echoed the development of a holistic inward and outward mobility framework to support internationalisation at institutions.
- The NGO group of institutional representatives argued that internationalisation should be encouraged not only at HE institutions but also at the community and state level. NGO representatives highlighted that there is a growing recognition of the importance of a greater openness of Indian universities to international HE providers and partnerships, who can support further internationalisation of the HE sector and facilitate good practice in higher education and skills development.

Providing an Employer Engagement Framework for Collaboration and Input into the Design, Development and Delivery of Indian HE

Amidst perceived challenges to enable deeper university-industry collaboration, respondents emphasised the importance of providing opportunities for employers to actively participate in the design, development and delivery of education and employability-driven initiatives at institutions:

• Academic staff highlighted that making

students workforce-ready requires fundamental changes to the curriculum that include not only the development of outcome measures but also the provision of opportunities for students to be exposed to practice through employer engagement and interaction. The development of a holistic partnership framework to facilitate engagement and input from industry is seen as a necessary step in this direction.

- Employers themselves advocated the importance of closer collaboration with job creators, regardless of whether employers reflect the private sector, government or notfor-profit organisations. They felt that proactive university-industry collaboration is critical so that universities can understand what higherlevel skills, current and future, are required and be able to adapt their curriculum provision to respond to these requirements.
- Policymakers felt that one opportunity to promote university-industry collaboration could be the introduction of employer-led modules focused on relevant skills development opportunities created in partnership with HE institutions. They suggested that these specialised modules may well focus on developing skills in demand across key sectors of the Indian economy, which can supplement the mainstream curriculum.

5. Enabling Widening Participation and Equality to Educate and Skill India's Youth Talent

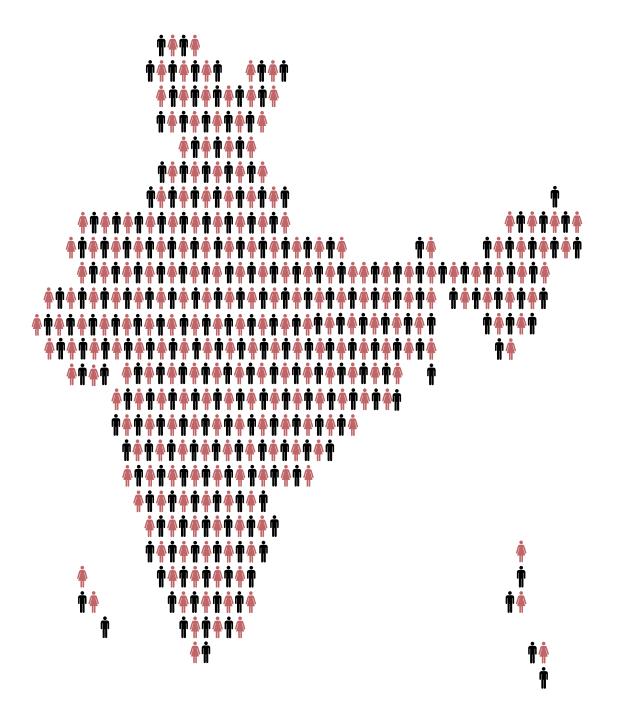
Enabling access to HE and higher-level skills development opportunities for students from different socio-economic backgrounds is something that students and NGO representatives felt should be addressed as it represents a fundamental challenge for India due to the relatively large size of its youth (tertiary age) population. Representatives from all stakeholder groups agreed that widening participation and inclusion play a key role in improving the productivity of the Indian workforce, as more young people will be employable and able to join the workforce.

• Students highlighted that India is a diverse country in itself and inclusivity of students from different backgrounds should be high on the agenda going forward. This move would enable more young people to be educated and trained with a view to joining India's ever-growing workforce. Students argued that widening participation should extend to both private and state-supported elite institutions which traditionally have a low representation of learners from lower socio-economic backgrounds.

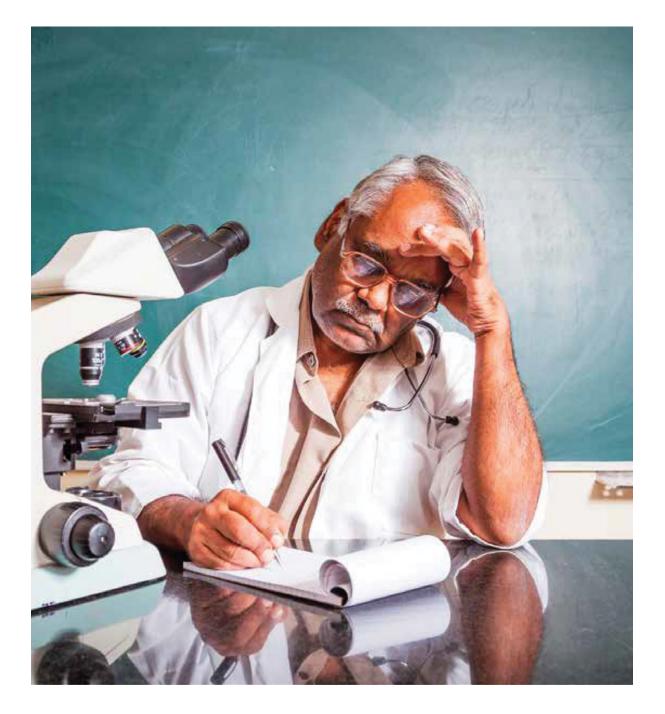
- In light of this, NGOs suggested that universities should provide a level playing field for students who have come from rural areas and those from cities by creating opportunities that enable inter-learning between these two cohorts. NGO representatives felt that the inclusion of rural communities in education provision and skills development, coupled with more diversity in the recruitment of students and academic staff, has the potential to improve the employability prospects of many rather than a few.
- Employers, HE leadership and government representatives acknowledged the importance of promoting this agenda but did not provide ideas on how stakeholders interested in HE and skills development can scale up their efforts to enable more students from under-represented communities to participate in HE and skills development initiatives.

The following five sections provide in-depth discussions of the findings summarised above, by each stakeholder group. Individual case studies are also presented.

DETAILED FINDINGS



HIGHER EDUCATION PERSPECTIVES: ACADEMIC STAFF AND LEADERS

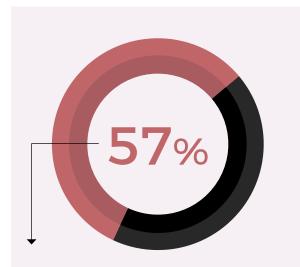


HIGHER EDUCATION PERSPECTIVES: ACADEMIC STAFF AND LEADERS

Experience of Indian HE

Understanding international developments

Indian HE aspires to prepare students for the global workplace in terms of understanding international developments, but there is more to be done, particularly in blending technical education with opportunities to develop cross-disciplinary knowledge and soft skills, which is an evolving global trend.



of academic staff and leadership feel that Indian HE is unable to prepare students for the global workforce in terms of understanding international developments.

India, through its IITs (Indian Institutes of Technology), have introduced humanities modules to science and technology degrees to bridge this gap. This move by IITs indicates the recognition of interpersonal and other soft skills as important. However, the majority or 57% of them concluded that Indian HE does not prepare students for the global workforce and workplace and enhance their understanding of global themes and developments. This figure is an increase of 15% on the 2018 data. The reasons for this include limited talent development opportunities and a lack of vision from policymakers.

Furthermore, only 48% of academic staff agreed that Indian HE is international and globally-relevant

with fewer courses that are comparable to their equivalents internationally. Internationalisation is a growing trend in global HE, and Indian universities have already taken steps towards elevating internationalisation into a strategic institutional agenda. Setting international standards, establishing student and staff exchange programmes with international universities and creating an international environment on campus are initiatives staff felt can help prepare students for the global workplace in terms of understanding international developments.

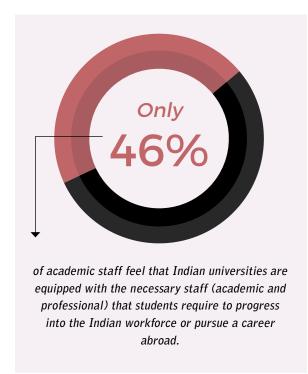
Respondents highlighted a number of additional resources that they felt would be valuable in further developing international and professional standards in Indian universities:

- Facilitation of international research collaborations.
- Development of student exchange programmes with partner institutions.
- Resources to enable capacity building and career development of staff.
- Online resources, including the introduction of MOOCs (Massive Open Online Courses).

Respondents felt that progress has been made in bringing in cross-disciplinarity, introducing internationalisation and developing international and professional standards in Indian HE but such initiatives have been done in pockets, across fewer courses and institutions.

Staff, resources and facilities on campus

Equally, Indian universities need to be equipped with the necessary staff, resources and facilities students require to progress into the Indian workforce or pursue a career abroad. These factors facilitate the provision of employability support and skills development opportunities. Amidst India's diversity in HE provision, including state universities, private universities, IITs and IIMs staff felt that none of these providers are equipped enough to help students with skills development and prepare them for the future. Resources (including learning materials) and facilities (including labs, pods, technology), alongside classroom infrastructure to accommodate the often large classes of students, have been highlighted as a challenge with only 47% of respondents indicating



that universities are equipped with the necessary facilities required by students – a drop of four percentage points when compared to data from the first edition of this report.

In so far as resources (e.g. learning materials, online and digital learning environments) are concerned, academic staff concluded that only 45% of institutions in India have access to adequate learning resources and environments.

The level of preparedness of academic staff and the fairly limited training opportunities have been identified as another pertinent challenge for Indian HE in ensuring that students are more employable. Academic staff were seen as key to improving the quality of teaching and the level of embeddedness of pedagogic innovations into university courses. Academic staff and senior leaders felt that government interventions are required on both educator level as well as student level to address the need to develop staff, resources and facilities on campus.

Relevance of Indian HE curriculum and pedagogy

The provision of HE curriculum and pedagogy that offers relevant and current knowledge, skills and competencies, and training development opportunities is central to ensuring that students at universities are able to develop the necessary skills to progress into the workforce.

Development of course content and the upgrade of syllabus takes considerable time and requires approval on various levels. Consequently, innovation in the provision of knowledge is seen as a lengthy process, particularly in state institutions. Just over half or 51% of surveyed staff felt that curriculum and pedagogy offer relevant and current knowledge. This is not, however, the case with offering skills and competencies and training development opportunities.

One important aspect of ensuring the relevance of curriculum and pedagogy to industry requirements is the provision of training development opportunities and providing the opportunity for students to acquire certain skills and competencies during their time at university. Yet, only 38% of the surveyed academic



of academic staff and leadership agreed that Indian HE curriculum and pedagogy offer relevant and current training development opportunities.

staff and HE leadership felt that the Indian HE curriculum and pedagogy offer relevant and current training development opportunities. This is a drop of 10% when compared to 2018.

6 Students manage to complete a degree without acquiring the course skills required by employers. They struggle with transferrable skills. Employability in Indian HE is real a problem.

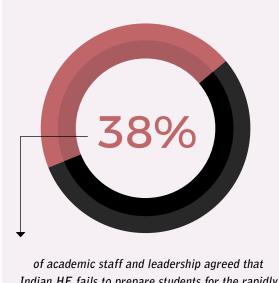
(Academic Staff, Chennai)

Skills development and Indian HE

Indian universities, alongside employers and industry representatives have a key role to play in skills development and preparing students for the world of work. This section of the report describes the academic staff and senior leadership perspectives on the role of universities in preparing students for the rapidly changing workforce and workplace and the skills and attributes students find difficult to develop through Indian HE.

Indian HE and the rapidly changing World of Work

The rapidly changing world of work requires Indian universities to adapt their curriculum and innovate in pedagogy to enable students to develop a range of skills and attributes. Only 55% of academic staff and HE leadership felt that Indian HE prepares students effectively – a drop of six percentage points from last year.



Indian HE fails to prepare students for the rapidly changing world of work.

Major global forces are reshaping the workforce and workplace, and Indian HE needs to stay abreast of such trends. The introduction of more industryrelevant HE proves to be challenging at present with the majority or 55% of academic staff suggesting that education does not bear relevance with the world of work. This irrelevance is due to a number of factors such as the lack of academic training, out-dated curriculum and the slow adoption of international standards and good practice.

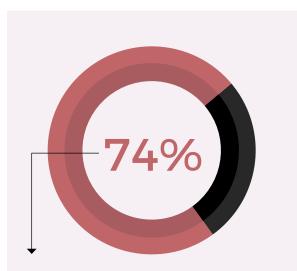
Learning outcomes that are difficult to acquire

through Indian HE

The development of learning outcomes, such as certain skills, subject knowledge and competencies is important, but Indian students may find it difficult to acquire these through HE in its current state.

Academic staff and HE leadership participating in the survey were asked to provide their perspective on the top three learning outcomes that students find difficult to acquire through Indian HE. The inability to demonstrate the application of relevant skills and competencies and the lack of industry experience were rated as the top two learning outcomes that students find difficult to acquire during their time at college or university.

74% of academic staff felt that students in Indian HE are unable to demonstrate the application of relevant skills and competencies and industry exposure – an increase of nine percentage points on last year. Industry exposure t could be demonstrated by just over half or 52% of students in Indian HE.



of academic staff and leadership felt that students in Indian HE are unable to demonstrate the application of relevant skills and competencies and industry exposure.

Furthermore, 35% of them felt that the effective use of relevant technology was a key skill, albeit difficult to develop in the classroom.

Interview respondents felt that students were unable to develop both specialist knowledge in the students' own domain as well as transferable skills, such as work ethic and integrity. Students lack soft skills that are specific to South-East Asian conditions that will enable them to flourish in the workforce.

Alongside specialist knowledge and soft skills, findings suggested that some students failed to demonstrate some basic skills and attributes, particularly in government-led universities, such as the art of formal and academic writing, presentation and articulation skills. Critical thinking is one. Organisational thinking is another skill that students in India are lacking. Learning to work within systems and getting methods to work for you are also important skills that students find difficult to develop.

(Academic Staff, Delhi)

The future of Indian HE and the World of Work

Academic staff and HE leadership provided their ideas on the key challenges of Indian HE that require action as well as their top three suggestions for the future of Indian universities and their role in skills development.

Key challenges that need to be addressed in Indian HE

India offers a range of opportunities for HE, its economy and society due to its favourable demographics; however there remain a number of challenges related to quality, widening participation and ensuring employability outcomes of HE for the majority (if not all) students.

However, the challenges facing Indian HE included the lack of a student-centred classroom environment. Staff felt that universities should focus on students becoming more critical, more innovative, and more creative and student-centred facilities are central to that goal. Another key challenge pointed out by academics is one that of braver leadership that can challenge the deep rooted traditions and change aversion characterising the corridors of Indian HE.

The availability of skilled academic faculty and key infrastructure was seen as yet another key challenge that requires further attention from policymakers. This, alongside the lack of industry exposure and opportunities for application of knowledge, contributed to the inability to create an enabling environment for students to develop their employability potential.

90% of staff highlighted the perceived significant value in establishing international collaborations between Indian universities and their counterparts internationally. According to staff, this can be achieved through partnerships with international institutions and industries for curriculum development and students' professional development through international placements. Staff, nevertheless, suggested that Indian universities have a long way to go in terms of demonstrating openness to international developments in HE and the adoption of good practice, despite seeing significant value in the establishment of international collaborations and partnerships with institutions abroad.

Academics' 'Big Ideas' for how Indian HE can improve to become more industry-relevant and meet the demands of the rapidly evolving World of Work

Staff provided over a hundred ideas on how they feel Indian HE can improve to meet the demands of current international developments and the rapidly evolving world of work. Dominant themes included the need to address the perceived gap between academia and industry, adoption of predictive models to better align courses to industry requirements, and the importance of large-scale investment in education and research. The top three ideas are described below:

BIG IDEA



With the future of work in mind, staff felt that the Indian government should rethink how curriculum development at universities is approached. Investment in research centres tasked with predicting what is happening in society, technology and economy was seen as imperative. Policy changes though are needed to take account of such developments so that HE curriculum and pedagogy can be adapted to respond to these developments.

1 Freedom and flexibility in designing new courses is something that needs to happen more often in universities. Educators who design the courses should be given the opportunity to assess students, not someone else.

(Academic Staff Member, Pune)

BIG IDEA



The gap between university curriculum and current developments in the world of work is something that academics and leaders in Indian HE felt needs to be addressed. Making students workforceready requires one fundamental change in curriculum - to build outcome measures in the Indian HE system. Exposure to practice through employer engagement and collaboration, alongside nurturing entrepreneurship were also high on the future HE agenda for academics and should be integrated:

We need to create space for entrepreneurship in Indian Higher Education. If you spread out entrepreneurship, because the Government's focus is to create jobs, that's important. So one needs to inculcate an entrepreneurial spirit in students as jobs for life is no longer the norm. Entrepreneurship will play a big role in creating the jobs of the future.

(Academic Staff Member, Chennai)

BIG IDEA



Government spending on education and research is important for the future of Indian universities, particularly because of the potential for HE to address India's grand challenges. Staff felt that HE should serve as a platform for students to transform India through innovation in education and research, which will enable them to develop an innovative mindset. Academic staff also suggested that the state should increase its spending on HE but intervene less to create space for innovation in curriculum.

CASE STUDY: ACADEMIC STAFF AND LEADERS

Senior Leader at Tata Institute for Social Sciences, Mumbai

Your experience of Indian Higher Education

Do you think that the Indian Higher Education prepares students for the global workplace in terms of understanding international developments?

Academic staff: Students' current skillset and capacity is low because they come from a HE system which is in itself is not up to scratch in terms of quality and relevance. I think there is still a big disconnect between what we are teaching at our universities and the requirements of businesses and employers who hire graduates. Many of the big corporate organisations here in India that employ our graduates are international in nature, but we need to establish closer ties with them and essentially involve them in the development of internationally relevant programmes. I don't think the Indian HE system achieves that at present.

The role of Indian Higher Education in skills development

What would be the top three skills which will be important for the future?

Academic staff: We need to focus on the development of entrepreneurship skills and abilities in Indian students so that they can help with the creation of more employment and jobs for graduates in India. We have a lot of unemployed graduates across a whole range of disciplines and inculcating entrepreneurship is one way to solve this challenge.

The development of research abilities and creativity are also important skills for the future. We

desperately need innovation in India on so many levels – not only in education but also in different industries which face a lot of challenges.

The Indian HE sector also needs to focus on the development of softer, interpersonal skills that make students unique and help them realise their strengths and abilities. This will become more important in the future as many repetitive roles and jobs become automated.

Ideas for the future of Indian Higher Education

Please provide your top three big ideas on how you feel higher education can improve to fit current international developments and the rapidly evolving world of work?

Academic staff: I think what the Indian government and HE institutions need to do is to first invest in academic staff and improving the capacity of the faculty. This also includes a revamp of how academic staff are treated in Indian HE – how they are employed, how they are paid and treated are all important considerations. Otherwise, the quality of teaching suffers. Academic staff are the key stakeholders in Indian HE and yet they seem to be the group which receives the least importance.

Second, institutional frameworks and infrastructure more generally do not accommodate research and development. It is through research that our staff and students have the opportunity to contribute to knowledge, but if we look at the funding provided for research, it is pathetic. Research and development which contributes to knowledge, is where universities can really excel and can make a name globally for themselves in the international scene.

Indian HE also needs to become more practicebased and employability-oriented. In the 21st Century, our system is still dominated by theory and instructional teaching. As I said before, we don't do enough as a sector to engage with corporate organisations and employers to understand their requirements and develop new teaching models and help our students upgrade their skills to become more employable.

HIGHER EDUCATION PERSPECTIVES: STUDENTS



HIGHER EDUCATION PERSPECTIVES: STUDENTS

Students are the primary recipients of education and skills development interventions. The voice of students on the role of HE in higher-level skills development is often unheard, and this report provides a platform for students to orate their perspective on the matter. This section of the report

Experience of Indian HE

Indian students provided insights on a number of themes related to their experience of Indian HE, including the relevance of curriculum and pedagogic models adopted by Indian universities, the strengths of Indian HE in developing employability in students, the preparedness of staff and the state of resources and facilities on campus, and learning outcomes that are difficult to acquire at university.

Relevance of Indian HE curriculum and pedagogy

Universities that offer relevant and current knowledge, skills and competencies and training development opportunities are central to developing employable graduates. When asked whether their course offers relevant and current knowledge, skills and competencies, and training development opportunities, Indian students felt that this depends, to a large extent, on the nature of the discipline and course chosen by the student.

Disciplines like engineering and medicine were thought to provide a strong employability-driven curriculum and pedagogies, such as the inclusion of placement opportunities, while disciplines such as humanities and liberal arts needed to do more to ensure that adopted curricular and pedagogic models are aligned with current developments in the world of work.

69% of the surveyed students indicated that their course offers relevant knowledge – a drop of 18% when compared to the first edition of this report. Meanwhile, just over half or 54% of them agreed that the curriculum and pedagogy at Indian universities offer relevant and current training development opportunities. This figure was down to 34% for students who agreed that their course is offering explores Indian students' perspectives on their experience of Indian HE, the role of universities in skills development and graduate employability, as well as the skills and competencies developed at university. Students also provide some key ideas for the future of Indian HE.



of Indian students agreed that the curriculum and pedagogy at Indian universities offer relevant and current training development opportunities.

the opportunity to develop relevant skills and competencies. Some students felt Indian HE has already taken steps to embed practical elements in courses, but the curriculum was still very much subject-driven and, as such, it may not allow for acquiring a wider perspective of the subject, knowledge and relevant practical experience.

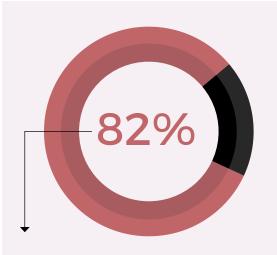
Indian HE doesn't focus on the applicability of knowledge - we are taught well, and we understand concepts, but when we try to apply them in the practical world, then we face challenges.

(Business Student, Pune)

Strengths of Indian HE in developing employability in students

Key strengths of Indian HE, such as skills, subject knowledge and competencies, support Indian graduates to be successful in securing employment either in India or internationally. Some students felt that Indian HE is very good at providing a good theoretical knowledge, equipping students to work under pressure and complete tasks within a short timeframe, while others believed that developing research skills and questioning what you are being taught are among the key strengths of Indian universities.

Students had the opportunity to provide the top three strengths of Indian Higher Education in helping graduates be successful in securing employment. Enabling students to acquire the necessary subject knowledge was seen as a top strength of Indian HE, with 82% of students agreeing that universities demonstrate good performance in the provision of a sound theoretical basis to teaching and learning.



of Indian students agreed that universities enable them to acquire the necessary subject knowledge.

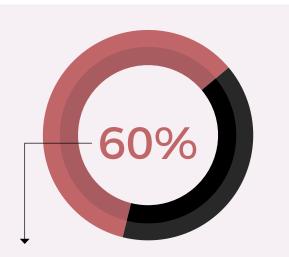
On the other side of the spectrum, only 20% of students felt that Indian universities offer a relevant and up-to-date curriculum, while only 9% agreed that HE promotes relevant pedagogic practice.

A lot of the courses are very academic intensive, and I feel once you go through it, and once you go through the testing system, it gets easier to get employed. We have group assignments and projects, which help us develop a range of skills.

Staff, resources and facilities required by Indian students

The provision of skilled staff is central to the development of current knowledge and skills, while up-to-date resources and facilities act as an enabler for students to develop their employability potential. Despite recent improvements in Indian institutions, such as the provision of a good level of infrastructure and Internet connectivity, students felt that there is more to be done to ensure that they are receiving a good quality education, which was down to academic staff, resources and facilities. Nearly a third of all surveyed students felt that they do not have access to good learning and teaching equipment, such as labs and online resources.

In total 32% of them indicated that their campus is not equipped with the necessary resources (e.g. learning materials) and facilities (e.g. labs, pods, technology) that they require in their learning – an increase of two percentage points on 2018. Despite 60% of Indian students suggesting that their campus hosts good academic and professional staff, this figure represents a drop of three percentage points when compared with data from the first edition of this report. Teaching was also seen as an important factor whereby students suggested that Indian universities may not have access to enough academic staff and that often the available academic staff lacked relevant teaching skills.



of Indian students felt that their campus is equipped with the necessary staff, both academic and professional, that they require to progress into the workforce.

(Liberal Arts Student, Pune)

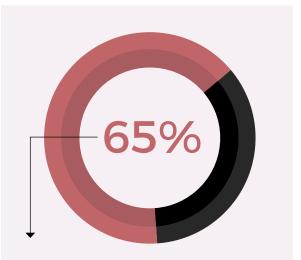
1 I feel like the teaching quality is what we should emphasise on. Universities don't have enough professors and the professors they have don't have sufficient skills to teach.

(Engineering Student, Chennai)

Learning outcomes that are difficult to acquire through Indian HE

The lack of standardisation of HE quality and provision in India, mainly due to its rapidly growing and diverse HE sector, can have an impact on the learning outcomes that students have the opportunity to acquire through courses. Immersion in learning through technology and using technology to develop certain skills is something that students felt is difficult to acquire during their time at university. 65% of students who were surveyed felt that the most 'difficult to acquire' learning outcome at Indian universities is industry exposure that provides skills development opportunities. Application of relevant skills and competencies and industry exposure were the second most 'difficult to acquire' learning outcome, with 59% of students suggesting that Indian HE fails to provide opportunities for learning through practice and hands-on experience - this figure accounts for an increase of four percentage points when compared to the 2018 data. The lack of practical knowledge was echoed by students suggesting that Indian HE is still largely theory-driven with 54% of students suggesting that they have limited opportunities to develop relevant skills and competencies.

Thinking outside the box and the development of communication and collaboration skills were also highlighted by students as important learning outcomes that they fail to develop at university.



of Indian students felt that industry exposure is the single most important learning outcome that they find difficult to acquire during their time at university.

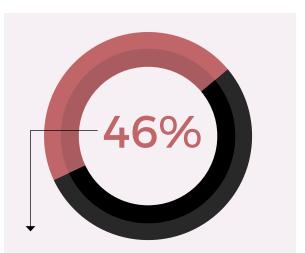
66 Science courses offer a very individualistic approach, and there is hardly any collaboration among students that will help them develop their collaboration and communication skills. So, communication skills is something I feel needs to be inculcated in Indian Higher Education.

(Computer Science Student, Pune)

Skills development and Indian HE

By 2025, India will have the largest tertiary-age (18-22s) population in the world – 119 million – suggesting that students and graduates will form a considerable part of the Indian workforce going forward. Developing a skilled workforce is imperative, and skills development is at the heart of recent reforms reflected across several government ministries and organisations such as MSDE, NSDC and SSCs.

This section of the report explores student perspectives into the role and ability of Indian universities to prepare them for global careers and the rapidly-shifting world of work. It looks at the top three skills students think are important but difficult



of Indian students felt that their studies fail to prepare them for the global workforce and workplace.

to develop, alongside the opportunities for Indian students to engage with employers and access careers and employability services at university.

Preparing students for global careers and the world of work

Preparing Indian students for the rapidly changing world of work and indeed for global careers is vital, particularly in light of the Government's aspirations to make India a hub for talent on a global level (FICCI & EY 2016). Shifting demographics on a global level point to an emerging trend whereby millions of Indians are expected to join the workforce in countries experiencing talent shortage due to an ageing population.

Only 54% of Indian students felt that their university prepares them with the necessary skills and attributes to succeed in the global workforce and workplace. They suggested that extra-curricular activities, which are primarily available in private universities, can help students develop a global mindset enabling them to adapt quickly to new environments and excel. Nearly two-thirds or 63% of students agreed that Indian HE is international and globally-relevant but pointed out that this is evident at only a handful of high-profile universities and colleges and highlighted that only some of their courses can demonstrate international relevance.

The nature of work is changing on a global level, and students need to be able to acquire skills and knowledge that will enable them to adapt quickly to the fast-paced environment – both in India and internationally. Yet, only 46% of students felt that their studies prepare them for the rapidly changing world of work characterised by the highly competitive job market, globalisation of professions as well as technological disruptions such as automation and robots. A further 40% concluded that Indian HE is not industry-relevant.

(Universities and colleges need to include more international elements if we want to be prepared for employment in India and abroad. The curriculum needs to become more international so that students are given a chance to develop international understanding and mindset.

(Business Student, Pune)

With this in mind, findings suggest that students would like to see technical education, such as engineering and science disciplines opening up to allow for embedding international perspectives and cross-disciplinarity, which students believe will be important in terms of developing broader skills and knowledge.

Important skills difficult to acquire through Indian HE

The top three skills that students felt are important in going forward, but they still find difficult to acquire through Indian Higher Education are, to a large extent, influenced by the shifting world of work together with the rapid globalisation and the opportunities it brings with it.

They are:

- Creativity
- Critical thinking
- Global Mindset

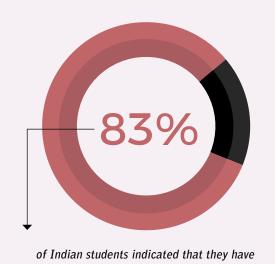
C Students should be able to understand the culture differences because what might be acceptable in India might not be in other parts of the world. Indians are very crisp and straight to the point, and others might think that this is rude.

(Informatics Student, Pune)

Internationalisation of Indian HE will have an important role to play in developing these top three skills. The rapidly evolving workforce and workplace require students to develop new skills. Students felt that 'global' skills, such as international relations and diplomacy, alongside the fourth, fifth and sixth most important skills, namely cross-cultural communication, cross-industry understanding and cross-disciplinary understanding, should be embedded in Indian HE.

Access to careers and employability services and employer engagement

Access to careers and employability services is essential to connect students with graduate-level opportunities as well as giving them industry exposure. 83% of students indicated that they have access to employability and careers services at their university or college – an improvement of 24% on last year. Students at private institutions had more opportunities to enhance their employability through initiatives overseen by careers and employability services, such as real-life community projects, industry visits and employer guest speakers. Despite the majority of students suggesting that they have some form of access to employability and careers services at their institutions, their access and engagement with these remains low as follows:



of Indian students indicated that they have access to some form of employability and careers services at their institution.

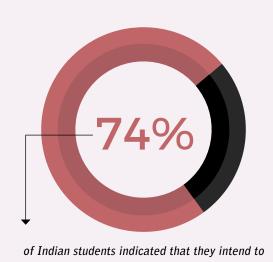
- Career fairs available to 43% of students.
- Employer workshops available to 36% of students.
- Industry visits available to 34% of students.
- Mentoring and coaching 32%.
- Industry events available to 30% of students.
- Interview preparation 25% of students.
- Test centres available to 18% of students.

Employer engagement is another important aspect of developing the employability of Indian students and graduates. Students had only limited opportunities to engage with employers on their course, predominantly through career fairs (in 43% of the cases) and industry visits (in 34% of the cases). However, students did not mention any employability development opportunities available to them and involving hands-on, practical experiences, such as internships, real-life company briefs and industry projects.

The future of Indian HE and the World of Work

Intentions to study further and seek employment in India and internationally

The number of Indian students on HE courses outside India is soaring, with 350,000 students in universities across the world in 2015 - the secondlargest international student cohort after China



look for employment overseas after graduation.

(Mathai 2016). Drawing on their intentions to study further, 76% of Indian students indicated that they

have considered studying overseas as part of their plans. Throughout the interviews, the majority of students highlighted that they would like to study abroad, predominantly on a postgraduate level, if they have the opportunity to do so. Considering their intentions to look for employment after graduation, 74% of students indicated that they intend to look for employment overseas – this figure represents a sharp increase of 40% when compared with data from the first edition of this report, Only 26% highlighted that they would like to pursue employment opportunities in India.

Students' 'big ideas' for how Indian HE can improve to become more industry-relevant and meet the demands of the rapidly evolving World of Work

Students provided over 80 ideas on how they feel Indian HE can be improved to respond to India's capacity, quality, and equality challenges, in addition to current international developments and the rapidly evolving world of work. Dominant themes included the importance of promoting practicebased education, ensuring consistency of the quality of education and standardisation of skills development, and matters of equality, inclusivity and the wider role of universities in society.

BIG IDEA



With Indian HE courses being still largely theory-based, the development of practice-based HE curriculum and pedagogies stood as an important consideration for the future of Indian universities from the perspective of students.

Some students felt that the introduction of extra-curricular activities, compulsory industrial experience, entrepreneurship and innovation development programmes may bridge this gap. Other students highlighted the importance of developing more vocational courses in universities, alongside opportunities for students to acquire hands-on experience and real-life projects.

In general, there are no vocational courses and this is something that we lack in India completely. People taking up vocational courses should be recognised for it, certified for it. Vocational education is something that we can really lead on in India because we have a huge population, which is less formally educated.

(Psychology Student, Pune)

BIG IDEA



The introduction of institutional rankings and some standardisation efforts in the Indian HE sector has led to considerable progress, but challenges remain ahead. Students felt that more could be done to promote a consistency of the quality of education and standardisation in skills development with the view to ensure equal skills development opportunities for students regardless of their institution.

Students suggested that the quality of teaching needs to improve sharply in Indian universities going forward as should the opportunities for everyone to acquire a set of key skills and attributes that will enable them to progress into the workforce.

6 Skills can be standardised in the future, and everyone should have the opportunity to acquire a set of skills. I think what would be important is the implementation of a framework for skills with a minimum set of skills for everyone.

(Liberal Arts Student, Pune)

BIG IDEA

Students also felt that universities should nurture equality, inclusivity and play a bigger role in contributing to society. Within the context of equality, students also proposed the abolition of current practice to use marks as a criterion to judge their capacity when enrolling on a HE course. India is a diverse country in itself and inclusivity of students from different backgrounds should be high on the agenda going forward.

6 Universities should be able to give equal opportunities to all students who want to join a university, despite cast and education status. I feel that will be important for Indian universities going forward.

(Media and Communications Student, Madras)

Universities in India have traditionally been involved in politics. Students suggested that Indian HE should focus more on social issues, the bigger societal picture, the positive role of universities and the change that they can bring about in societies.

CASE STUDY: STUDENTS

Undergraduate Student, Symbiosis International University, Pune

Your experience of Indian Higher Education

Would you agree that your course offers relevant and current knowledge, skills, competencies, and training development opportunities?

<u>Student:</u> We need to work heavily on the overall development of students, first of all. Also, international exposure is not included in Indian HE. There are a lot of international companies setting a base in India, and we are not ready for employment at these companies, we don't have the skills and understanding of international business.

Sometimes this is because we haven't introduced higher standards for faculty. Over here we have a very good faculty, but that is not the case with a lot of colleges in India, and there are a lot of tenured professors who are not very good at their jobs. The syllabus needs updating, and academics have to be better prepared so that we can get the most of our time at university.

The role of Indian Higher Education in skills development

What are, from your perspective, the top three skills that you think are important, but you find difficult to acquire through Indian Higher Education?

Student: Communication and cross-cultural skills are not sufficiently developed at university. I was lucky enough to secure an internship in a global firm, and the experience there taught me how to write an email for example or how to talk to my senior managers and how to communicate when working on projects with my team. But the majority of colleges and universities in India don't give students this exposure. Then I think something related to communication as learning to work in a team efficiently is something that all of us lack, I think. Indian students tend to do well on their own, and we are good independently, but we see how important it is nowadays to be able to work in a team – most companies require their staff to work in teams, and universities need to find ways to help students develop teamworking skills.

Ideas for the future of Indian Higher Education

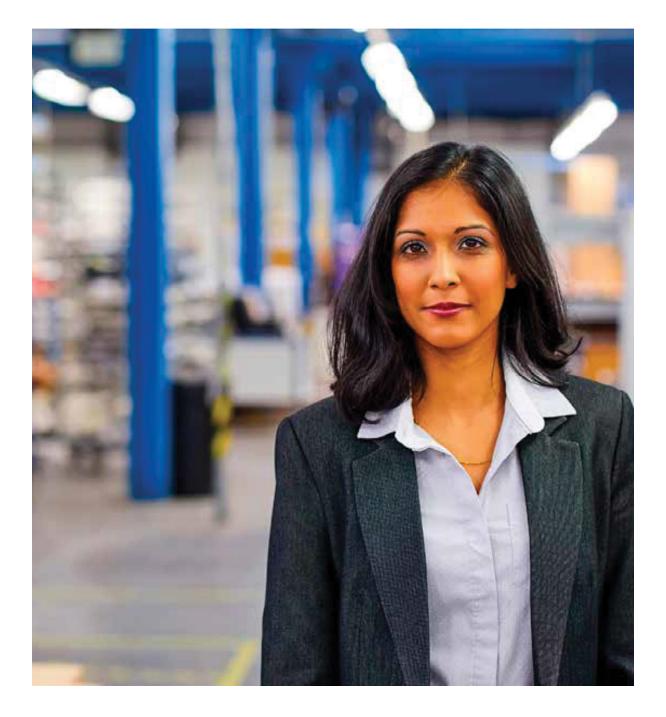
Please provide your top three big ideas on how you feel higher education can improve to fit current international developments and the rapidly evolving world of work.

Student: If I were an education minister for a day I would first upgrade all subjects we teach at universities in India. We need to restructure the syllabus because the kind of things that are taught to us in India are very different in terms of practical applicability. Indian HE doesn't focus on the applicability of knowledge – we are taught well, and we understand concepts, but when we try to apply them in the practical world then we face challenges.

Universities and colleges need to include more international elements if we want to be prepared for employment in India and abroad. The curriculum needs to become more international so that students are given a chance to develop international understanding and mindset. Students should also be made aware of the opportunities available to them with large multinational companies – I was only introduced to this in my second year.

Also, better organisation in terms of the administration of Indian HE needs to be considered. I think we are lagging behind other nations and everyone knows the size of the education sector in India, so there are always organisational challenges - we have thousands of universities and colleges. Better management and leadership of these universities and colleges is important if we want to improve teaching and skills development.

INDUSTRY PERSPECTIVES: EMPLOYERS



INDUSTRY PERSPECTIVES: EMPLOYERS

Indian industry and employers are the main recipients of graduate talent. There are 1.3 million businesses in India and their success, to a large extent, depends on the quality of graduate talent entering the workforce. This section of the report provides industry insights into the state of workforce readiness of Indian graduates from an employer perspective. Key higher-level skills and competencies, current and future, which are sought after by employers, alongside the opportunities for capacity building through training and partnerships with universities, are also explored. Employers also provide their key ideas for the future of Indian HE.

Skills development and Indian HE

Preparing students for global careers

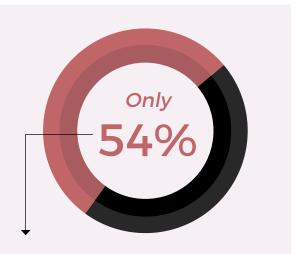
In light of the increasing globalisation and opening up of the Indian economy, preparing graduates who are ready to take on work assignments on a global level or at global businesses in India is imperative. Yet, only 54% of employers feel that Indian HE prepares students for the global workplace in terms of understanding international developments, good practice and exposure to international business models and approaches. This figure represents an improvement of 15% on last years data; nevertheless, it still indicates that nearly half or 46% of employers feel students enrolled in Indian HE institutions are not adequately prepared for global careers.

Surveyed employers felt that students lack awareness in terms of the latest developments in their respective field and global perspectives in general terms, in addition to being able to demonstrate only limited knowledge on future directions. A lack of exposure in international practice, norms and approaches, including the lack of training to adapt to the ever-changing requirements in the job market, was also highlighted as a pertinent issue that indicates that Indian students may not be adequately prepared for global careers.

66 Very few higher education institutes prepare students for global management - while the top 15 - 20 Management and Technical Institutes would have adequate to basic coverage in the courses on global issues, others will not even have a targeted preparation of the students in this area.

(Manufacturing Employer, New Delhi)

Employers also suggested that Indian HE has a way to go to become more international in nature,



of employers feel that Indian Higher Education prepares students for the global workforce and workplace.

with 41% of them highlighting that institutions' education models are not international enough nor globally relevant. They also voiced that the majority of students lack exposure to global business practice and workplace shifts.

Preparing students for the rapidly shifting world of work

Alongside globalisation, technology acts as a major disruptor within the world of work. The 2018 World Economic Forum report, the Future of Jobs, predicted that by 2022 the skills required to perform most jobs would have shifted significantly with an expected change in 42% of the skills required in the future workforce and workplace (WEF, 2018). Hence preparing Indian students and graduates for the rapidly changing world of work, the mega shift in the in-demand skills and readiness for jobs that do not exist yet is of utmost importance.



Only half or 50% of the surveyed employers felt that Indian HE prepares students for the rapidly changing world of work, which includes developments such as the highly competitive job market, automation, entrepreneurship, project-based work and the gig economy. Just over half of them (54%) agreed that Indian HE is industry-relevant. Employers felt that emphasis in Indian HE had been primarily on getting students ready for an exam, as opposed to getting them ready for the increasingly international and dynamic workforce and workplace. Other employers suggested that except for a few HE institutions, there is a general lapse in making students adapt to these changing requirements due to the limited opportunities for students to apply their knowledge outside the classroom. When the focus has been on teaching theory as opposed to developing practical skills, students are not equipped for the workforce when they graduate.

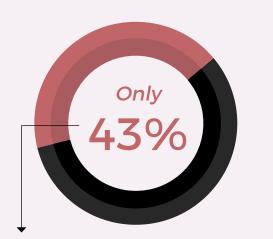
66 Students have good theoretical knowledge, but they don't have enough hands-on experience or they haven't done internships. The real hands-on experience of having done something makes you challenge things and have a deeper understanding of your subject. Applied knowledge of concepts is lacking, and a lot of the Indian graduates require a lot of training on the job as they are not fully ready. Driven by the latest technological developments reshaping the world of work as we know it, employers highlighted that a range of new courses should be introduced by Indian HE institutions including Artificial Intelligence (AI), Blockchain and Machine Learning to keep future graduates abreast. Employers concluded that institutions are nevertheless too slow to respond to such developments. As one Chief Innovation Officer in a large multi-national company remarked:

The adoption of robotics and automation, and increased usage of technology for any decision making are changing the workplace rapidly. The changes are so rapid that the age of any technology is not more than 3-4 years. So any academic changes and their implementation are dated when students graduate and join the world of work.

(Digital and Creative Employer, Delhi)

Staff, resources and facilities required by Indian students

Similar to academic staff and students, employer respondents also had the opportunity to reflect on the state of the provision of key resources and facilities to aid students with developing their employability. In contrast to students and academic staff, fewer employers felt that Indian universities are equipped with the necessary staff, resources and facilities required by students, with the biggest gap



of employers feel that Indian universities are equipped with the necessary facilities, such as labs, pods, and technology required by students.

(E-commerce Employer, Mumbai)

being in the lack of provision of facilities, such as labs, pods and technology that expose students to practice-based learning, giving them the opportunity to undertake applied research. Employers suggested that good quality teaching and good resources are limited to fewer institutions like IITs and IIMs.

A total of 52% of employers agreed that Indian HE hosts skilled academic and professional staff - this figure reflects an increase of 13% when compared with data from the first edition of this report; yet only 43% of them felt that universities provide the necessary facilities, such as labs, pods and technology, required by students on their course. Employers reflected on the challenge of attracting and retaining academic talent in Indian universities and colleges by suggesting that current remuneration poses challenges to attracting the best academic talent.

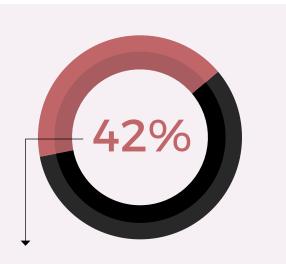
1 The theoretical basis of Indian teachers is very strong, but they have to be trained a bit to be in line with new developments. There is also scope for technology to be improved.

(Hospitality Employer, Pune)

Employers further highlighted that only a small fraction of government-funded institutions and autonomous private colleges perform better when it comes to staff, resources and facilities. They argued that further public and private investment should be channelled at improving academic staff performance, resources and facilities as well as to launch new institutions to meet India's demand for education and skilling. Since then, the government contends that up to 2000 new Type 2 institutions will be established over the next two decades each having the opportunity to uplift its stature as a Type 1 institution through research and innovation.

Indian HE relationship with industry

University-industry partnerships are essential not only for the provision of employability opportunities to



of employers feel that the Indian HE sector's relationship with industry is closed and isolated from the world of work.

students such as internships and work placements but also for developing employability skills and attributes through working in partnership with employers on real-life briefs and projects. Over half or 58% of the surveyed employers felt that the Indian HE sector's relationship with industry is open to collaboration and can meet industry needs. Despite the expressed openness of institutions to collaborate with industry, 42% of employers concluded that their current relationship with Indian HE is rather closed and isolated – a depressing increase of 17% when compared with data from the inaugural Global Talent in India report.

Employers felt that IITs and IIMs have good industry links but other institutions, which form the majority of all Indian universities, somehow fail to provide evidence of close relationships with employers. There are opportunities on the horizon to improve these relationships and, according to employers, universities and industry would benefit from working towards creating an ecosystem that is innovative, entrepreneurial and connects universities with industry talent and employment opportunities.

Requirements of skills and competencies

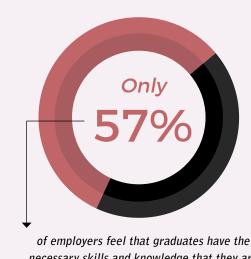
Indian HE graduates' skills and knowledge level

The ability of Indian graduates to demonstrate adequate levels of knowledge and skills developed is essential for them to be both employable and progress into employment through meeting employer needs. Findings from this second Global Talent in India report highlight an improvement of 24% in employers' opinion of graduate preparedness, including the access to necessary skills and knowledge that they are looking for in their sector. 43% of employers feel that graduates from Indian HE institutions are not able to demonstrate that they have the necessary skills and knowledge that they are looking for. Employers felt that the application of concepts is less demonstrable, and a lot of Indian graduates require significant training on the job as they are not fully ready to contribute to their respective industry.

66 Students have good theoretical knowledge, but they don't have enough hands-on experience or they haven't done internships. The real hands-on experience of having done something, makes you challenge things and have a deeper understanding of your subject.

Given how the Internet and technology is evolving,

(Technology Employer, Mumbai)



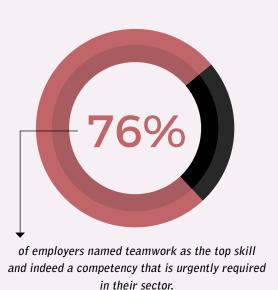
of employers feel that graduates have the necessary skills and knowledge that they are looking for in their industry.

employers felt that graduates should have a more work-ready attitude, have a stronger understanding of what it takes to secure employment, particularly in cases where universities may not be adequately preparing them for their future careers.

While the Indian HE system produces a lot of engineers and computer scientists, employers felt that graduate STEM talent are not fully ready to join the workforce. Not only do graduates lack specialist knowledge and experience, but they also fail to demonstrate soft skills, which are becoming imperative regardless of the industry (World Bank 2016).

Skills and competencies required by your industry

The top five skills and competencies that are urgently required by employers in their sector were dominated by soft and transferable skills as opposed to more technical and specialist ones:



- Teamwork required by 76% of employers.
- Problem-solving required by 71% of employers.
- Creativity required by 65% of employers.
- Leadership required by 61% of employers.
- Critical thinking required by 57% of employers.

In light of these findings, coupled with recent trends in the world of work, such as automation and artificial intelligence, some employers identified that soft skills are indeed a key requirement in their industry. This trend is more evident across sectors of the economy that require human interaction, teamwork and people skills, such as the tourism and hospitality industry:

Soft skills are very important. Coping with stress and different people and teams is also important. We want to create experiences for our clients and experiences [that] are created by humans, not technology.

(Hospitality Employer, Pune)

Some global employers in the survey sample suggested that students should be exposed to

contexts that develop skills to work in a global context such as international trade and business, compliance and taxation. Such specialist skills are becoming increasingly important since the Indian economy is becoming more open to inward investment and trade, which can create new business and entrepreneurship opportunities.

Capacity building through training and HE partnerships

Skilled professionals to train people required by industry

Some global employers in the survey sample suggested that students should be exposed to contexts that develop skills to work in a global context such as international trade and business, compliance and taxation. Such specialist skills are becoming increasingly important since the Indian economy is becoming more open to inward investment and trade, which can create new business and entrepreneurship opportunities.

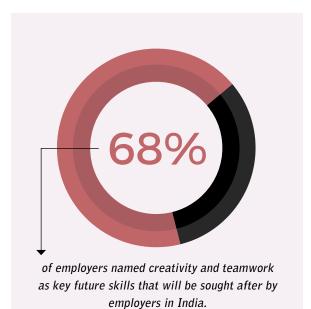
Employers had the opportunity to reflect on the availability of skilled professionals that are capable of building capacity through training and skilling people, including students and graduates, who are required for professions and projects in their respective sector. It was suggested that this capacity building is vital but perhaps not fully utilised by employers. Despite 74% of employers feeling that they have access to skilled professionals to train and skill people, they also felt that trainers are more often involved in basic training and consequently unable to provide more specialist training. Other employers indicated that there is a considerable shortage of professionals who can train people that can join a truly global workforce.

Partnering with Indian HEIs to help train students

Another key aspect of capacity building through the development of employable graduates is the establishment of sustainable partnerships between Indian universities and employers focused on training. 86% of employers indicated that they are willing to partner with academic institutions to help train students through mentoring, voluntary placements or internships - a drop of four percentage points on last year. Some employers highlighted that they already partner with HEIs to help skill and re-skill students, particularly in the provision of mentoring opportunities and personal development. However, challenges remain, particularly after employers voiced their concerns that the universities in India are disconnected from the world of work.

Key future skills, attributes and competencies that will be sought-after by employers

Building on key skills, attributes and competencies required by employers, they were also allowed to define the most important skills for the future that will be sought after by employers. The top 10 key future skills, competencies and attributes were again dominated by soft skills and personal traits and abilities, as opposed to more technical and specialist skills. In total, 68% of employers felt that creativity and teamwork are the two most important skills for the future:



- Teamwork key for 68% of employers.
- Creativity key for 68% of employers.
- Digital literacy key for 64% of employers.
- Adaptability- key for 63% of employers.
- Problem-solving key for 62% of employers.
- Critical thinking key for 61% of employers.
- Leadership key for 60% of employers.
- Global mindset key for 57% of employers.
- Cross-industry understanding key for 50% of employers.

• Cross-cultural communication – key for 48% of employers.

With 64% digital literacy comes third on employers' list of key future skills, competencies and attributes of Indian graduates that will be sought after by employers. Digital India, a key initiative under the Modi Government echoes the importance of digital skills to success in New India. Cross-cultural communication and cross-industry understanding also feature among the ten most sought-after skills, attributes and competencies for the future suggesting a greater emphasis on cross-disciplinarity and internationalisation – themes that are firmly embedded in the 2019 draft National Education Policy for India.

The future of Indian HE and the World of Work

Employers' 'big ideas' for how Indian HE can improve to become more industry-relevant and meet the demands of the rapidly evolving world of work

BIG IDEA



Employers advocated the development and introduction of a comprehensive framework of skills, competencies and attributes that are influenced by recent technological developments impacting the world of work. Subjects related to Al, Big Data, Automation and Blockchain, according to employers, should be firmly embedded in a new skills framework to futureproof Indian graduates. Industry representatives also highlighted the importance of developing campaigns to raise awareness of the rapidly evolving world of work and provide support to students for non-traditional career routes. including freelancing and entrepreneurship.

BIG IDEA

Closer collaboration with employers and the embedding of entrepreneurship modules into HE degrees can narrow the gap between the provision in Indian HE and the rapidly evolving world of work. Both reflect opportunities that employers strongly believe should inform the future of the sector. Employers advocated closer collaboration with job creators, regardless of whether employers reflect the private sector, government or nonprofit organisations. They felt that proactive universityindustry collaboration is critical so that universities can understand what skills are required and be able to adapt their curriculum provision to respond to these requirements.

11 Indian HE should focus on actual current and future requirements of the industry. Professors and coordinators should visit industry more often to realise the huge gap between training imparted and what is required by industry.

(Financial and Professional Services Employer, Mumbai)

BIG IDEA

Measuring employability outcomes for HE courses and the introduction of employability rankings was also seen as an important future direction for the Indian HE sector in its efforts to align its curriculum with industry requirements. University employability rankings were launched on a global stage in 2016 through the introduction of the Times Higher Education's Global University Employability Rankings and QS Graduate Employability Rankings. Indian HE representation in global employability rankings is generally low. Only seven Indian HE institutions feature in these rankings to date, and they are predominantly IITs and IIMs, alongside the University of Delhi. In light of these developments, employers felt that the Indian HE sector has the opportunity to develop a set of metrics and rankings to measure the effectiveness of individual. institutional programmes in developing the employability of their students.

CASE STUDY: EMPLOYERS

Senior Manager, Deloitte, New Delhi

The role of Indian Higher Education in skills development

Do you think that Indian Higher Education prepares students for the global workplace in terms of understanding international developments?

Employer: We are one of the major recruiters in India, particularly from top tier institutions, and we regularly take part in on-campus recruitment and employment events. So we have access to the most talented students and graduates in India, but the reality is that the majority of institutions don't have the capacity and resources to develop employable talent with the right skills, knowledge and abilities required by different firms and sectors in India. One area I feel can improve to develop such talent in universities is industry exposure. Universities should partner with corporates and employers to help students get exposure and learn what is happening in the real world. There should be more realisation in Indian HE about what the corporate world is all about. So here we are making a case for stronger university-employer partnerships to bridge this gap in Indian HE.

Talent mismatch in Indian Higher Education skills

Do you feel that graduates from Indian HE have the necessary skills and knowledge you are looking for?

Employer: We face a lot of challenges with recruiting skilled graduates – here we talk about not just technical skills and knowledge but also in terms of softer, interpersonal skills that many graduates lack when they Leave the He system in India. Professionalism, in general, is also lacking in many recruits.

There are some new skills and competency areas that graduates should be aware of – Big Data, AI and Blockchain are some of them. But the bottom line is that graduates have to be ready to face a lot of change when they join the corporate world. Graduates' readiness to seek new challenges and keep adapting to these challenges is increasingly important.

What is also important for graduate talent is to keep learning and updating their skillsets constantly. They may have good knowledge, expertise and experience in a particular area but what they should also have a working knowledge of other areas to be able to benefit their organisation and stay employable.

Ideas for the future of skills development

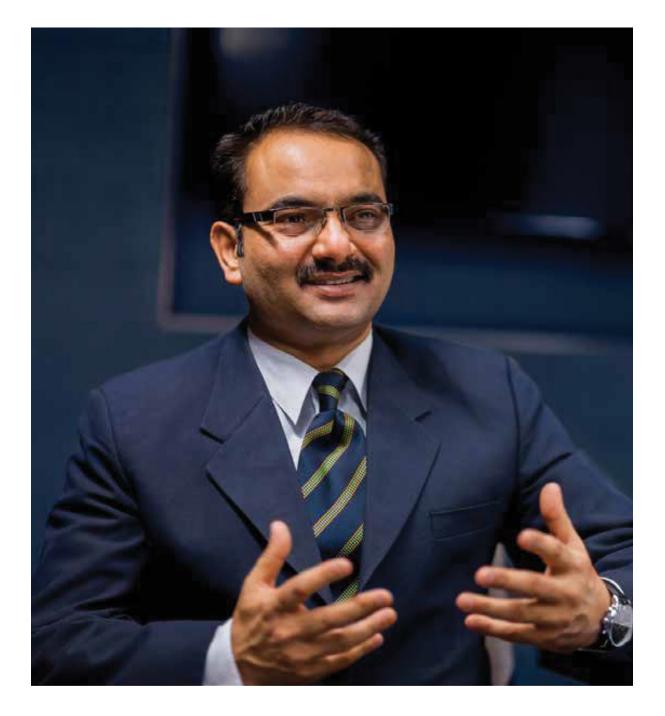
Please provide your top three big ideas on how you feel higher education can improve to fit current international developments and the rapidly evolving world of work?

Employer: Indian HE needs to enable students to acquire global exposure, particularly in terms of cross-cultural experience in the corporate world. Take for example Deloitte employees – even if some of them don't work or specialise in global engagement, often most of them are required to connect virtually with their counterparts in different regions of the world and work together. So

internationalisation and exposure to global business and developments should be better integrated into the Indian HE system, so students are prepared for the internationalised world of work.

It is important for Indian HE to stop churning out graduates with business and engineering degrees. Instead, it should drive and push students to be educated in new areas and subjects such as Automation, Artificial Intelligence, Machine Learning and Blockchain. More specialist knowledge and degrees will be important in the future – take for example Data Science and Big Data Analytics – we need to prepare our students in emerging disciplines if we want them to be more productive and employable. Universities in India should also become more open and flexible in their approach to teaching and preparing students for the world of work. We all know that syllabus at many institutions is outdated and not relevant to the requirements of the world of work, but institutions should be more open and work closely with employers who can actively participate in developing a new, more relevant curriculum to prepare students for the future.

GOVERNMENT PERSPECTIVES: POLICYMAKERS



GOVERNMENT PERSPECTIVES: POLICYMAKERS

Policymakers play an important role in higher-level skills development in the country. The Ministry of Skills Development and Entrepreneurship established in 2018 is set to champion this agenda alongside other important players such as NSDC, SSCs and CIIs. The proposed reforms in the recently announced draft National Education Policy is another initiative set to herald a change in HE in India. This section of the report provides insights into the state of the policy and planning of skill development and the Indian workforce including key priorities, the public sector's requirements of skills and competencies, the state of brain drain in India, and the role of HE in skills development. This section concludes with policymakers' key ideas for the future of Indian HE.

Skills development and Indian HE

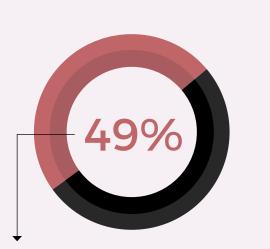
Preparing students for global careers

Understanding international developments is crucial in preparing students for the increasingly global workforce and workplace. Opportunities for Indian students to develop global competencies through immersion in international themes and developments are not evenly distributed across the sector. Only 51% of policymakers felt that Indian HE prepares students for the global workplace in terms of understanding international developments and standards. This figure represents a drop of four percentage points when data is compared with the inaugural Global Talent in India report.

Students at major universities in big Indian cities are engaged in co-curricular and extra-curricular platforms (such as symposiums, conferences and competitions), which provide opportunities for them to develop an awareness of international affairs and developments. Clobal awareness, policy-makers felt, is key for students to understand how to navigate through an international work environment, but they emphasised that the majority of students may not yet have access to such opportunities. With the private HE sector in India becoming more competitive, initiatives involving outward student and staff mobility are more common, but they are limited in provision to fewer universities.

Conventional Indian HE is still very content-centric and is on its way to becoming more Industry oriented, which means the introduction of professional conduct and international standards. Such developments often take a backseat in HE institutions across India.

(Associate, Department of Higher Education New Delhi)

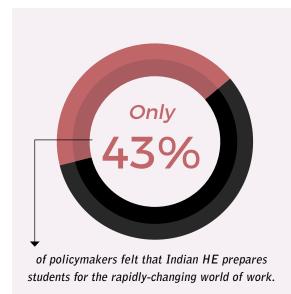


of policymakers felt that Indian HE fails to prepare students for the global workplace in understanding international standards.

In line with the above findings, 49% of policymakers conclude that Indian HE is not international and globally-relevant. Increased focus on national as opposed to international themes and developments, limited global perspectives embedded in teaching and learning practice and the light representation of Indian institutions in global university rankings were some of the reasons cited for this by policymakers.

Preparing students for the rapidly shifting world of work

The world of work is changing at a rapid pace, and the Government initiatives such as Skills India aim to address this challenge but also provide an opportunity to develop the next generation of graduate workforce in India. Recent attitudes by policymakers suggest that there may be a long way



to go. 57% of policymakers felt that Indian HE fails to prepare students for the rapidly changing world of work and recent developments contributing to shifts in the workforce and workplace. This figure 13 percentage points improvement on data from the first edition of this report, albeit the majority of policymakers still feel Indian, HE fails to develop employable graduates.

Some policymakers commended the quality of the Indian HE system in light of its theoretical base but felt that the practice dimension involving reallife industry exposure might be missing. Others suggested that there is no focus on creating labs, inviting industry in the classroom and aligning industry requirements to university courses.

1 In the UK, teaching and training are conducted by professionals and people from the industry, and we still haven't reached this level of integration of industry in universities. This kind of mindset is not there, and I don't think we are ready.

(Director, Sector Skills Council)

Despite challenging rhetoric, some policymakers emphasised the progress that has been made by the Indian Government in the face of MSDE in its efforts to elevate the skills development agenda. One example is the largest skills development scheme, Skills India, which has been created by MSDE and aims to train 400 million people by 2022.

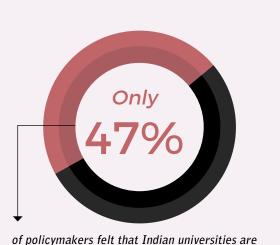
66 Before the setting of MSDE, there was no proper ecosystem in skills development. Some standardised models and schemes on quality education are to be implemented.

(Director, Ministry of Skills Development and Entrepreneurship)

Respondents concluded that the majority of Indian HE institutions and courses taught in them are not industry-relevant. Indian HE was unable to make its courses at par with industry according to 59% of policymakers.

Staff, resources and facilities required by Indian students

Academic and professional staff, alongside resources and facilities at Indian universities, are important factors in developing the employability of students and graduates. Similar to staff, students and employers' opinions, policymakers also felt that there is more to be done to address these factors in Indian HE. Just 49% of policymakers agreed that Indian universities have the necessary resources, and 48% agreed that Indian universities have the necessary academic and professional staff. These figures show an improvement of 12% and 18% respectively when compared to the 2018 data.



of policymakers felt that Indian universities are equipped with the necessary facilities required by students.

Further, 47% of policymakers reported that institutions are equipped with facilities, such as labs, pods and technology, required by students to progress into the workforce which also represents an improvement in performance and can be attributed to some improvements in teaching and learning infrastructure of Indian HE institutions.

Policymakers concluded that limited provision of adequate teaching and learning resources is due to the lack of sufficient financial resources at Indian universities. They highlighted the considerable level of bureaucracy involved in the granting of additional resources when requested at the institutional level. Alongside facilities and resources, policymakers have questioned the preparedness of academic staff. There is an opportunity for staff to change their mindset, particularly in relation to the adoption of innovations in the classroom.

C Teachers need to be trained, and that's very true. We have had smart boards in our classrooms for a while, but some teachers feel that conventional methods work well, and they don't engage with innovations.

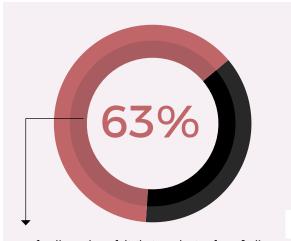
(Civil Servant, Department of Education, Chennai)

In addition to academic staff, policymakers emphasised that capacity building and up-skilling programmes at an institutional level should also be extended to technical and administrative staff who are central to the provision of world-class teaching and learning infrastructure, facilities and technology.

Requirements of skills and competencies

Indian HE graduates' skills and knowledge level

The level of preparedness of Indian graduates in terms of graduate skills and knowledge level was also



of policymakers felt that graduates from Indian universities do not have the necessary skills and knowledge they are looking for in the public sector.

explored through the perspective of policymakers. Graduate skills and knowledge that are sought after by the public sector were limited, according to policymakers. Only 37% of policymakers felt that graduates from Indian universities have the necessary skills and knowledge they are looking for in the public sector. This is a drop of two percentage points when compared to the 2018 data.

Policymakers concluded that except graduates from a handful of elite institutions, the majority of Indian university leavers are not generally employable in the public sector. Functional skills were relatively easy to acquire according to policymakers, unlike specific soft skills deemed to be key to the public sector, such as attitude to training, customer excellence, cross-cultural and cross-team communication and personality traits.

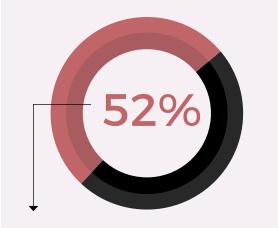
Most of the colleges in India, which are private, provide opportunities for students to develop soft skills that are sought after by the public sector, but government colleges and schools have not been able to provide such opportunities according to policymakers. Policymakers felt that there had been considerable efforts channelled at incorporating these soft skills, but these have been individual, institutional efforts, as opposed to holistic, HE sectorlevel efforts.

Since students and graduates go through an outdated curriculum, the public sector employers do not find them jobready, and then spend a lot of time and resources in retraining them by themselves.

(Principal Secretary, Department of Higher Education, Hyderabad)

Skills and competencies required in the public sector

The top 10 skills and competencies required in the public sector in India as seen through the perspective of policymakers were dominated by soft skills and personal traits and abilities, as opposed to more technical and specialist skills. 52% of policymakers rated global mindset and leadership as the top two skills and competencies that are urgently required in the public sector. These replace creativity and critical thinking, and the new ranking of in-demand skills by policymakers includes:



of policymakers rated global mindset and leadership as the top two skills and competencies that are urgently required in the public sector.

- Leadership key for 52% of policymakers.
- Global mindset key for 52% of policymakers.
- Creativity key for 44% of policymakers.
- Critical thinking key for 40% of policymakers.
- Adaptability key for 36% of policymakers.
- Cross-disciplinary understanding- key for 32% of policymakers.
- Teamwork key for 32% of policymakers.
- Digital literacy key for 28% of policymakers.
- Problem-solving key for 28% of policymakers.
- Curiosity key for 24% of policymakers.

Policymakers in relatively small governmental organisations emphasised the importance for graduates to be able to demonstrate multi-tasking skills with cross-functional capabilities and high adaptability, alongside other, predominantly soft skills.

C The challenge is that there is a disconnect between universities and industry. A major deficiency is soft skills, people management and the ability to communicate.

(Director, Confederation of Indian Industries)

Challenges to skills development in the public sector

Just as in the case of universities' employability efforts and training provided by industry, policymakers also saw a number of challenges with regards to skills development in the public sector.

For some policymakers, the scalability, quality and relevance of skills development programmes in India was seen as a key challenge to capacity building and improving productivity. Due to the sheer scale and complexity of government structures in India, policymakers argued that duplication of efforts is a common challenge which should be addressed:

11 There needs to be better co-ordination between various ministries and government departments to avoid the duplication of efforts in skills development. This is a common challenge in countries with a large population and extensive government services.

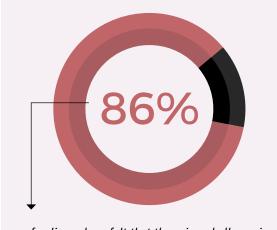
(Lead Scientist, Ministry of Skills Development and Entrepreneurship)

Policymakers felt that regulations, frameworks and guidelines for skills development are still evolving, which leads to uncertainty, posing a challenge to actual viability and implementation. Other challenges involved a lack of access to skills development programmes delivered by private sector organisations and the limited availability of public sector skills trainers and assessors, alongside resources, both financial and technical and infrastructure.

The state of brain drain in India

Indian brain drain - reversing the trend?

The proportion of Indian talent that has joined the global workforce and contributed to organisations in world economies is soaring. With 16 million people living outside the country, India has the largest diaspora population in the world (Times of India 2016). Thousands of Indian students go overseas for study purposes, and many of them decide to pursue a career post-graduation in their host country. Policymakers had the opportunity to provide their perspective on this trend and its direction, and



of policymakers felt that there is a challenge in making sure India's skilled graduates stay in the country.

86% of policymakers felt that there is a challenge in making sure India's skilled graduates stay in the country. This is a sharp increase of 27% relative to last years data. Despite the significant flow of skilled graduates from India, policymakers suggested that there is a significant number of talented people willing to start new businesses and take up large roles in the Indian job market. Policymakers commented that the recent surge in inward investment, and the opening up of new sectors and markets in India, are encouraging signs that highlyskilled Indian graduates will decide to start their career journey in the country.

The challenges of making India's graduates stay in the country

Some policymakers felt that the trend of Indian students studying overseas is likely to reverse in the coming years and India may see more of its youth deciding to study in the country. While privatisation in the HE sector has become commercial in its objectives, policymakers suggested that the advantage has been that India is now moving to the next stage of competitiveness among HE institutions, which in turn will create more opportunities for quality education in India. India already has landmark institutions like the IITs, IIMs, NLUs, which policymakers felt have raised the bar for other institutions.

Others, however, felt that the proportion of Indian students going abroad to pursue university-level education is expected to increase even further, which is because the student body in India is increasing rapidly and admission to landmark HE institutions in India is becoming very competitive.

Universities are coming into India so the trend may change, though there will continue to be an interest in going overseas to get a global perspective which is useful for the global as well as Indian career.

(Advisor, Department of Education, MHRD)

Policymakers pointed at the rapid pace at which HE institutions in most advanced economies update their teaching and learning programmes to make them more relevant for the world of work as another motivational factor for Indian students to study overseas. Indian universities, the policymakers contended, are largely lagging behind major study abroad destinations such as the US, Australia, Germany and the UK.

Indian students studying abroad was not necessarily seen negatively. Some policymakers stressed the importance of the opportunities of studying abroad and the influence of international experience and exposure on the employability of Indian students and graduates. Even if Indian universities improve to match the best in the world, there was no substitute for international exposure.

Key policy priorities

Productivity and capacity building through skills development

Policymakers emphasised that the current Government has launched a number of key initiatives to promote vocational training, which will enhance the present skills and pave the way for improved skills development provision. The draft National Education Policy (NEP) from 2019 and the Education Quality Upgradation and Inclusion Programme (EQUIP) reflect such recent initiatives. They felt that key sectors of the Indian economy should be given industry status, which will encourage employers to come forward and take ownership of skilling. With this in mind, the logistics and supply chain sector was just one example highlighted by policymakers.

Incentivising industry to train students should be

put at the heart of the skills development agenda. Apprenticeships were just one example to address the current challenges surrounding the productivity and capacity building of the Indian workforce through skills development. Apprenticeships were thought to be crucial for developing skills for key sectors of the Indian economy, such as manufacturing, construction and trade.

Identification of skills gaps, horizon scanning of workforce trends in the Indian labour market, and the provision of industry input mechanisms were also put forward by policymakers as key policy priorities to support skills development aspirations of the Government and to ensure that universities develop graduates that are fit for the workforce.

Developing skilled professionals to train people

Another key policy priority, which was put forward by policymakers, was the development of skilled professionals to train people to join the Indian workforce through channelled investment and quality control of training and assessment. Within this context, key considerations policymakers felt should be taken forward include:

- Standardisation of academic inputs at all universities and colleges.
- Provision of resources to develop trainers and assessors.
- Development of industry exposure opportunities.
- Faculty development programmes.

The future of Indian HE and the World of Work

Policymakers' 'big ideas' for how Indian HE can become more industry-relevant and meet the demands of the rapidly evolving World of Work

BIG IDEA



Development of a comprehensive universityindustry network to set up and promote various industry exposure opportunities to students. Policymakers agreed that many universities offer industry engagement and exposure opportunities to their students, but the sector needs a more unified approach that will enable more institutions and their students to benefit from such initiatives

BIG IDEA



Focus on entrepreneurship, innovation and quality research are important areas of work that have the potential to scale up and support the Government's efforts in skilling India and improving the productivity of its workforce. Alongside skills development, policymakers felt that research and innovation hold a prominent place in the HE sector and that more resources be channelled at these two initiatives.

Some policymakers made a case for business incubation centres to support future graduates in building their enterprises. Incubation centres can prepare students for entrepreneurial life and support the creation of additional jobs driven by smallscale business innovations and start-ups.

BIG IDEA



Introduction of employerled short modules focused on skills development was another idea proposed by policymakers. With this in mind, universities and colleges have the potential to introduce a range of specialised short modules, which focus on developing skills in demand across key sectors of the Indian economy and supplement the mainstream curriculum. Policymakers suggested that employers have a key role to play in designing these short modules, training of faculty members, and having an oversight on the quality of training delivery, quality assessment and certification.

"

((I hope universities will inspire youth to get into research too. Because by creating start-ups, for example, you are not just creating a job for yourself, but you are facilitating more employment for the country.

(Director, National Skills Development Corporation)

The Indian mindset is changing, and there are already initiatives in place to skill students and provide hands-on industry exposure but mainstreaming might take another ten years.

(Director, National Skills Development Corporation)

CASE STUDY: POLICYMAKERS

Senior Secretary, *Ministry of Skills Development and Entrepreneurship, New Delhi*

The role of Indian Higher Education in skills development

Do you think that Indian Higher Education prepares students for the rapidly changing world of work (e.g. highly competitive job market, automation)?

Policymaker: One of the key challenges Indian HE faces nowadays is related to skills deficiency. Approximately 24 million Indians enter the job market every year. Out of those 24 million, only 6 million of them go through HE, which at least allows them to develop relevant skills. So as a skills ministry, one of our key aspirations is to reach out to all those 24 million people entering the workforce every year.

But even if we look at that section of society which has access to HE, data suggests that the majority of them are not employable or prepared for the job market. Institutions churn out graduates with degrees which don't allow them to develop the skillsets we need in business and industry. So this is another challenge – both for institutions but also for our government. Also, a lot of work needs to be done by the education ministry to ensure that courses and subjects at institutions are relevant to the workplace.

We have a workforce in India of around 500 million people. With the pace of change of technology, in particular, skillsets are becoming redundant faster than they were in the past. So we need to bring an ecosystem that catalyses this change so that we enable students, graduates and other sections of society to adapt fast and be employable.

State of graduate preparedness for the workforce

Do you feel that graduates from the Indian Higher Education have the necessary skills and knowledge you are looking for?

Policymaker: As the world of work is changing, one thing that seems increasingly evident in India is that more jobs are moving into the services sector. The services sector, by its nature, requires more communication and human skills rather than technical skillsets. These skills therefore become key to the future economy, and that's why it is critical that all graduates develop them.

Second and as far as hard, technical skills are concerned, the required skillsets change constantly, so I believe a stronger industry connect to help with nurturing these hard skills in students and graduates is imperative.

I expect more incremental changes to happen in the world of work as technology advances and service sector becomes more prevalent in India. So integrating this change in our society and in aspects of the way we live and work needs to become a central part of our education system. In light of this, we want to develop learning platforms where people can acquire skills as they go along and as per their requirements. This is one of our key objectives.

Ideas for the future of Indian Higher Education

Please provide your top three big ideas on how you feel higher education can improve to fit current international developments and the rapidly evolving world of work?

Policymaker: The majority of our elite institutions that develop employable graduates are not performing well – both in terms of student capacity

and also in terms of the diversity of the skillsets that they develop in students. So universities, in collaboration with the government should focus on short term skilling where people can up-skill fast, diversify their skillsets and can acquire multiple skills at various levels.

Another area which I see as a priority and indeed something that we have been working on for a while is integrating apprenticeships, internships and other pathways into the curriculum of HE institutions. Once this new approach is in place, students will get industry exposure that helps them develop relevant skills and abilities to make them fully employable.

Since the world of work is changing at such a rapid pace, every individual would need to be able to upgrade their skill set regularly. So what is important for Indian HE is to help students with upgrading their skills, understand the changes in technology impacting the world of work and develop in students adaptability -the ability to up-learn and re-learn to be successful and employable.

THIRD SECTOR PERSPECTIVES: SOCIAL ENTERPRISES



THIRD SECTOR PERSPECTIVE: SOCIAL ENTERPRISES

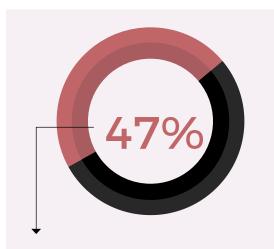
Third sector organisations in India, commonly known as Non-Governmental Organisations (NGOs), are influential advocates of education and play an important role in skills development in the country. India has 31 lakh (3.1 million) NGOs, more than double the current number of Indian schools (Indian Express 2015). Many NGOs in the country have their primary focus on education and skills development. Prominent ones are Teach India, the British Council and You and I. This section of the report draws on the perspectives of over 150 NGOs in India into the state of Indian HE and the skills development agenda, NGO requirements of skills and competencies, the societal and community angle of workforce productivity and capacity building, and the state of brain drain of Indian talent through the perspective of NGOs. The section concludes with a section where NGO representatives reflect on key ideas for the future of Indian HE.

Skills development and Indian HE

Preparing students for global careers

Globalisation requires students to be prepared for global careers and this is particularly relevant in the case of India, where a large number of graduates are expected to join the global workforce and fill in skills gaps in countries experiencing talent shortages. NGOs have a role to play in inculcating a global mindset and awareness in students. Over half or 57% of the Indian NGOs, which took part in this study are directly involved in education provision and skills development, which often cater to youth from disadvantaged backgrounds.

In the first edition of this report, NGOs, unlike employers and policymakers, provided a more



of NGO representatives felt that Indian HE fails to prepare students for the global workplace through understanding of international development and standards.

positive picture on the preparedness of Indian students and graduates for the world of work. Despite that, only 53% of NGOs highlighted the potential and capacity of Indian HE to prepare students for the global workplace in terms of understanding international developments and standards in this second edition of the report. This figure represents a drop of 14% when compared to last year's dataset.

Furthermore, only 55% of NGO representative participants in this study agreed that Indian HE and skills development opportunities are international and globally-relevant. They felt that current government initiatives such as Skill India should introduce more advanced skills development programmes to prepare students for understanding international developments and the changing nature of work.

NGO participants felt that having a global outlook and being able to respond to issues of diversity are important to graduate outcomes, which have not been taken forward by Indian HE institutions, nor have they been integrated with the curriculum. One of the key problems they identified was the lack of opportunities for Indian students for exposure to diversity both in the Indian context and internationally.

Representatives from NGOs felt that HE institutions themselves should concentrate considerable efforts to internationalise and innovate their curriculum as the basis for preparing students and graduates for global careers:

Characterization There is an urgent need to develop in students 21st Century skills – particularly global and soft ones – like critical thinking, cross-cultural communication, the art of having conversations with people from different cultures and at different levels.

(Consultant, British Council)

Preparing students for the rapidly shifting world of work

NGO representatives highlighted a number of prominent challenges related to preparing Indian students for the world of work. The lack of experiential learning opportunities and limited access to project-based education were flagged up as two considerable challenges in Indian HE. NGOs highlighted a number of institutional initiatives of good practice, which has the potential to be mainstreamed across the wider HE sector in India. Some of these examples of good practice included student-led projects with community organisations and the involvement of industry representatives in skills development initiatives.

Nevertheless, nearly half or 46% of NGOs concluded that Indian HE fails to prepare students for the rapidly-changing workplace and workforce requirements, particularly in the case of universities located in large urban centres, such as Delhi and Mumbai. This is a downward trend represented a 26% increase in the number of NGO's concluding such. Rural and publicly funded universities were thought to be facing far more challenges in equipping their students for the workforce. These challenges are often related to the capacity and quality of HE provision outside large urban centres in India and the negative effect on the employability of students graduating from these institutions.

C The potential is there, but there is a problem with skills development as the current supply of higher education is unable to meet the demand from youth across the country. There is a shortage of quality and scale.

(Director, E and H Foundation)

This decline in confidence is re-echoed in their sentiment towards Indian HE as a whole. Just over half or 51% of NGOs concluded that Indian HE is not industry-relevant. The largely outdated university curriculum and limited employer engagement in both course development and delivery were highlighted to be among the key reasons for this state of affairs.

Staff, resources and facilities required by Indian students

NGOs also had the opportunity to reflect on the state of the provision of key resources and facilities to aid students with developing their employability. Unlike the more critical perspectives provided by academics, employers and policymakers, NGOs were more likely to agree that Indian universities are equipped with the necessary staff, resources and facilities required by students. Only 49% of NGOs highlighted that Indian universities have the necessary academic and administrative staff, some arguing that faculty in lower-tiered HEI's are not inadequately trained and are lacking in essential skills. 48% of NGO (an increase of 22%) respondents suggested that institutions are not equipped with the necessary facilities students require to progress into the workforce. Other NGOs suggested that there was a huge gap between urban and rural institutions in their access to and provision of the necessary resources and infrastructure for teaching and learning.

NGOs identified that government resources for HE are not often utilised strategically and tend to concentrate in a few institutions. The reason for unequal distribution of resources and inconsistency in the quality of education might be the result of key country-level trends and challenges such as the 'massification' of Indian HE, as NGOs highlighted, coupled with the growing demand for education from India's fast-growing middle classes, which are expected to increase to 500 million people in the next decade (British Council 2014).

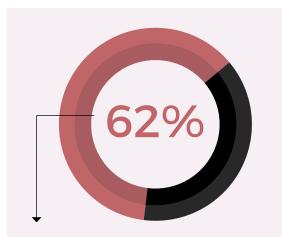
The main challenge for Indian HE is quality because massification is happening at a rapid pace. The Gross Enrolment Ratio at Indian universities is only around 27%.

(Head of Internationalising HE, British Council)

Requirements of skills and competencies

Indian HE graduates' skills and knowledge level

Specific skills needs for organisations representing the third sector in India is also an important consideration, particularly for NGOs involved in education and training as their network of volunteers serves as educators, whose knowledge and attributes is transferred on to students. Only 38% of the surveyed NGO representatives felt that Indian graduates have the necessary skills and knowledge they are looking for representing an increase of 29% on the 2018 data. NGOs pointed to the range of predominantly soft skills that graduate recruits in NGOs often fail to demonstrate. Within this context, some NGO representatives felt that students lack communication skills on both a personal and professional level thus leading to an inability for graduate recruits to work as part of a team, which is an essential requirement for this type of organisation.



of NGO representatives felt that Indian graduates do not have the necessary skills and knowledge they are looking for.

C The organisation I work for have a problem with finding leaders. Interpersonal skills are something that you do need when you have to deal with a large number of people, but if one is treated as an independent student, it is hard to develop them.

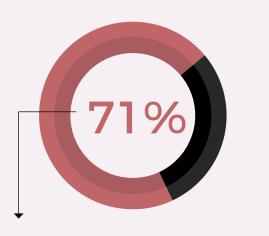
(Lead Educator, U and I)

Leadership skills were highlighted as key for NGOs, particularly for those organisations with a larger

volunteer base. Leadership was nevertheless less demonstrable in Indian graduates regardless of which NGO jobs they went for, with NGO representatives highlighting that the ability to manage people and people skills are not present in Indian graduates. According to NGOs, students and graduates from Indian, HE knows how to work on their own, but they often lack the skills to work with others.

Skills and competencies required in NGOs

Alongside the ability of Indian graduates to demonstrate adequate levels of knowledge and skills for the sector lay an array of specific skills, attributes and competencies that are required by NGOs, making graduates who possess these skills more employable in NGOs. Creativity and digital literacy were noted by 71% of respondents as the two, most important skills required in the not-for-profit sector in India. Other top skills comprised primarily of soft skills as follows:



of NGO representatives named creativity and digital literacy as the two most important skills required in the not-for-profit sector.

- Creativity required by 71% of NGOs.
- Digital literacy required by 58% of NGOs.
- Global mindset required by 62% of NGOs.
- Leadership required by 59% of NGOs.
- Critical thinking required by 54% of NGOs.
- Adaptability required by 42% of NGOs.
- Sensitivity- required by 37% of NGOs.
- Cross-cultural communication required by 33% of NGOs.

- Curiosity required by 33% of NGOs.
- Emotional intelligence required by 33% of NGOs.

Attributes linked to key functions of NGOs involving community outreach and social work, such as leadership and sensitivity, were also featured as key and ranked fourth and seventh respectively. Equally, global mindset and cross-cultural communication were also considered highly important and feature in the top 5 skills highly sought after by NGOs.

Challenges to skills development in NGOs

To support skills development, NGOs felt that accessibility and awareness of training and education opportunities need to be encouraged, alongside capacity building for trainers in NGOs.

Accessibility to and affordability of education and training from underprivileged communities in India was seen as one of the main challenges. NGO representatives suggested that there should be greater awareness of the benefits of undergoing training and education courses through NGOs, particularly amongst underprivileged communities, which should be supplemented by effective planning and support from the Government and media partners. NGO representatives felt that the ability of new recruits to absorb and apply new knowledge and innovative pedagogic approaches was seen as a major challenge.

We can provide the training, but having the skills to pick it up, understand it, comprehend it and apply it is not there. There is a lot of micro-managing that we end up having to do as recruits do not absorb skills fast enough so that they can apply them in NGOs.

(Lead Educator, U and I)

Others suggested that building on the recent success of the NSDC; the challenge remains to establish niche skills companies that can channel their efforts at developing capacity and capabilities for the Indian workforce engaged with NCOs.

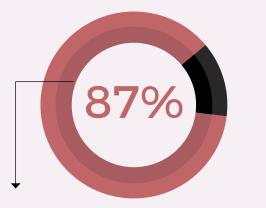
NGO respondents highlighted the importance of instigating good leadership and governance structures in the education and skills development sector, arguing for greater support for the further development of the social enterprise sector.

The state of brain drain in India

The challenges to graduate retention

These challenges are often linked to the absence of an enabling environment which promotes economic opportunities and incentivisation of top talent (Purkayastha 2017). These challenges are seen through the perspective of NGO representatives who, similar to policymakers, felt that India, as a whole and the NGO sector in particular suffered by brain drain in different ways.

87% of NGO representatives felt that there is a challenge in making sure India's skilled graduates are retained in the country. For policymakers, the figure was 86%, which suggests that both groups are cognizant of the dangers of brain drain. The lack of talent development opportunities was seen as the foremost barrier to the retention of highly-skilled graduates in India:



of NGO representatives felt that there is a challenge in making sure India's skilled graduates stay in the country.

1 Yes, there is a challenge. Providing a stimulating environment where you do not just use your skills, but you also develop new skills is important. So the challenge for a lot of employers is to develop their employees. Sadly, the best minds are attracted by the best companies, which are in Silicon Valley, not in India.

(Project Liaison, Rural Women NGO)

Not only was brain drain recognised as a specific problem for India at large, but also for NGOs themselves, which suffered the departure of talented volunteers, educators and trainers at NGOs. Representatives from these organisations pointed to the challenge of continuity, whereby Indian graduates commence work for NGOs immediately after graduation for a short period and then take on opportunities to study abroad.

NGO representatives also had the opportunity to provide their views on how challenges related to brain drain are likely to impact the societal agenda and society at large. They felt that brain drain had not affected the social agenda to a significant extent, as Indians abroad only have a moderate influence on the social agenda in India mainly through their involvement in NGOs and contribution through remittances.

Many of these people were born in families that are educated. They understood the importance of education and higher education. So people who went abroad are the elite of India. They don't play much of a role in defining the social agenda; they do, however, contribute through remittances.

(Project Liaison, Rural Women NGO)

Indian brain drain - reversing the trend

Thousands of Indian students go abroad to study for undergraduate and postgraduate HE degrees,

whereby main destinations for Indian students have been the UK, Australia, Canada and USA. NGO representatives reflected on whether this trend is likely to change in the coming years and whether India would perhaps see more of its graduates choose to study in the country.

They provided contrasting perspectives on the future of brain drain in India and felt that challenges related to this trend can be offset by innovation in the HE sector in India linked to the provision of a better learning environment, a challenging curriculum and graduate employment opportunities.

66 I do not see any change in the coming future unless there is a paradigm shift in education policy following the demand of modern times with a focus on knowledge production and value addition.

(Chairman, Arts and Culture NGO)

Others suggested that the current trend whereby Indian students go abroad to study is slowing down, despite the significant number of students who embark on opportunities to study abroad, particularly at a postgraduate level. NGOs felt that there is a shift whereby Indians choose to go abroad to either look for employment opportunities or undertake postgraduate courses:

C There is a slowdown as education overseas does not have the same attraction as in the 90s and early 2000s. Now Indians prefer going abroad for jobs. Infrastructure and internet have made the world smaller so they will tend to study in India at the undergraduate level but leave for postgraduate courses and employment overseas.

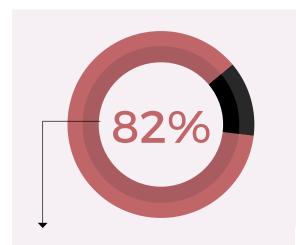
(Director, Education and Disabilities NGO)

NGO respondents suggested that postgraduate education opportunities in India are limited, but the fast-growing Indian economy and rising standard of living might serve as pull factors for Indian talent to join the Indian workforce.

Key policy priorities

Skilled professionals to train people required in NGOs

NGOs had the opportunity to define key policy priorities, which they felt would support their agenda going forward. Scaling up resources for capacity building of the NGO workforce and network of volunteers was seen as a key policy priority going forward. Only 18% (an improvement of 11% on last year) of the surveyed NGO representatives felt that they are unable to access the necessary professionals, who will be able to train the number of



of NGO representatives suggested that they have access to the necessary professionals, who will be able to train the number of people needed in NGOs.

skilled people required for professions and projects in the NGO sector. The shortage of skilled trainers was particularly evident in rural India, where the need for adequate training was seen as even higher due to poorer education and training standards in these rural communities when compared to NGO professionals based in cities.

NGOs based in cities, on the other hand, highlighted that they boast a good number of professionals who can support them in their training and development projects due to their proximity and reach to technical institutes.

Improving the effectiveness of training and capacity building of the Indian workforce, while promoting the optimisation of investment in training, was seen as another key policy priority by NGO representatives. Larger NGOs specialising in education and training, such as Teach for India provide in-house training to their employees and volunteers, but they saw a potential in reducing the amount of time required for training, which currently stands at six weeks.

Role of productivity and capacity building through skills development in society

Skills development benefits the economic productivity of Indian companies and the economy. Nevertheless, the wider role of workforce productivity and capacity building through skills development should not be underestimated, particularly in the societal agenda. NGO representatives had the opportunity to reflect on how skills development initiatives benefit societies and communities at large.

NGO representatives suggested that skills development has the potential to boost the employability of Indian graduates and create more job opportunities, but a fundamental reconsideration of the way skills development interventions are carried out may be required going forward.

⁶⁶ The market is still very immature to realise that capacity and competency building exercise have to start at the ground level. We may produce a million more engineers, by opening another thousand-degree mills, but the problem is with ensuring that they are employable and their skills benefit societies.

(Director, Entrepreneurship and Skills Development NGO)

In line with this, other NGO representatives suggested that, in addition to students and the graduate workforce, improving productivity and increasing the capacity of the wider workforce pool should also be placed high on the agenda. This move was seen as something that would also benefit societies and communities at large, particularly in areas with lower concentrations of HE institutions and graduates.

The future of Indian HE and the World of Work

NGOs' 'big ideas' for how Indian HE can become more industry-relevant and meet the demands of the rapidly evolving World of Work

BIG IDEA





In line with recent technological developments, NGO representatives concluded that more advanced skills development programmes should instil. This would enable the development of innate human capabilities read to face the AI age. They felt that skills development initiatives are over-dominated by basic skills development and focused on roles that are likely to be automated in the future.

66 Advanced skill

development activities should be introduced in by Indian Higher Education. **((** So many new technologies emerged in the last decade - AI, automation, Blockchain, Robotics. These technologies are changing completely the world of work.

(Director, Skills Development NGO)

NGOs felt that there are some fundamental challenges that the sector needs to focus on in line with taking actions to ensure that Indian HE is fit for the rapidly evolving world of work. Ensuring equality through education provision and skills development opportunities were seen as an important consideration. The inclusion of rural communities in education provision and skills development coupled with more diversity in the recruitment of students and academic staff has the potential to improve employability prospects for a wider cohort.

India's higher education system, originally designed to serve the elite, will now have to serve the people.

(CEO, Skills Development NGO)

In light of this, NGOs suggested that universities should provide a level playing field for students who have come from rural areas and those from cities by creating opportunities that enable interlearning. BIG IDEA

NGO representatives suggested that providing access to education and skills development opportunities to the masses is what Indian HE should focus on going forward. This will involve the establishment of sustainable multilateral partnerships involving Government, employers, academia and NGOs to drive this agenda forward.

66 NGOs, whilst having few that might be influential because they have supporters who are influential, these organisations can't teach on their own. They need to bring everybody on the table - whether that's the private sector, government or universities.

(Lead Educator, Teach for India)

Scaling up of HE provision to enable access to higher education, particularly to students who cannot afford it, was seen as key for NGO representatives. However, the Indian HE sector may lack motivated and skilled lecturers to support students in their learning and employability efforts.

CASE STUDY: SOCIAL ENTERPRISE

Consultant, British Council, New Delhi

The role of Indian Higher Education in skills development

Do you think that Indian Higher Education prepares students for the global workplace in terms of understanding international developments?

Social enterprise: Certain HE institutions in India are very much into internationalisation and have developed projects and programmes that connect their students and staff with the rest of the world. But other institutions don't have the resources or personnel to develop their internationalisation and make their teaching models more international – I think forging internationalisation at institutions is very important for preparing students for the globalised world of work and help them understand international developments. There is an urgent need to develop in students 21st Century skills – particularly global and soft ones – like critical thinking, cross-cultural communication, the art of having conversations with people from different cultures and at different levels. Indian universities and colleges still focus largely on theoretical perspectives and practical perspectives are not developed. Part of the problem is academics who don't always have practical knowledge, experience and exposure that can be transferred to students and prepare them better for employment.

The role of Indian Higher Education in skills development

What would be the top three skills which will be important for the future?

<u>Social enterprise:</u> Creativity and innovation I have to say are imperative for the future. We tend to focus on a lot of new-age skills thanks to technological advancements, but I would argue that creativity and innovation are even more important if we want students to be ready for employment.

Developing adaptable graduates who can get out of their fixed mindset and adapt to changing trends in the world of work and also changing requirements from employers is a very important skill. When students join the workforce, many of them will have to change many jobs throughout their life, so they have to have this ability to adapt quickly.

Finally, all students should have the opportunity to develop a global mindset and understanding of different countries and cultures. The world is becoming more globalised, and many Indian graduates will end up either working abroad or here in India working for large multinational companies. If they want to be successful, then having a global mindset is very important.

Ideas for the future of Indian Higher Education

Please provide your top three big ideas on how you feel higher education can improve to fit current international developments and the rapidly evolving world of work?

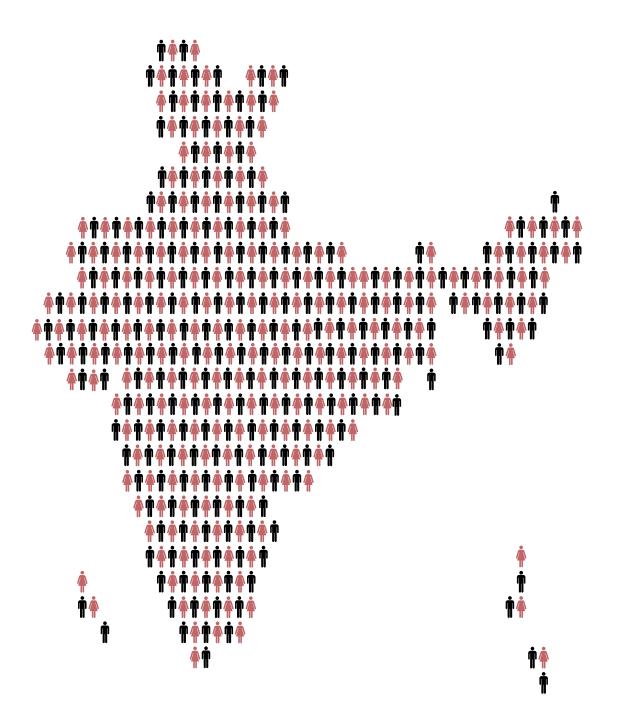
Social enterprise: Indian HE institutions need to broaden their perspective on the subjects and disciplines taught to students - there are way more opportunities beyond traditional disciplines such as engineering and IT. Institutions need to develop new teaching models and introduce courses that will be more relevant in the future. Take, for example, technological advancements which have created a range of new professions and require new skills and knowledge from students entering employment - we need to prepare for that.

Introducing more international partnerships between institutions in India and other parts of the world is also very important – partnerships create a bridge for students to travel and experience new cultures and modes of work. It's the international exposure that is very beneficial to students in preparing them for the world of work, and I think universities and colleges in India can achieve that through international partnerships.

I also think international exchange programmes and projects should be extended to staff and particularly with foreign academics coming to India and working at Indian HE institutions. We Indians are very critical to other open-minded Indians, but when we invite foreign faculty to teach at universities and share new knowledge and use non-traditional teaching models, then we tend to value their perspectives.

So I think the exchange of faculty and particularly inviting foreign faculty in Indian HE can help revamp our institutions and also help students gain relevant knowledge and skills that will make them more employable.

INTERNATIONALISATION IN THE SPOTLIGHT



INTERNATIONALISATION IN THE SPOTLIGHT

This section provides cross-stakeholder insights on the importance of internationalisation of the Indian HE system. Institutional efforts in internationalisation can support students with the development of global mindset, skills and competencies and provide exposure to global economic, political, environmental and societal themes and developments which are redefining the World of Work and society more broadly. As such, internationalisation plays an active role in the development of students as employable graduates.

In this section, we present themes from across the five stakeholder groups pointing to data-driven approaches and other ideas for Indian HE to improve its internationalisation efforts.

Towards comprehensive internationalisation

Some policymakers suggested that Indian HE institutions should focus on embedding comprehensive internationalisation as a way of becoming more global in nature. International faculty and students, developing multilateral partnerships with foreign institutions and the establishment of a body to promote and oversee the implementation of internationalisation efforts were cited as necessary steps to promote comprehensive internationalisation according to policymakers. Embedding key elements of internationalisation at institutional, departmental, faculty and student level was seen by academic staff as an important action that needs to be taken forward if institutions are to become more globally competitive. Staff also argued for this to be initiated at the government level with a designated funding stream for internationalisation of Indian HE; further enhanced and supported at the institutional level.

Development of bilateral mobility programmes

The introduction of a 'study abroad' initiative and provision of more international opportunities for Indian students through bilateral agreements with international institutions was repeatedly mentioned as an important step to support the Indian HE system in becoming more international and globally-competitive. Such exposure to international education and practice would enable students to be ready for a globally competitive labour marketplace.

Academic staff also proposed the development of a 'study in India' programme that will enable crosscultural learning on campus and the development of international classrooms through inviting more international students to Indian HE institutions. Staff highlighted that both government and individual institutions should focus on diversifying the student target market which at present is dominated by students from other South and South-East Asian countries and Africa.

This theme was equally supported by students who advocated in favour of the increasing of funding and scope of inward and outward student mobility programmes to enable them to study internationally whilst inviting students from other countries to experience HE in India. Students proposed that this mobility programme should also extend to faculty to enable the sharing of good international practice.

Internationalisation of teaching and learning

Introduction of a globally-relevant curriculum and the role of technology in the classroom to enable learners to connect with the rest of the world. This can facilitate learning about international perspectives and developments with technology breaking down the barriers to collaboration. This sentiment is echoed in the recently announced National Education Policy reforms too.

Students proposed that the provision of internationally-themed projects and learning opportunities will enable them to develop a truly global mindset and broaden their understanding of the world. According to students, significant resources and innovation should be directed toward facilitating this change in teaching and learning and the recruitment of academic staff with international experience and education. The GIAN initiative, whilst designed to do this, has only benefitted 40,000 students and needs scaling up to impact a country with 37.4 million students enrolled in HE.

Employer respondents to the survey, highlighted the importance of recruitment of international faculty at Indian HE institutions, seeing this as central to internationalisation and quality improvement at universities. Employers felt that faculty from other countries can be beneficial to both educators in India through teacher training and capacity-building and to students via the introduction of elements of global citizenship and development of global classrooms.

Setting international standards in skills development in Indian HE

Employers suggested that international exposure of faculty and students is urgently required as is skills mapping that is bespoke to India's development context yet in line with international standards. Within the context of internationalisation of the student body, employers argued for more opportunities for both inward and outward mobility programmes.

Other employers remarked that cross-cultural training and exposure to globally accepted work practices can prepare graduates for the world of work better. Using technology to partner with international institutions abroad, industry representatives advocated the development of online and blended learning content in partnership with foreign universities to provide students in Indian HE with more exposure opportunities and knowledge of global issues and developments.

The process of aligning India's education and skills development standards with international standards is an important consideration in going forward and will enable the Indian HE sector to become more competitive and develop graduates who are fit for both the Indian and international labour markets according to policymakers.

Funding internationalisation developments

NGOs felt that internationalisation of the Indian HE sector should be encouraged at not only an institutional but also national and state levels. There is a growing recognition of the importance of greater openness of Indian universities to international HE providers, who can bring about good practice in higher education and skills development.

NGO representatives also suggested that the international competitiveness of the Indian HE sector should be encouraged and incentivised by government authorities and departments. This would enable Indian HE to build a global reputation which is seen to be necessary for the attraction of global faculty and students.

The development of support mechanisms to provide funding for institutions to develop their internationalisation strategies and improve their standards was seen as central to internationalise the Indian HE sector according to government representatives. Some policymakers highlighted that the government and allied departments should play a more active role in supporting the internationalisation efforts of universities through financial and other resource-oriented means.

INSIGHTS FOR POLICY AND PRACTICE



INSIGHTS FOR POLICY AND PRACTICE

Based on the findings presented above, this section offers some initial insights and actions relevant to a variety of organisations and individuals with interest in Indian HE skills development and graduate employability initiatives.

Academic staff and HE leadership

Insights provided by academic staff and HE leaders pointed to the widening gap between current teaching and learning approaches and developments in the world of work. Academic staff also highlighted the value of internationalisation in Indian HE emphasising the opportunity to establish international collaborations and partnerships. This report puts forward specific insights and calls to action made by academic staff and HE leaders:

- Embed internationalisation and crossdisciplinarily in the curriculum and pedagogic practice as the basis of preparing future-ready, globally-aware Indian graduates.
- Provide opportunities for students to develop industry-informed, subject-specific skills and soft skills and attributes through project-based and flipped classroom approaches.
- Revamp curriculum content together with teaching and learning practice to include 21st Century subjects and courses influenced by technological advancements including Artificial

Intelligence, Blockchain, Big Data and Robotics.

- Embed employability development modules and pedagogic tools to assist students with the development of employability skills and attributes.
- Intensify the employer engagement to provide students with a platform for the development of industry-informed skills, exposure to business practice, placements and employment.
- Establish a collaborative environment for industry and employers to engage with your institution and provide industry-informed input into curriculum and pedagogies through the establishment of Employer Boards and the appointment of Professors of Practice.
- Work towards establishing international student and academic staff mobility partnerships with HE institutions overseas that will enable the internationalisation of the two cohorts at your institution.

Students

Key findings from students highlighted the limited opportunities for exposure to a practice-based and industry-informed curriculum and pedagogy. Students also emphasised the role their university can play in preparing them to navigate an everchanging world of work but highlighted that access to employability and careers services at their institutions can be difficult. As the key takeaways for Indian students, the report highlights the need to:

- Seek extra-curricular opportunities through your institution or through NGOs in India to enable your personal and professional development through involvement in extra-curricular experience and development of skills and attributes that make you more employable.
- Embrace curricular, co-curricular and extracurricular opportunities involving collaborative projects that will assist with the development of emotional intelligence,

teamwork and other people skills, which are in high demand in the current graduate job marketplace.

- Enrol on subject-specific MOOC courses that will give you access to the latest theoretical and practice perspectives and help you see your course through an international and crossdisciplinary perspective.
- Enrol on personal and professional development MOOC courses to develop new skills and competences and brush up your teamwork and communication abilities with other students on the course.
- Create a digital professional identity on professional media platforms, such as LinkedIn that will make you stand out from the crowd and give you a platform to network with likeminded professionals and access training and employment opportunities.

Employers

Employers and industry representatives highlighted the lack of preparedness of Indian graduates for the world of work. Employers also defined the nature of Indian HE's relationship with industry, as being closed and isolated despite the willingness of employers to partner with academic institutions. This report puts forward specific insights and actions aimed at employers and industry representatives as a response to these and other key findings:

- Explore university-industry partnership opportunities with universities and colleges as a platform to collaborate on the provision of training and skills development opportunities to students and graduates and conduct graduate talent recruitment.
- Establish your employer presence on campus through recruitment events and job fairs with the view to promote your organisation's vision, mission and values to students and graduates on

campus and use this as an opportunity to boost your graduate talent recruitment.

- Seek incentivisation from the Government to work together with HE institutions on the establishment of skills development initiatives through relevant government-led frameworks in place, such as Sector Skills Councils and India's International Skill Centres.
- Provide input into the university curriculum through the development and implementation of 'new age' academic courses and programmes to provide Indian student and graduates with industry-relevant knowledge and skills.
- Explore further skills development resources and opportunities at national and state events led by the Confederation of Indian Industries and Federation of Indian Chambers of Commerce in India.

Policymakers

Policymakers highlighted the need for universities and colleges to internationalise and innovate their curriculum to facilitate a more holistic personal, academic and professional development of Indian students and graduates. They also pointed to the need to embed attributes, such as 'new age' skills and attributes, entrepreneurship and innovation. For policymakers, this report highlights the need to:

- Nurture partnerships between Indian HE institutions and universities internationally with the view to introducing a global curriculum in line with international developments across subject disciplines identified as a priority for India going forward.
- Explore and invest in the development of large-scale inward and outward academic staff mobility programmes that will enable Indian academics to gain an international perspective in their subject discipline, acquire innovative teaching and learning approaches from their international peers and bring back good international practice to support Indian campus internationalisation.

- Support the development of further inward and outward student mobility programmes that will enable Indian students to develop global competencies and enhance their employability through global experience and exposure.
- Incentivise university-industry collaborations with a focus on the design, development and delivery of new courses and modules in the areas of Big Data, Artificial Intelligence, Blockchain and Robotics.
- Support the establishment of university-industry partnerships with a focus on the development of graduate-level career and placement opportunities across subject disciplines of national importance.
- Utilise Big Data through professional media platforms, such as LinkedIn India as a source of mining trends in relevant skills and professions in demand that will enable the development of industry-informed curriculum that is fit for the world of work the requirements of employers and key industries.

Social enterprises

Findings from NGOs highlighted the important role of social enterprises in the provision of education and skills development opportunities but also the lack of a skilled NGO workforce. NGO representatives set as a priority the development of a widening participation agenda that will enable India's tertiary age population to have access to relevant education and higher-level skills development opportunities. Key recommendations include:

- Explore partnership opportunities with industry and employers to provide support to disadvantaged youth and students with their personal, academic and professional development.
- Nurture partnerships with large-scale social enterprises internationally to support your vision and mission and scale up your operations and impact in the education and skills development agenda in India.
- Make use of government and industry data

on workforce and workplace trends to make informed decisions with regards to refining your organisation's curriculum content and teaching and learning practice

- Utilise free and affordable personal and professional development platforms, including MOOC courses with a view to up-skill and re-skill your network of trainers and provide exposure opportunities to teaching and learning in a global context.
- Consider the inclusion of subject-specific and skills development MOOC courses as a source of international and employability perspectives into your organisation's teaching and learning practice.
- Explore crowdfunding opportunities and develop international crowdfunding campaigns to scale up the reach and impact of initiatives in education and skills development championed by your social enterprise.

CONCLUSION

The purpose of this report was to explore the current higher and graduate-level skills landscape in India from the perspective of a wide range of stakeholders. In so doing, it builds on the findings of the 2018 report and updates it with new data, insights and cases.

Through detailed interviews and surveys, we have garnered the views of over 1000 HE leaders, educators, students, employers and NGOs on the challenges and opportunities for HE in addressing the talent mismatch and graduate-level skills development challenges facing India.

Respondents identified several challenges for HE, notably:

- The curriculum was often too theory-based and lacked opportunities for practical application of knowledge in the real-world.
- There was a lack of an enabling environment where entrepreneurship, innovation and worldleading research culture can thrive.
- The provision of relevant courses and future skills at HE institutions with a focus on Al, Automation, Blockchain, Robotics and Big Data is either limited or not present.
- Internationalisation, a critical enabler of employable graduates, was not embedded into the heart of the institutional vision, mission and purpose.
- The need for an employer engagement framework for input into the further development and delivery of HE.

Overall, there was a consensus amongst respondents that there is much more to be done within HE to tackle the graduate talent gap and to ensure Indian graduates have the opportunity to develop industry-relevant and graduate-level skills. Generally, respondents advocated the expansion of the higherlevel skills development agenda through proactive investment and collaboration but also the quality and relevance of this skills provision within HE through the setting of international and professional standards that respond to the rapidly changing world of work and incorporate key international developments.

The report concluded by summarising some key actions, specific to each stakeholder group, that

could inform enhanced skills provision in the HE sector which included establishing an enabling environment to nurture the development of partnerships between HE and employers (both within India and overseas) to internationalise the curriculum and embed practice-based education.

To date, the skills development agenda in India has been largely directed at the development and delivery of foundational life skills. Some recent developments and initiatives led by MSDE, however, point to a shift whereby higher-level skills are gaining recognition as they often contribute to higher economic productivity and well-being, promote innovation and develop the capacity for the Indian workforce to address the country's social, economic and environmental challenges and opportunities. The 2018 FICCI Visioning India 2030 report, however, points to current challenges to understanding and developing higher-level and specialist skills to futureproof Indian graduates joining the workforce (FICCI 2018). This study has, therefore attempted to further our understanding of this topic by giving a voice to five different stakeholder groups - all who have a stake in the future of higher-level skills development in India.

Further work in this area is needed to enable universities, government, industry and other stakeholder groups to meet the demands of a growing global economy and a favourable Indian demographic. It is acknowledged that while the present report represents a modest contribution, we intend to continue this research on an annual longitudinal basis to deepen our understanding of this important global challenge in the Indian context.

This second Global Talent in India report and its findings aim to provide a framework, which will be advanced over the coming years of this longitudinal study. For now, it opens up a dialogue on the importance of the design, development and delivery of higher-level skills development interventions in India and further afield.

Through future research, we will build on the insights in this report to develop a nuanced longitudinal understanding of how key stakeholders, both in India and here in the UK, can work together to bridge the education to employment gap through a focus on higher-level skills development.

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APPENDIX 2 - Detailed methodology and sample characteristics

1. Profile of Organisations Participating in the Study

- Higher Education leaders and academic staff included representatives from the University of Mumbai, University of Delhi, Tata Institute for Social Sciences, IITs and IIMs, as well as representatives from independent technical, liberal arts and engineering colleges affiliated to over 15 universities across India.
- Participating students in HE institutions included representatives from the University of Pune, University of Delhi, Symbiosis International University, University of Mumbai, IITs, IIMs, in addition to independent technical, engineering, social sciences and liberal arts colleges.
- Employers included senior representatives from large international organisations, such as Ali Baba India, Google India, Deloitte, Tata Motors, Michael Page and a range of small and medium-sized businesses established in India across key sectors of the economy.
- Policymakers included representatives from the Department of Education in Delhi and Madras, the National Skills Development Corporation (NSDC), Ministry of Skills Development and Entrepreneurship (MSDE), Sector Skills Councils, the Ministry of Human Resources Development and other government organisations.
- Third sector organisations included representatives of NGOs involved in education and skills development, social entrepreneurship, gender and minority empowerment, arts and culture whereby prominent organisations included the International Labour Organisation, British Council India, Teach for India, U and I, E and H Foundation.

2. Research Tools, Study Sample and Profile

A total of **55 semi-structured Interviews** with representatives from the following stakeholder groups have been conducted (featuring at least 5 interviews for each stakeholder group):

- Higher Education (e.g. senior leadership and student representatives).
- Policymakers (e.g. representatives of various governmental bodies).
- Employers (e.g. employers from key sectors of the Indian economy).
- Third sector organisations (e.g. NGOs and community organisations).

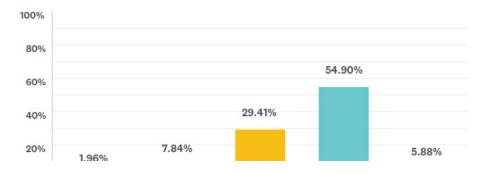
Building on the semi-structured interviews, **1010 survey questionnaires** were distributed online and completed by representatives from each of the five stakeholder groups:

Higher Education (senior leadership and academic staff) - 194 responses.

Profile of Respondents

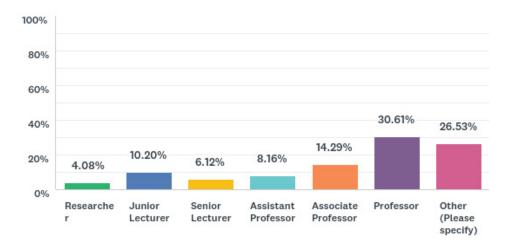
1 Qualification

Q2 What is your highest qualification?



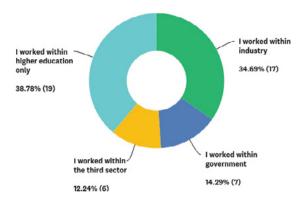
2. Position in institution





3. Experience with industry, government or the third sector

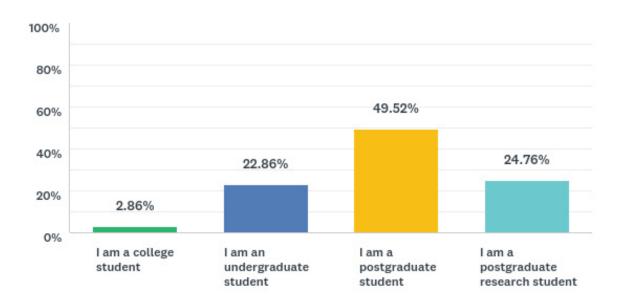
Q4 Have you, as part of your past experience, worked within industry, government or the third sector?



Higher Education (students) - 218 responses.

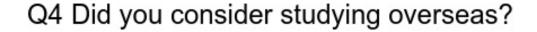
Profile of Respondents

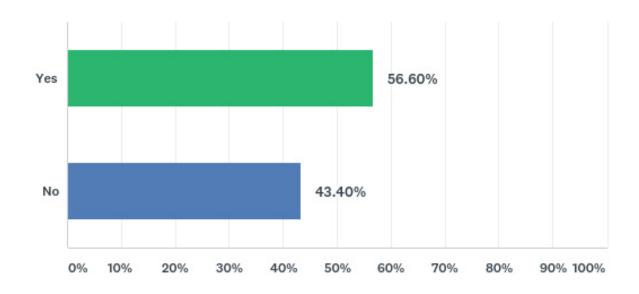
1. Level of study



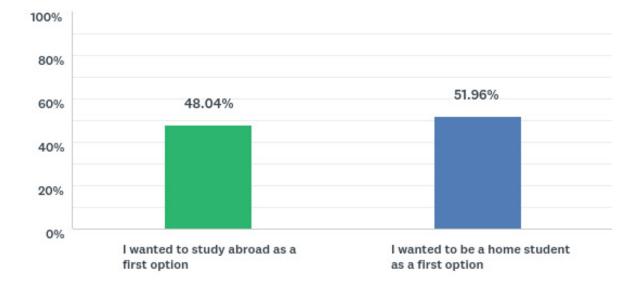
Q2 What is your level of study?

2. Study abroad considerations





3. Your first study option



Q5 Which was your first option?

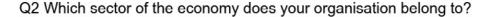
Employers (from key sectors of the Indian economy) - 288 responses.

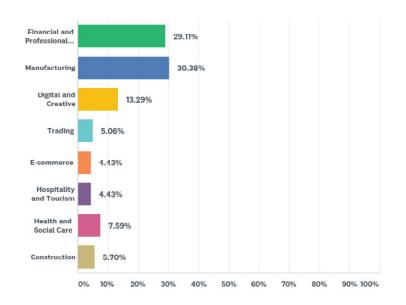
Profile of Respondents

1. Position in organisation

• 64% of the respondents held senior management positions in their organisations, e.g. CEO, Managing Director, Head of Department.

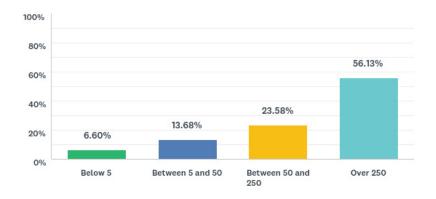
2. Sector of the economy



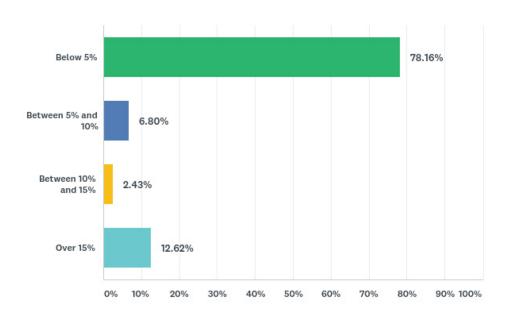


3. Size of organisation

Q3 What is the size of your organisation in terms of number of employees?

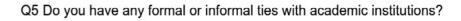


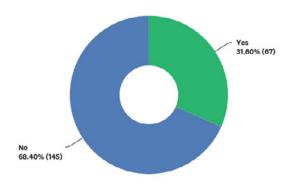
4. Proportion of non-Indian workforce



Q4 What proportion of your workforce in non-Indian born?

5. Ties with academic institutions





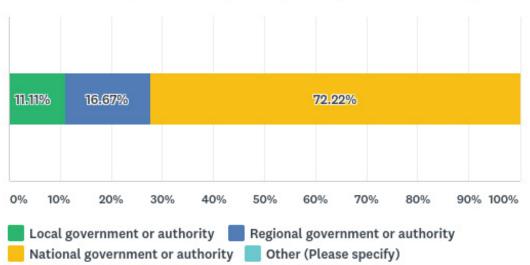
Policymakers (e.g. representatives of various governmental bodies) - 155 responses.

Profile of Respondents

1. Position in organisation

• 61% of the respondents held senior management positions in their organisations, e.g. CEO, Director, Principal Consultant, Principal Secretary.

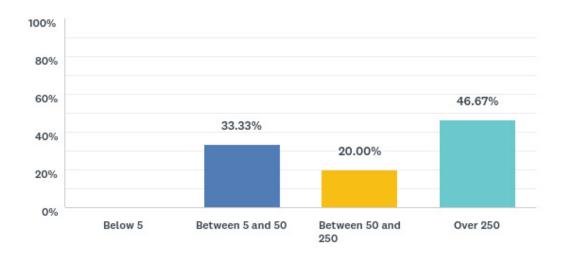
2. Policy community (local, regional, national)



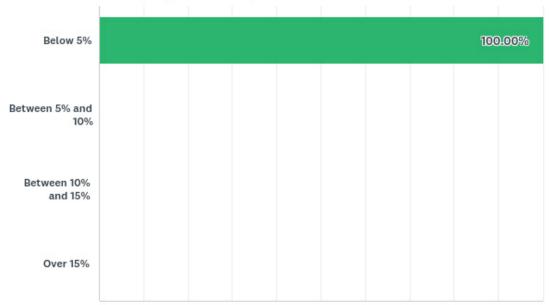
Q2 Which policy community does your organisation belong to?

3. Size of organisation

Q3 What is the size of your organisation in terms of number of employees?



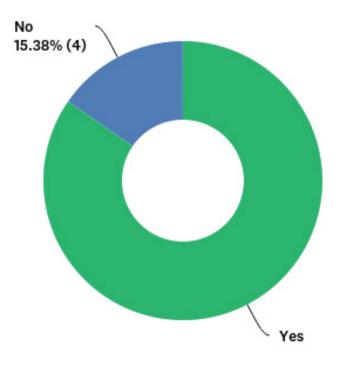
4. Proportion of non-Indian workforce



Q4 What proportion of your workforce in non-Indian born?

5. Ties with academic institutions

Q5 Do you have any formal or informal ties with academic institutions?

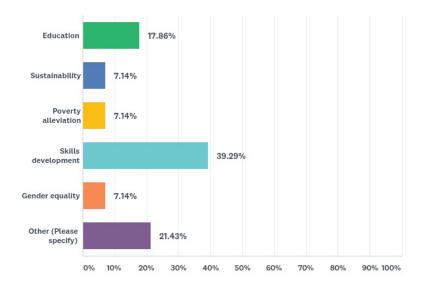


Profile of Respondents

1. Position in organisation

• 56% of the respondents held senior management positions in their organisations, e.g. CEO, Project Manager, Managing Director, Programme Officer.

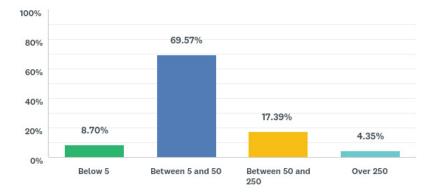
2. Area of economy or society (education, sustainability, gender equality)



Q2 Which area of economy and society is your organisation related to?

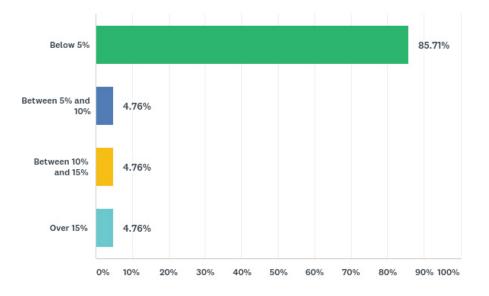
3. Size of organisation

Q3 What is the size of your organisation in terms of number of employees?



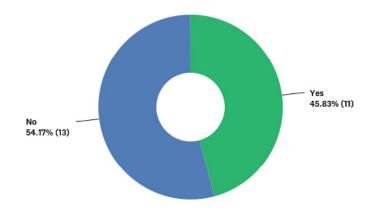
4. Proportion of non-Indian workforce





5. Ties with academic institutions





3. Focus Groups with Students

Global Talent Focus Groups

• Three focus groups were held with Indian undergraduate and postgraduate students. They were held in Pune, Mumbai and Delhi in February and June 2018 to gather students' views on the role of HE in skills development and to provide some key ideas for the future of HE.

4. Geographic Spread of Participants

The interviews and survey questionnaires received responses from over 10 Indian cities, amongst which were Ahmedabad, Chennai, Hyderabad, Jaipur, Kolkata, Mumbai, New Delhi, and Pune.

GLOBAL TALENT IN INDIA: CHALLENGES AND OPPORTUNITIES FOR SKILLS DEVELOPMENT IN HIGHER EDUCATION – 2nd EDITION, 2019

Clobal Talent in India: Challenges and opportunities for Skills Development in Higher Education is second in a longitudinal study on the higher-level skills development challenges facing global higher education.

Presented by the **Global Talent Lab** in the UK, the research reported here draws on a range of perspectives from key stakeholders in the Indian H.E. landscape.

C This is a timely and highly useful report. Historically the UK has a strong HE presence in India but cannot take it for granted. Intelligence on skills and development needs will help UK universities stay relevant and at the forefront of this globally competitive market. Reference to opportunities in the voluntary and social enterprise sectors is especially welcome.

Professor Nick Petford, Vice-Chancellor, University of Northampton

1 The report addresses a key challenge for Indian policymakers, HE leaders and employers. It provides further insights into the current landscape on graduate skills from stakeholders in the area. Building on the work in the 1st edition of Global Talent in India, the report provides evidence, data and views to shape this field of study and impact a key driver for economic development. Highly recommended."

Delia Heneghan, Director of Education - India, Sannam S4



