THE INDIAN STATES

OPPORTUNITIES FOR INTERNATIONAL
HIGHER EDUCATION COLLABORATION

January 2015

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CONTENTS

FOREWORD

India will remain a top priority for the UK over the next decade.

The British Council has been on the ground in India for almost 70 years and we are currently present in 9 cities across the country. This gives us first-hand insight and understanding of government and institutional priorities. Higher education in India is undergoing significant reform; we are witnessing a rapid move towards greater state autonomy, as responsibility for higher education budgets and governance are devolved from central to state governments. As the state institutions and their affiliated colleges account for 97% of higher education enrolment in India, this systemic change, which began in 2013, presents emerging opportunities for UK universities and colleges to engage in new international partnerships with India at institution and system levels.

We are delighted to produce this report in partnership with Ernst & Young and the UK Higher Education International Unit to provide the latest insights into the Indian States. In this report, we also undertook a deeper analysis into 5 states where conditions are more favourable for international collaboration.

While the report is primarily produced for the UK sector, our conversations, interviews and survey questions with Indian states and institutions have prompted them to think more internationally and become aware of potential areas of engagement to strengthen their international relationships with the UK.

I trust this report will be both insightful and help shape your strategy for partnerships between the UK and India.

We look forward to continuing to work with you.

Rob Lynes
Country Director, India
British Council

The visit to India of Minister Rt Hon Greg Clark last month, on his first overseas visit, signifies the importance of this bilateral higher education relationship.

India will soon have the largest tertiary education age population in the world and will be a vital source of the global graduate workforce as well as a major producer of future research talent India's economy is likely to be 3rd largest in the world by 2030 which will drive up demand for high quality education and internationally recognised qualifications. UK universities have strong links with India, but with the increasing autonomy of the states, it is no longer enough to view India in broad national terms

– we need to understand the demands and opportunities for engagement at the state level.

This research will play an important role in fostering this better, more granular understanding of India, and helping universities engage in the most productive ways with its higher education system. For our part, the International Unit will continue to work closely with the British Council in continuing to develop mutual understanding and dialogue with our Indian counterparts.

Vivienne Stern
Director
UK Higher Education International Unit

EXECUTIVE SUMMARY

THE RISE OF THE STATES

The expansion and reform of the higher education system in India will be driven by the Indian states. As states receive more autonomy, fresh policies and opportunities are beginning to emerge for international collaboration with new partners in the state and private sectors. While the central government will continue to govern the central universities and institutes of national importance, a rapid devolution of authority and budgets towards the states is currently underway. These changes will affect the 97% of the higher education sector which come under their control, including many private colleges. This presents a significant opportunity for partnership and signals a potential shift in strategic approach towards international engagement with India. There has never been a better time to collaborate with India in higher education.

In light of these developments, this report aims to increase the understanding of the higher education sector in India at state level. It gives a data overview of all the states in India and analyses in depth the opportunities for international collaboration in five states, based on interviews, surveys and available data on state policies and individual institutions.

THE INDIAN HIGHER EDUCATION SYSTEM IS LARGE AND GROWING

The Indian higher education system is the second largest in the world in terms of enrolment, consisting of nearly 30 m students enrolled in 48,500 institutions. The private sector over the last decade has played an instrumental role in the growth of the system, with private unaided institutions accounting for almost 60% of enrolment in 2011-12. Out of the 190 state private universities in the country, 176 institutions have been established in the last decade, with strong footprints in Rajasthan, Uttar Pradesh, Haryana, Gujarat and Himachal Pradesh. While Indian higher education offers exciting opportunities due to growing enrolments, quality and relevance of teaching and learning, research and

teaching capacity and limited investment remain key challenges. However, in addition to the reforms under the 12th five year plan for higher education the government and private sector are putting in place significant initiatives which aim to contribute to improvements and innovations in the sector.

THE NEW CENTRAL GOVERNMENT HAS INITIATED SEVERAL MEASURES TO TACKLE THE CHALLENGES PLAGUING THE SYSTEM

The new central government, which came into power in May 2014, is putting in place various measures to improve the employability of Indian graduates and to position India prominently on the global higher education landscape through initiatives in skills development, digitisation, and research. While the government is preparing a new policy for education, which should be completed in the coming year, several new flagship initiatives specifically related to potential international collaboration have recently been launched:

- **SWAYAM (Study Webs of Active-learning for Young Aspiring Minds):** A new national Indian MOOC platform, offering online courses in Management, Social Sciences, Basic Sciences, Engineering and Energy, on which international universities have been invited to offer postgraduate courses.

- **NSQF:** The new National Skill Qualification Framework seeks to promote vocational education and training by facilitating seamless mobility between general and vocational streams.

- **Bachelor of Vocation:** New B.Voc courses are being designed and delivered under the NSQF and National Vocational Education Qualification Framework (NVEQF) schemes.

- **Global Initiative for Academic Networks (GIAN):** The Government will support Indian universities to invite eminent scholars and researchers both inside and outside the country as guest speakers/ scholars.

- **Connect to India Programme:** Aims to attract undergraduate students from other countries to spend time in India on short courses or summer schools under a shared funding model. A pilot scheme was launched in July 2014 initially with a limited number of Indian universities, but will soon be expanded to others.

In addition to these central initiatives, some state governments are also setting up various programmes, particularly in faculty and student mobility.

THE STATE GOVERNMENTS HAVE BEEN EMPOWERED TO IMPROVE THEIR SYSTEMS THROUGH RUSA

Rashtriya Ucchatar Shiksha Abhiyan (RUSA), a scheme launched in October 2013, devolves more power to the states but makes them more accountable for their funding to state-funded universities and colleges. While internationalisation of higher education institutions is not one of RUSA's explicit goals, state governments can allocate funds for such initiatives under different budgetary heads.

Given the increasingly important role state governments will play in the Indian higher education sector, we have explored international collaboration opportunities in five states: Punjab, Gujarat, Tamil Nadu, Karnataka and Odisha. These states have relatively mature enrolment ratios and relatively high intent to improve the quality of education.

The details of these initiatives is available on page 15 and 16

EXECUTIVE SUMMARY

Based on a prioritisation framework that looked at the scale, maturity, quality of the higher education system, political climate and openness to collaborate, five states have been identified to understand potential international partnership opportunities:

State	HE Priorities for the next 5-10 years	International collaboration opportunities
Gujarat	• Increase GER from the current 18% to 32% by 2022 • Marked improvement in the proportion of 'A' accredited institutions in the state • 75% graduates employable by the end of the decade	• Providing access and improving excellence and physical infrastructure are top of the agenda for Gujarat government where it would welcome international support • Faculty development and exchange and curriculum development are key areas for international collaboration to improve the quality of teaching. The Government will fund foreign faculty who wish to come and teach in Gujarat • Employability of graduates by providing training in transversal skills (such as interpersonal, communication, English Language, etc.) and ICT skills
Tamil Nadu	• Increase GER from current 42% to over 50% and make the state an innovation centre and education hub by 2023 • Good progress has been made on access and equity in HE; a strong focus on access for women and disadvantaged groups and skills for employability and language training for university students remains a key focus	• Expansion of higher education and enhancing research capability • Curriculum development partnerships to improve quality and relevance to industry • Providing graduate skills courses, including language training • Partnerships which support widening access and participation • Design and use of technology-enabled learning
Punjab	• Provide access to higher education to 100% by 2022 focusing on rural and tribal areas • Increasing quality and employability of graduates	• Given the state's increasing focus on vocationalisation of higher education, international collaborations that aid employability will be promoted • Further collaborations for research, students/faculty exchange, curricula development, infrastructure development and sports will be welcomed
Karnataka	• Achieve GER of 30% by 2020 from current 25.5% • Create new research departments and universities • Reform of undergraduate curricula	• Although the state government does not have any specific plans for internationalisation, there is a key focus on increasing the quality of research collaborations in STEM, ICT, medical science. • Interest in student and faculty exchange; supporting early stage research experience, faculty development through workshops on international best practices, effective use of technology in teaching and learning and creating a state accreditation system, institutional QA and a state HE ranking agency
Odisha	• Achieve GER of 32% by end 2022 • Achieve 25% higher enrolment of rural students, SC and ST students and girls by 2022 • Promotion of ICT and R&D	• The key focus of the state is on access and equity, skills development and compulsory vocational courses for UG students. International collaboration in employability, skills and curriculum development for additional courses would be of interest • There is a demand for expert foreign faculty to come and train local faculty members and send local teachers abroad for training.

EXECUTIVE SUMMARY

WHILE THE INTERNATIONALISATION IN THESE STATES CURRENTLY ONLY EXISTS IN POCKETS…

A significant number of students go abroad from these states for higher studies; however inbound student mobility is limited except in the southern states. International collaborations for student exchange, faculty exchange and development, curriculum development, joint research, etc., have been driven by individual institutions, rather than through state policies, with the private sector accounting for a majority of collaborations. Some research-focused government institutions have also been proactive in this area.

…STATES HAVE EXPRESSED A KEENNESS TO INCREASINGLY ENGAGE WITH FOREIGN INSTITUTIONS

The states covered in this report are at different stages of maturity and have differing higher education priorities and ambitions.

In general, while states are willing to play an enabling / facilitating role with respect to international collaborations, they expect individual institutions to drive such initiatives. They also expressed a keenness to attract greater numbers of faculty and students from abroad, in preference to the one-way flow of Indian students to the UK. They appear particularly interested in long term mobility options with employment potential in the host country.

Some state governments appear to be wary of the private sector entering into arrangements with international institutions, some of which may not be functionally active or are used as a 'marketing tool' to attract students.

In broad terms, of the five states examined, Gujarat appeared particularly proactive when it came to international collaboration; others, while encouraging, seem to have a more reactive / opportunistic approach to internationalisation.

COLLABORATION OPPORTUNITIES: INSTITUTIONS

Most states have given significant amount of autonomy to their institutions to enter into tie-ups with whomsoever they may deem fit at the institution level, although issues remain around recognition at a national level. Our study indicates that private institutions have been quicker and more active in forming international connections than central and state institutions, which are generally quite risk averse.

Some observations include the following:

- While central, state and private universities are equally interested in student and faculty exchange programmes, central and private institutes have also expressed a keen interest in international collaborations for research.

- Most of the private institutions showed willingness to engage in curriculum development and joint degree programmes, whereas only curriculum development was on top of the chart for a few state and central institutions.

- While institutes in Gujarat and Karnataka have interest in research and curriculum development, institutes in Tamil Nadu and Odisha are keen on collaborating on joint degree programmes.

The impediments to collaboration include: lack of funding, quality assurance mechanisms, mismatch in curricula and academic calendar, quality, availability of faculty, visa issues in inviting international faculty to India and a restrictive regulatory environment.

A majority of the respondents expressed interest in collaborating with specific countries, including the UK, US, Canada, Australia and other European countries. However, they are open to collaborating with best institutes irrespective of their origin.

While international collaboration in higher education is still in its nascent stages in India with no clear international strategy in place, the increasing focus on quality, research and student / faculty exchange, supplemented with government initiatives and state encouragement is offering significant collaboration opportunities.. As autonomy increases, these are likely to be institution-driven.

The new governance and accountability framework of RUSA suggests opportunities for multi-dimensional, system-wide support for higher education reform at state level. These need to be explored further with individual states, but could include governance systems, quality assurance approaches and structures, funding mechanisms, impact assessment, faculty development, internationalisation and leadership development.

OVERVIEW OF HIGHER EDUCATION IN INDIA

INDIA'S DEMOGRAPHIC PROFILE COUPLED WITH ECONOMIC GROWTH IS DRIVING THE DEMAND FOR HIGHER EDUCATION

BY 2030, INDIA IS ESTIMATED TO BE THE THIRD LARGEST ECONOMY AND WILL BE HOME TO THE LARGEST AND ONE OF THE YOUNGEST POPULATIONS IN THE WORLD

- India is expected to become the most populous nation by 2030 reaching 1.46 bn, up from 1.25 bn in 2013 and its urban population is expected to reach 600 m by 2031 (41% of total), up from 377 m (32% of total) in 2011

- It will also have one of the youngest populations in the world by 2030, with a median age of 32 years, as compared with 35 in Brazil, 39 in the US, 42 in the UK, 43 in China and 52 in Japan

- The Indian economy is expected to grow at a Compound Annual Growth Rate (CAGR) of 6.7%, the fastest in the world, to become the third largest economy by 2030, at GBP 8.6 trillion after China and the US

- Industry and services sectors are expected to contribute 92% of India's GDP by 2030 and require a net / gross incremental workforce of 145 m / 250 m respectively

Figure 1: Estimated population age 18 – 23 years in India in 2030 (in m)
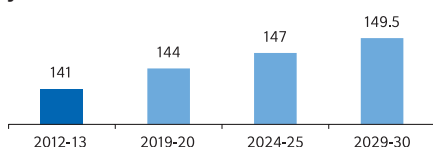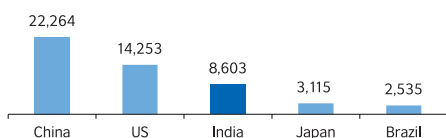

2012-13	2019-20	2024-25	2029-30
141	144	147	149.5

Figure 2: Real GDP in 2030 (in GBP bn)
Real GDP in in USD bn at 2005 PPP converted to GBP

China	US	India	Japan	Brazil
22,264	14,253	8,603	3,115	2,535

Growth rate of respective countries (FY12–30)

6.6%	2.5%	6.7%	1.1%	3.9%

Source: Higher Education in India: Vision 2030, EY-FICCI; Ministry of Labor; RBI; Census 2011; EY Estimates

THE GROWING MIDDLE CLASSES ARE SPENDING MORE ON EDUCATION

Increasing income levels have translated into increased consumption by households. Examples of growth areas:

- India has 243 m internet users out of which 185 m are total active mobile internet users

- India has 762 m active mobile connections and 111 m smartphone connection, which makes India the second largest country by number of mobile phones in use

- Sales of personal computers in India rose 25.6% in the three months ending June 2014 to 2.55 m units as compared to 2.03 m units in the same period last year

- Tablet sales in India increased from 0.35 m in 2011-12 to 3.35 m in 2013-14

Figure 3: Indian population by income bracket (%)

Poorest | Poor | Middle class | Upper middle class | Rich
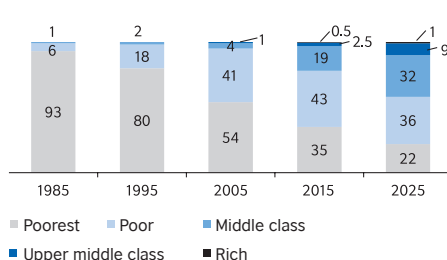
CAGR (2015–25):

Rich: 9%   Upper Mid: 16%   Mid: 7%

According to the Indian Market Research Bureau's survey on middle class expenditure, the proportion of the budget for education has risen significantly, from 7% of the total household expenditure in 2008 to 10% in 2010 and 15% in 2013. This will result in greater spends on higher education.

INDIA'S HIGHER EDUCATION SYSTEM IS THE SECOND LARGEST IN THE WORLD IN TERMS OF ENROLMENT AND LARGEST IN TERMS OF NUMBER OF INSTITUTIONS, WITH 29.6 M STUDENTS ENROLLED IN OVER 48,500 INSTITUTIONS

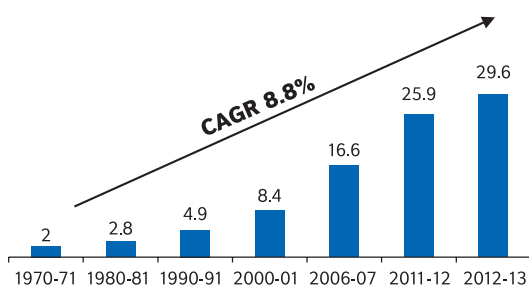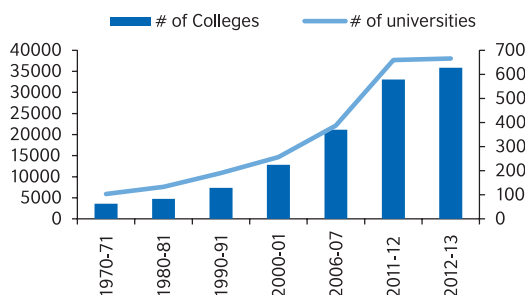**Figure 4: Enrolment in higher education institutions in India (m)**

Figure 5: Growth in number of institutions

- Enrolment of students in higher education institutes has grown 14 times in the last four decades, increasing at a CAGR of 11% since 2000–01

- Indian higher education institutions have the third-largest enrolment in the world after China and US

- The number of universities / institutions of national importance has grown 7x in the last four decades - 665 Universities, 35,829 colleges and 11,443 stand alone Institutions in 2012-13

- India has added more than 23,000 colleges since 2000-01

Stream	Level of study	Mode of delivery	Geography
• Professional education programmes including engineering, medical, law, management and other vocation-based courses such as hospitality and architecture account for 33% of enrolment in the country whereas the general programmes including arts, science, commerce account for 67%. Furthermore, the demand for professional courses has grown at the rate of 20% compared to 6% for general courses (2007–2012)	• Degree programmes account for 91% of enrolment, whereas Diploma/Certificate or integrated programmes account for the remainder • Out of all degree courses, 87% of students are enrolled in undergraduate programmes, 12% in postgraduate programmes and 0.5% in doctoral programmes	• Around 3.5 m students are enrolled in distance education programmes offered by 197 institutions in the country and 26.1 m students are enroled in regular brick-and-mortar institutions. In distance education, IGNOU accounted for 17% of enrolment in 2011–12 and 13 government open universities for 26% in 2011–12 • Enrolment in distance education has more than tripled in the last decade (CAGR: 11%)	• Uttar Pradesh, Maharashtra, Tamil Nadu, Andhra Pradesh, Karnataka, Madhya Pradesh, West Bengal, Rajasthan, Gujarat and Bihar account for 78% of enrolment. They are among the top 10 states in terms of enrolment of students to higher education programmes in their institutions

Source: EY-FICCI Higher Education Reports 2012 and 2013, AISHE 2012 −13
Refer to Annexure for details on accreditation boards, structure of Indian higher education system, statutory bodies in higher education and role of central/state government

THE PRIVATE SECTOR IS PLAYING A VITAL ROLE IN THE GROWTH OF HIGHER EDUCATION IN INDIA, ACCOUNTING FOR 73% OF INSTITUTIONS AND 58% OF ENROLMENT, AND DOMINATING THE PROFESSIONAL COURSES LANDSCAPE

Table1: Growth of enrolment in the Government of India's 11th Plan period (2007–12)

	2006-07		2011-12		Increase	CAGR
	Enrolment (m)	Percentage of total enrolment	Total enrolment (m)	Percentage of total enrolment	Enrolment (m)	
Central	0.3	2.2%	0.6	2.6%	0.25	12.7%
State	6.0	43.6%	8.4	38.5%	2.4	6.9%
Private	7.5	54.2%	12.8	58.9%	5.3	11.3%

- The share of unaided private institutions out of the total number of institutions increased to 58% in 2013, up from 43% in 2007, while enrolment in these institutions has increased almost two-fold

- 73% colleges are privately managed; 58% private unaided and 15% private aided. Andhra Pradesh has more than 80% private unaided colleges

- More than 73% of colleges, aided and unaided, are run by the private sector. These account for 58% of the total enrolment in higher education institutions in the country

- Between 2007 and 2012, the number of private institutions, including colleges which award diplomas, grew from 18,145 to 29,662

Figure 6: Number of state private universities
2014 figures-as of Nov 24, 2014 data from UGC website
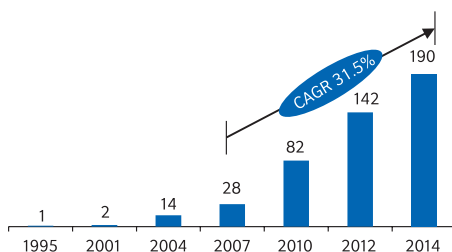
- More than 162 private state universities were established from 2007 to 2014. These have been growing at a CAGR of 31.5% (2007–2014)

- Rajasthan, Uttar Pradesh, Haryana, Gujarat, and Himachal Pradesh together have more than 52% of private universities in the country

- Many corporate and philanthropist organizations have set up higher education institutions in India. These include Shiv Nadar University (est. 2011), Azim Premji University (est. 2011); Jaypee University of Engineering & Technology (est. 2010); Dr. K.N. Modi University (est. 2010); O.P. Jindal Global University (est. 2009) and BML Munjal University (est. 2014)

Source: Twelfth Five Year Plan: Chapter on higher education; UGC; AISHE 2012-13; Press articles; Twelfth Five Year Plan (2012–2017)

"In the future, we are likely to see a significant rise in the number of private universities in India, as universities, under one umbrella, can provide general undergraduate courses along with specialised courses such as engineering, management, journalism, law, and art and design, among others."
The Hindu Businessline

SIGNIFICANT NUMBER OF INDIANS ARE GOING ABROAD FOR HIGHER STUDIES, BUT INBOUND MOBILITY AND INTERNATIONAL COLLABORATIONS ARE LIMITED IN NUMBER

Outbound Mobility

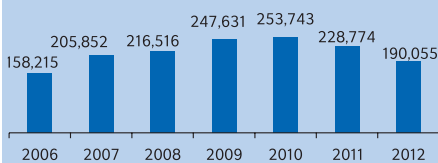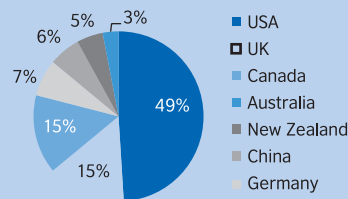**Figure 7: Number of Indian students studying in higher education institutions abroad**

Year	Students
2006	158,215
2007	205,852
2008	216,516
2009	247,631
2010	253,743
2011	228,774
2012	190,055

Figure 8: Outbound students from India (2012) — by country of destination

- USA 49%
- UK 15%
- Canada 15%
- Australia 7%
- New Zealand 6%
- China 5%
- Germany 3%

- Quality of education, scholarship opportunities and options to work while pursuing studies and after completion of the degree are the most important factors for Indian students while selecting a foreign study destination
- The number of students taking the GRE has increased from 53,505 in 2012-13 to 84,841 in 2013-14 and students taking GMAT has increased from 25,268 in 2012-13 to 28,325 in 2013–14

Inbound Mobility

Figure 9: Inbound mobility of international students by origin (by percentage)

- Asia 66.7%
- Africa 19.4%
- North America 3.3%
- Europe 1.0%
- Oceania 0.9%
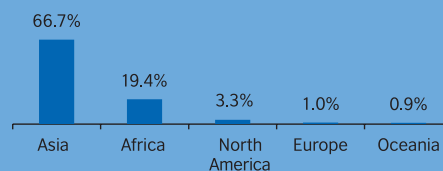
- In 2012, 31,000 foreign students came to India to study in the country's higher education institutions
- Only around 5% of international students who studied in India are from developed regions such as North America, Europe and Oceania

International collaborations

Figure 10: International higher education partnerships by type (2010)

Total=631

Type	Number
Joint campus	5
Twinning	49
Programmatic collaboration	60
Twinning or programmatic collaboration	77
Functioning from home campus	440
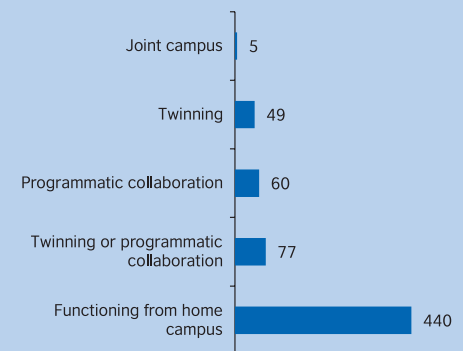
International higher education institutions have a low number of collaborations with Indian higher education institutions due to the following reasons:

- Approval systems and bureaucratic processes are not clear and/or not conducive to international collaboration.
- Information about the Indian sector is not comprehensive; international higher education institutions find it difficult to assess the quality and reputation of new partners in India.
- Restrictions in academic collaboration around curriculum, recognition of qualifications and credits, and funding can be barriers

*Figures do not include students who come to India on exchange programs

Source: EY-FICCI Higher Education Reports 2012 and 2013; UNESCO; SANNAM S4; Inside India, A new status quo, British Council

INTERNATIONAL EDUCATION HUBS SUCH AS THE UK, US, CANADA AND AUSTRALIA ARE ACTIVELY FORGING DEEPER TIES WITH INDIAN INSTITUTIONS THROUGH RESEARCH AND STUDENT EXCHANGE PROGRAMMES (1/2)

UNITED KINGDOM

- **UK-India Education and Research Initiative (UKIERI)** is a multi-stakeholder GBP 110 m programme set up in partnership with the Government of India with the objective of strengthening the education and research relationship between India and the UK. Its activities include grants for building new research and teaching partnerships, policy dialogues, student and faculty interaction, post doctorate and PhD training. To date over 1,000 partnerships have been formed and 25,000 academic exchanges have taken place.

- **Research Councils UK in India:** RCUK facilitates research initiatives between the best researchers in the UK and India, through high-quality, high-impact research partnerships which address shared national research agendas in energy, health and life sciences, climate change, social sciences, arts and humanities.

- **DelPhe:** The Development Partnerships in Higher Education programme, funded by the UK's Department of International Development and managed by the British Council, leverages the expertise of higher education towards poverty reduction and development goals.

- **The Newton-Bhabha Fund:** A brand new five-year UK global Emerging Powers Research and Innovation Fund of GBP 50 m, launched this year, jointly funded by the UK government in partnership with the Government of India, aims to stimulate new collaboration in science and innovation through mobility, research and tech partnerships and STEM education initiatives.

- **The GREAT campaign:** An extensive partnership between the UK universities and the UK government which promotes the UK as a study destination, offering Indian students over 750 scholarships (undergraduate and postgraduate), worth GBP 1.5 m to Indian students.

- **The British Council's Internationalising Higher Education programme:** Supports the internationalisation of British and Indian institutions and spans a range of joint initiatives to deepen mutually beneficial partnership, including knowledge economy collaborations, policy dialogues and study visits.

- **Generation UK India:** A brand new initiative launched in November 2014, aiming to support the mobility of up to 25,000 UK students to India over the next five years in partnership with higher education institutions, government and the corporate sector. UK students will spend time in Indian education institutions and corporations.

- **Chevening Scholarships:** Offers 150 Master's degree scholarships in 2015-16 to talented professionals.

UNITED STATES

- **Obama-Singh 21st Century Knowledge Initiative:** This GBP 6.6 m programme was set up in 2009. It was co-funded by the US and India to facilitate and promote collaboration between US and Indian higher education institutions. Eight grants have been awarded to deserving candidates as a part of this initiative.

- **American Institute of Indian Studies Junior Research Fellowships:** This institute awards grants to doctoral candidates to pursue PhD programmes in Indian higher education institutions.

- **Fulbright-Nehru International Education Administrators Grant:** This initiative encourages American and Indian administrators to take courses in higher education institutions of partner country.

- **Community College development in India:** US India Higher Education Cooperation (USIHEC) administered a grant to develop capacity of the technical educational institutions in India. The programme focused specifically on faculty development & training, student affairs & support systems and aligning training programs with local & emerging industry.

- **Association of U.S. Academic Programs in India (AUSAPI):** USIHEC hosts annual conference for US and Indian education administrators to discuss and share best practices.

INTERNATIONAL EDUCATION HUBS SUCH AS THE UK, US, CANADA AND AUSTRALIA ARE ACTIVELY FORGING DEEPER TIES WITH INDIAN INSTITUTIONS THROUGH RESEARCH AND STUDENT EXCHANGE PROGRAMMES (2/2)

AUSTRALIA

- **Australia-India Strategic Research Fund (AISRF):** This GBP 36.1 m fund is spread over 10 years and supports joint activities between Indian and Australian researchers. The initiative has supported more than 220 projects so far.

- **Australia-India Education Council Research Fellowships:** This GBP 13,254 fellowship for post-graduate and post-doctoral students, set up in 2012, awards grants to facilitate exchange of researchers between the two countries.

- **Australia Asia bound programme:** Under the Government's Asia bound programme, Australian Government supported more than 29 higher education institutes from Australia to send 300 students to India for study experience.

- **Connect to India programme:** The programme provides an opportunity for Australian students to visit India for short term programmes.

- **Australia India Knowledge Partnership Grants:** Grants institutes to fund prioritised areas in higher education and supports Indian and Australian universities in developing credit transfer agreements.

CANADA

- **Canada-India Research Centre of Excellence:** Under this programme, set up in 2012, Canada pledged GBP 8.1 m over five years to establish the Centre of Excellence to foster and encourage innovative multi-discipline collaboration between the two countries.

- **Shastri Student Internship Project (SSIP):** This is an internship programme for under-graduate and post-graduate students in Saskatchewan for three-month internships in India. A total of six GBP 19,440 grants will be awarded to chosen students.

- **Shastri Partnership Seed Grant:** Grants to Canadian and Indian institutions for activities that contribute to institutional agreements and other long term partnership between Canadian and Indian higher education institutions. The value of the award is GBP 13,500.

Source: Websites of international education agencies

INDIAN HIGHER EDUCATION INSTITUTIONS STILL FACE SYSTEM-RELATED CHALLENGES DESPITE SIGNIFICANT PROGRESS MADE IN THE PAST DECADE

EXPANSION

- While India's GER increased significantly from 10% at the beginning of the millennium to 17.9% in 2011–12, it is still significantly lower than the world average of 27% and as well as the averages of other emerging countries such as China (26%) and Brazil (36%)

EQUITY

There is a wide disparity in GER across genders, social groups and regions, with rural areas and minority social groups having a GER that is significantly lower than the national average.

- **Inter-state disparity:** 38.5% in Delhi vs 11.2% in Bihar; southern states with a higher GER than northern and eastern states (2012–13)
- **Differences across communities:** 15.1% for SCs, 11.0% for STs (2012–13)
- **Gender disparity:** 19.8% for women vs 22.3% for men (2012–13)

EXCELLENCE

- **World rankings:** Only six Indian higher education institutions featured among the top 500 global universities and none feature in top 200 in the QS World University Rankings 2014–15

- **Employability:** According to the National Employability Report 2013, 47% of graduates are not employable in any sector in India's knowledge economy
- **Accredited institutions (2012–13):** Only 27% of universities and 15% of colleges in India have been accredited by the NAAC. Of the ones that are accredited, 44% of the universities and 17% of the colleges have been rated in the "A" category
- **Research publications:** The number of research papers published by academics in India is one-fifth of that published in China in 2013
- **Low citation impact:** India's citation impact of 1.3 is half that of the world average
- **Patents:** India's patents filed are just 3% of patents filed by China

SOME OF THE KEY REASONS FOR POOR QUALITY ARE:

- **Outdated curricula** not reflecting the requirements of the dynamic market environment
- **Shortage of faculty:** Shortage of faculty in state and central universities is 40% and 35% respectively resulting in high pupil-teacher ratios. As of 2013, an estimated 40% of college teachers are non-regular faculty members — temporary, contractual, ad hoc, guests or self-financing
- **Low focus on research:**
  - Indian government spends only 0.9% of GDP on R&D compared to 2.7% by the US
  - Although the quantum of scientific research papers published in India grew at the rate of 14.3% annually between 2007 and 2011, most of published research in the country is from research institutes and not from universities
  - Furthermore, although the number of research publications have increased, they are generally low in their impact. Moreover, higher education institutions are inadequate in their doctoral education capacity and have limited international research collaborations, which has in turn hindered growth of research in the country

NEW INDIAN GOVERNMENT PUTTING IN PLACE INITIATIVES AROUND RESEARCH, EMPLOYABILITY, DIGITISATION AND INTERNATIONALISATION OF HIGHER EDUCATION (1/2)

RESEARCH AND INNOVATION INITIATIVES

- **Research:** Under the new Global Initiative for Academic Networks (GIAN), Indian universities are to provide a list of eminent scholars and researchers in and outside the country whom they would like to invite as guest speakers/scholars. The Government will support them in inviting these scholars to teach in India

- **Innovation:**
  - The Government has earmarked around INR 1,000 m (GBP 10.4 m) to establish 60 innovation hubs in the country during the Twelfth Five Year Plan by March 2017
  - The Government is looking at expanding its India Inclusive Innovation Fund to promote grass-root innovation and deliver modest social and economic returns of around GBP 677.4 m

Access to knowledge: The Government has formulated a policy under which researchers will have unrestricted access to publicly funded research papers without having to pay for it.

INTERNATIONALISATION INITIATIVES

- **International students:** MHRD is planning to establish an entrance exam for foreign students seeking admission to educational institutions in the India and will allow institutions offering engineering and similar courses to participate in the project. Initially, Africa and other geographies with higher Indian population presence could be targeted.
  - Institutions will be allowed to admit 15% more students than their permitted number of seats, as well as fill up seats that fall vacant by admitting more foreign students

- **International faculty:** The Government plans to attract 1,000 US academics to teach in Indian universities.

- **Connect to India Programme:** Aims to attract undergraduate students from other countries to spend time in India on short courses or summer schools under a shared funding model. Initially, a pilot scheme was launched in July 2014 with a limited number of Indian universities, which will soon be expanded to more universities.

"The Global Initiative for Academic Networks (GIAN), through which we seek to invite celebrated academicians and industry experts from across the world, who will come and teach at least one semester in India at the cost of the Government of India, so that our students and faculty members benefit"

Smriti Irani, Human Resource Development Minister

NEW INDIAN GOVERNMENT PUTTING IN PLACE INITIATIVES AROUND RESEARCH, EMPLOYABILITY, DIGITISATION AND INTERNATIONALISATION OF HIGHER EDUCATION (2/2)

DIGITISATION OF HE

- **National Academic Depository (NAD) scheme:** The scheme aims to create an online national database of certificates awarded by boards and universities. It is currently being piloted by the Central Board of Secondary Education.

- **SWAYAM:** Study Webs of Active-learning for Young Aspiring Minds (SWAYAM) is a MOOC platform launched by the Indian government to provide free online education. In its first phase, IIT Bombay, IIT- Chennai, IIT-Kanpur, IIT-Guwahati, the University of Delhi, the Jawaharlal Nehru University and IIM Bangalore will offer courses in the areas of management, social sciences, basic sciences, engineering and energy with the help of faculty from foreign universities. International institutions are being invited to develop and offer MOOCs on SWAYAM.

- **Digitised library hubs:** The Government plans to set up a national digitised library for users and institutions which is globally accessible.

EMPLOYABILITY / ENTREPRENEURSHIP INITIATIVES

- **CIHEC:** The MHRD is in the process of establishing the Council of Industry-Higher Education Collaboration (CIHEC), which will collaborate with the placement cells of Central government universities to identify emerging fields, based on the requirement of industries, to make students employment-ready. The CIHEC will also help to train placement cell counsellors to enhance their competencies in guiding students towards appropriate careers and to liaise effectively with industry for job placements.

- **KUSHAL:** One hundred Knowledge Upgradation Centres for Skilled Human Action and Learning (KUSHAL) are to be established within a year. These centres will coordinate the skill development initiatives of higher educational institutions in India.

- **NSQF:** The Government has developed a National Skills Qualification Framework (NSQF), which seeks to promote vocational education and training among students by facilitating seamless mobility between general and vocational streams.

- **Entrepreneurship:** The Government proposes to establish an INR 100 m (GBP 1.3 m) fund to attract private capital by providing equity, quasi-equity, soft loans and other risk capital to start-up companies.

- **Bachelor of Vocation:** In 2014, the University grants commission (UGC) launched B. Voc courses under the National Skills Qualifications Framework (NSQF) and National Vocational Education Qualification Framework (NVEQF) schemes).

"The key to having effective MOOCs is having experts to conduct them… the demand for MOOCs among Indian students has grown considerably, due to the flexibility and convenience of the technology, and it can only grow further."
V Sivaramakrishnan, Executive President of Education Services, Manipal Global Education Service

Source: EY-FICCI higher education in India, vision 2030; Press articles

DEVOLUTION OF FUNDING, REGULATION AND GOVERNANCE OF HIGHER EDUCATION TO THE STATES IS A MAJOR REFORM UNDER THE GOVERNMENT OF INDIA'S RUSA FRAMEWORK

The objective of the Rashtriya Uchchatar Shiksha Abhiyan (RUSA), or National Mission for Higher Education programme is to improve the quality of government-funded higher education institutions and significantly increase their efficiency, transparency, accountability and responsiveness. It urges states to comply with and target quality-related norms and standards, and comply with mandates pertaining to accreditation mandates as a part of their quality assurance initiatives. RUSA also aims to create a facilitating institutional structure for planning and monitoring at the state level for which each state would need to create a State Higher Education Council (SHEC), promote autonomy in state universities and improve their internal governance.

The Government has allocated INR 659.7 bn (GBP 6.84 bn) under RUSA. This will be spread over the Twelfth and Thirteenth Plan periods (2012–2022) to fund states, state universities and government /

government-aided colleges, which account for around 60% of enrolment in higher education institutions in the country. The Centre: State ratio of funding is allocated at 90:10 in the North-Eastern states, Sikkim, Jammu & Kashmir, Himachal Pradesh and Uttarakhand, and 65:35 in all the other states. The amount of funding provided to a state will depend on its performance, and is therefore expected to encourage states and institutions to focus on outcomes.

More than 60% of the funds disbursed under RUSA is targeted at developing and upgrading infrastructure, 18% at recruiting faculty, 7% at making higher education vocation-oriented, and 6% at encouraging research and innovation-related initiatives. States will receive funding on the basis of a critical appraisal of their State Higher Education Plans (SHEPs), which will provide details of their strategies to address issues relating to access, equity and quality in their higher education institutions. The SHEPs will

also include the detailed plans of institutions in a state. Therefore, eventual allocation of funds to individual states may vary significantly from prior evaluation of their requirements, depending on their respective priorities. While some states have produced their SHEPs, others are at different stages of development.

Although internationalisation of India's higher education institutions is not one of the RUSA's explicit goals, state governments can allocate funds for such initiatives under different budgetary heads.

As of August 2014, INR 3.32 bn (GBP 30 m) was invested by the Central Government in most of the states:

- **Uttar Pradesh:** INR 1.06 bn (GBP 11 m)
- **Odisha:** INR 0.31 bn (GBP 3.2 m)
- **Andhra Pradesh:** INR 0.29 bn (GBP 3 m)
- **Punjab:** INR 0.26 bn (GBP 2.7 m)
- **Gujarat:** INR 0.17 bn (GBP 1.8 m)

Source: MHRD, AISHE 2012-13

STATES WILL PLAY AN INCREASINGLY IMPORTANT ROLE IN THE INDIAN HIGHER EDUCATION SECTOR. BASED ON A PRIORITISATION FRAMEWORK, FIVE STATES WERE SELECTED TO ANALYSE PARTNERSHIP OPPORTUNITIES FOR THE UK HIGHER EDUCATION SECTOR

In the context of RUSA, states will play an increasingly important role in the Indian higher education sector. We have therefore identified five states to understand potential partnership opportunities for the UK higher education sector at both the state level as well as the institutional level in those states.

Scale of system
>500,000 higher education enrolment

+

Maturity of system
GER (Higher being better)

+

Quality of system
Pupil-Teacher Ratio (lower being better)

+

Political climate
Relatively young and stable government

North
- Delhi
- Punjab

+

West
- Gujarat

+

South
- Karnataka
- Tamil Nadu
- Kerala

+

East
- Odisha

Ensuring regional representation

North
- Punjab

+

West
- Gujarat

+

South
- Karnataka
- Tamil Nadu

+

East
- Odisha

In addition to understanding the view of five state governments in terms of their priorities and internationalisation initiatives, we present profiles of a few institutes in each of these states, ensuring a mix of central, state and private institutes, old and new institutes, and diversified and stream-specific institutes.

* Institutes were selected to provide a range for analysis purposes , not necessarily just based on their rankings.

Source: EY analysis

OPPORTUNITIES FOR COLLABORATION WITH STATES AND INSTITUTIONS

GUJARAT — A PROSPEROUS STATE IN WEST INDIA WITH A STABLE POLITICAL CLIMATE AND ECONOMIC ENVIRONMENT

A DEMOGRAPHIC AND ECONOMIC OVERVIEW OF GUJARAT

GUJARAT HAS EMERGED AS INDIA'S MANUFACTURING HUB AND ATTRACTED THE SIXTH-LARGEST AMOUNT OF FDI (2.85%) IN THE COUNTRY IN FY13

Figure 11: Enrolment in higher education institutions in Gujarat (in '000s)

Source: AISHE 2012–13 (provisional), MHRD articles; Planning Commission; Census of India 2011; NAAC website; UGC; press

*Deemed University is a status of autonomy granted by MHRD and UGC under which university is allowed full autonomy in courses, syllabus, admission and fee
**Private universities include state private as well as deemed private universities

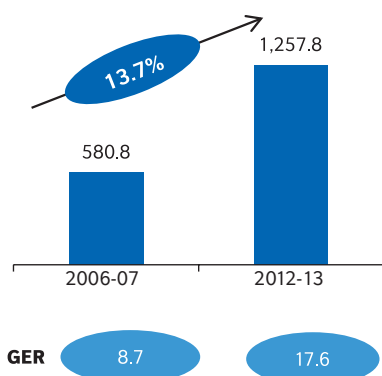| Parameter	Details
Population (2011)	60 m (10th largest in India)
18–23 year population (2011)	7.1 m (10th largest in India)
Urban population and key cities (2011–12)	42.58%; capital: Gandhinagar and Ahmedabad, Surat and Vadodra are the main cities
GSDP (2013) at constant price 2004–05	INR 4,272 bn (GBP 44.2 bn) (5th largest in India); CAGR of 18% from FY05-13 much higher than India's 7.9%
Composition of GSDP (2013) (Primary-secondary-tertiary sectors)	11–39–50 • Established industries: Electrical engineering, textile, petrochemicals & chemicals, auto, gems and jewellery • Emerging industries: IT, Tourism
GDP per capita (2013)	INR 70,685 (GBP 729) (10th rank in India)
Unemployment percentage (2011)	Unemployment rate of 0.5% compared to India's average of 2.2% in 2011–12
Political climate	Bharatiya Janata Party is the ruling party since 2002
Air connectivity	Nine domestic and one international airport in Ahmedabad; regular flights to the US, UK, Middle East and South East Asia
Scale and maturity of higher education system	1.2 m students enrolled in 1,904 higher education institutions in 2012–13 and is the 9th largest state in terms of enrolment. GER has increased from 8.7% in FY2007 to 17.6% in FY2013
Enrolment by level (2012–13)	PhD/M Phil: 0.2%; PG/PG diploma: 10.5%; UG/UG diploma: 87.6%
Universities by ownership (2014)	central:1; state: 24; private:17; deemed*: 2; institutes of national importance: 3
Quality metrics (2012–13)	• Pupil-teacher ratio of 26:1 as against India's average of 22:1 • 'A' rating awarded to 30 out of 423 accredited higher education institutions • Three universities featuring among top 100 in India (Careers360 ranking)
Examples of institutions in the state	• **Central:** IIM Ahmedabad, IIT Gandhinagar and National Institute of Design • **State:** Gujarat National Law University and Centre for Environment Planning and Technology (CEPT) • **Private**:** Mudra Institute of Communications Ahmedabad (MICA), Pandit Deendayal Petroleum University, Dhirubhai Ambani Institute of Information and Communication Technology, Nirma University and Ahmedabad University

GUJARAT HAS IMPLEMENTED VARIOUS INITIATIVES TO IMPROVE QUALITY OF ITS HIGHER EDUCATION IN THE STATE

The Gujarat government, through its Department of Education, established the Knowledge Consortium of Gujarat (KCG) in 2009 to promote higher education in Gujarat. It has taken several initiatives to improve the quality of the higher education system, some of which are listed below:

TECHNOLOGY ENABLED LEARNING

- KCG has made significant efforts to implement Information and Communication Technology (ICT) in classrooms
- It has conducted a series of workshops to create awareness of the National Mission on Education through ICT
- It has also set up assessment centres that can be used to conduct on-demand online examinations as well as conduct online courses
- Through its initiative, "Sandhan," 790 lectures in 24 subjects were telecasted in a single year

FACULTY DEVELOPMENT

- KCG has started the Knowledge Management programme for Faculty (KMPF) to build the capabilities of the faculties of higher education institutions in the state by integrating ICT and English in their role of creating and disseminating knowledge and equipping them in their respective domain
- It has developed a system of providing performance-linked incentives to teachers

EMPLOYABILITY

- It has started an initiative called "Udisha" to create a talent pool which can be easily absorbed in various industries
- As a part of this initiative, placement cells have been opened in several colleges to hold training programmes, followed by job fairs for students. Training for Credit Based Choice System (CBCS), material development, examination reforms at undergraduate and masters level is also given under this initiative

ACCREDITATION

- KCG has launched an initiative, Academic and Administrative Audit (AAA) to review implementation of government schemes in all colleges in the state.
- It is also looking at implementation of the GUIDE-AAA Score as a tool to identify areas for special focus and improvement in Gujarat

STATE FOR PRIVATISATION:

The state passed the Gujarat Private Universities Act in 2009 which helped attract a number of private universities in the state such as Auro University of Hospitality and Management, CU Shah University, Indus University and RK University

Source: Knowledge Consortium of Gujarat

THE GUJARAT GOVERNMENT'S VISION: TO INCREASE THE EMPLOYABILITY OF GRADUATES BY IMPROVING THE QUALITY OF HIGHER EDUCATION

While Gujarat's GER has improved significantly in the last few years, the state's rapid growth has raised concerns about the quality of higher education in the state.

Therefore, in the future, while access and equity will continue to be important, the state's main focus will be on improving on the quality of its higher education system.

The key targets and initiatives mentioned in Gujarat's RUSA plan are as follows:

Table 2: Higher Education targets and initiatives planned for Gujarat

Axis	Targets	Initiatives planned
Access	• GER of 32% by 2022	• Creation of six new universities in the state • Augmentation of capacity of higher education institutions • Emergence of Vadodara as a knowledge hub with multiple universities sharing common amenities • Addition of institutes in Knowledge Corridor (in Gandhinagar), which already has reputed higher education Institutions like PDPU and GNLU
Equity	• Gender parity index of 0.9% by 2019 • Reduction of geographic/Community-related disparities in GER	• Provision of incentives to faculty to teach in rural/tribal areas • Increased allocation of resources to rural/tribal areas
Excellence	• 50% of universities and 20% of constituent colleges under RUSA to qualify for NAAC rating of "A" (or equivalent) within seven years of implementing RUSA	• Implementation of rigorous accountability and establishment of robust monitoring systems • Mandatory accreditation of all institutes in the state • Augmented funding from corporate organizations for research and development; e.g., Siemens is planning to invest GBP 72 m to set up six centres of excellence • Peer review of universities every five years
Employability	• 75% of under-graduate students to be employable by the seventh year of implementation of RUSA	• Introduction of Choice Based Credit System (CSBS) in universities; 25 single-credits that are industry-developed and vocational focused courses to be offered • Provision of mandatory training for students to develop their interpersonal and communication skills • Launching of degree courses by state universities to offer full-time vocational degree courses to students

As of August 2014, Gujarat has received INR 173 m (GBP 1.7 m) from the central Government under RUSA and KCG is the nodal agency for implementation of RUSA in the state. Major initiatives under which funds have been allocated are infrastructure grants to universities: INR 81 m (GBP 0.8 m) and infrastructure grants to colleges: INR 56 m (GBP 0.5 m).

Source: Knowledge Consortium of Gujarat; MHRD; The Economic Times website; Interview with Principal Secretary higher education Gujarat

LARGE NUMBERS OF STUDENTS TRAVEL ABROAD FROM GUJARAT TO PURSUE HIGHER EDUCATION IN THE US, UK AND AUSTRALIA; SEVERAL HEIs IN THE STATE HAVE INTERNATIONAL COLLABORATIONS

- **Outbound student mobility:** Gujarat is an important market for outbound students. This is reflected in the fact that four major destination countries — the US, the UK, Australia and Canada — have their education promotion offices in the state. The market is catered to by several major education consultants.

Table3: Presence of international educational consultants in Gujarat

Overseas education consultants	Number of offices in India	Number of offices in Gujarat
The Chopras	**30**	1 (Ahmedabad)
Edwise	**23**	3 (Ahmedabad, Surat and Vadodara)
IDP Education	**17**	2 (Ahmedabad and Vadodara)
Global Opportunities	**15**	2 (Ahmedabad)

- **Inbound student mobility:** Around 584 international students were reported to have enrolled in higher education institutions in Gujarat in 2010–12 in PhD/M Phil courses, 32 in PG degree/diploma courses, 440 in UG degree/diploma courses and 100 in certificate courses. These numbers have increased significantly, as reflected in the fact that one institution, Pandit Deendayal Petroleum University, enrolled 285 international students in its courses in 2012.

- **International collaborations:** Gujarat has caught the eye of many international higher education institutions. Several institutions from the US, the UK, Canada and Australia have tie-ups with institutions in the state, some of which are listed in the table below. Vibrant Gujarat, an international trade conference, which is organized every year, saw 118 MoUs signed in the higher education sector in 2014.

COUNTRY	COLLABORATIONS
UK	• The UK has an ongoing knowledge economy partnership with KCG under the Gujarat-UK Exchange Visit Programme • Birmingham College has been approved as the UK campus of Gujarat University by the Gujarat University's Academic and Executive Councils of Gujarat University. • Maharaja Sayajirao University has entered collaboration with Leicester University in the UK. • IIMA has strategic partnerships with several Universities in UK.
US	• The Gujarat Energy Research and Management Institute (GERMI) has entered into collaborations with Georgia Tech, University of Tulsa, University of Oklahoma, and the University of Houston. • IIM Ahmedabad has collaborations with institutions including Columbia Business School, New York; Darden School of Business, University of Virginia, Fisher College of Business; The Ohio State University, Colombus, Ohio; Goizueta Business School, Emory University, Georgia; North Carolina State University, Raleigh; Stern School of Business, NYU, New York; The Anderson School at UCLA, Los Angeles; The Kenan Flagler Business School, UNC Chapel Hill, North Carolina; University of Chicago Graduate School Of Business, Chicago, Illinois; McCombs School of Business, University of Texas at Austin; Washington University (John M. Olin School of Business), St. Louis; Marshall Goldsmith School of Management, Alliant International University, San Diego.
CANADA	• GERMI has entered into collaborations with the University of Saskatchewan, the University of Regina and the University of Western Ontario. • PDPU has exposure programme collaborations with University of Saskatchewan and Seneca College. • IIMA has collaboration with McGill University, Montreal; Sauder School of Business, Vancouver; Schulich School of Business, Toronto Ontario.
AUSTRALIA	• The Gujarat government is establishing a centre with focus on mining automation and safety, in collaboration with University of Wollongong (UOW) ,through the Gujarat Mineral Development Corporation.

Source: The Chopras website; Edwise website; IDP website; Global Opportunities website; Press articles; International collaboration bodies websites; Data.gov website

SIGNIFICANT OPPORTUNITY FOR MORE INTERNATIONAL COLLABORATIONS BECAUSE OF THE GUJARAT GOVERNMENT'S FAVOURABLE ATTITUDE

As is evident from the previous examples given, the Gujarat Government is proactive in its effort to internationalise higher education. According to the Government, increased private participation in the state's higher education sector will lead to rise in the number of international collaborations.

While the Gujarat Government offers complete autonomy to its state institutions to collaborate at their own levels, it is keen to attract international partners to **develop and exchange higher education faculty.** It is willing to fund eminent international scholars to go to Gujarat and teach courses and other shorter duration programmes in its higher education institutions.

Making higher education vocation-oriented is another key area for potential collaboration, specifically to **develop soft and IT skills** to improve the employability of higher education graduates in the state.

Source: Interview with Principal Secretary higher education Gujarat

INTERNATIONAL OPPORTUNITIES WITH INSTITUTIONS IN THE STATE: SUMMARY

15 HIGHER EDUCATION INSTITUTIONS IN GUJARAT WERE APPROACHED TO PROVIDE INFORMATION, OF WHICH 10 RESPONDED

Table 4: Profiled higher education institutes from Gujarat

NO.	INSTITUTION	YEAR OF EST.	TYPE OF INSTITUTION	FIELDS	OPPORTUNITIES
CENTRAL INSTITUTIONS					
1	National Institute of Design, Ahmedabad	1961	Institute	Design	NID is open to all types of international partnerships
2	IIM Ahmedabad	1961	Institute	Management	The institute wishes to selectively partner with world-class institutions
3	IIT Gandhinagar	2008	Institute	Engineering	Has ambitions of becoming a leading international brand in technical education and is keen to engage with international institutes across all aspects
4	Sardar Vallabhbhai National Institute of Technology, Surat	1961	Institute	Engineering	To enhance the quality of education delivery, the institute is open to seconding faculty to foreign institutes for training on advanced technologies. It is also keen on student exchanges and research collaborations
STATE INSTITUTIONS					
5	Maharaja Sayajirao University of Baroda	1881	University	All faculties	The university is keen to establish research chairs with international universities
6	Saurashtra University	1967	University	All faculties	All areas, including research and innovation, student and faculty exchanges and curriculum development
7	Gujarat National Law University	2003	University	Law	Increased faculty and student exchanges and opportunities for international internships for their students
PRIVATE INSTITUTIONS					
8	Dhirubhai Ambani Institute of Information and Communication Technology	2001	University	Information and Communication Technology	Student and faculty exchanges, research collaborations and curriculum development in specialised IT fields are of interest
9	Pandit Deendayal Petroleum University (PDPU)	2007	University	All faculties	Student and faculty exchange and joint degree programmes
10	Mudra Institute of Communications Ahmedabad	1991	Institute	Management	Student and faculty exchanges with credit transfer collaborations

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

NATIONAL INSTITUTE OF DESIGN (NID) AHMEDABAD	• NID, a central institute established in 1961 and headquartered in Ahmedabad, offers professional education at undergraduate and masters level in 18 diverse design domains • It enrolls 375 students and has a strength of 65 full time faculty and 200 visiting faculty

Current international and industry collaborations

- NID has 70 international collaborations across three areas - student exchange, faculty exchange and research - with prominent institutions including Cleveland Institute of Art, Royal College of Art and Design, Monash University and others
- Industry Programmes and Projects (IP&P) integrates design knowledge with varied segments of industry, commerce and service sectors

Strategic imperatives and internationalisation strategy

- NID has reserved 15% supernumerary seats in its design programmes for applicants from SAARC countries, Cambodia, Laos, Myanmar, Vietnam and other foreign countries
- NID has established four design research chairs and two research fellowships in different areas of design education
- Organises International Open Electives on its campus that are two-week workshops offered to the senior students across diverse disciplines
- Introducing two new courses Universal Design and Digital Game Design to align with international design curriculum

Opportunities for partnership and partner selection criteria

- Interested in research, joint publications, faculty exchange and possibilities of offering joint workshops to students as well as short-term workshops to the industry
- Also interested in opportunities in joint degrees and joint doctorates programmes with reputed design institutes

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

IIM AHMEDABAD (IIM A)	• IIM Ahmedabad, India's premier management institute, established in 1961 and located in Ahmedabad, offers programmes in management and agribusiness management at the post graduate level. The Institute also offers a doctoral level programme, the Fellow Programme in Management (FPM).
	• It currently has nearly 1100 students and a faculty strength of 94 (full time faculty members as on September 1, 2014)
	• In 2008, IIMA became the first management education institute in the country to be awarded EQUIS (European Quality Improvement System) accreditation.
	• Nationally, IIMA has been consistently at number one position in the rankings published by reputed Business magazines in India.
	• Internationally, IIMA finds a prominent place in international ranking. It was ranked 16 in Financial Times Masters in Management Rankings 2014 and 30 in Financial Times Global MBA Rankings 2014. IIMA has been ranked 48th globally in the Economist full time MBA programmes Ranking 2014 and is the only Indian Business School to be ranked in the Economist ranking since the last 5 years. The Post-Graduate Programme in Agri-Business Management (PGP-ABM) of IIMA has retained its Number 1 rank in the Eduniversal Best Master's Ranking in Agribusiness/ Food Industry Management for 2013-14.

Current international and industry collaborations

• IIMA was one of the first institutes in India to have international collaboration in 1960's with Harvard Business School

• IIMA is a member of important international forums/organizations like EFMD (European Foundation for Management Development), AACSB (Association to Advance Collegiate Schools of Business), GMAC (Graduate Management Admission Council), PIM (Partnership in International Management).

• IIMA has academic international student exchange programme with more than 70 institutes across continents. It currently offers a double-degree programme in association with ESSEC Business School, Paris, France; University of Bocconi, Italy; HEC School of Management, Paris, France; European Business School, Germany and University of Cologne, Germany.

• IIMA has offered Executive Education Programmes and International Immersion programmes in collaboration with foreign partners/universities in Dubai, Bhutan, France, Portugal, China, United Kingdom in the recent years.

• IIMA's has long standing corporate connections with several faculty members on policy formation boards of variety of international/national, public & private organizations. The Institute's association with the industry has received further impetus as collaboration with Alumni and the organizations they represent has been contributing to research and training.

• The Institute's closely nurtured relationship with Industry and Alumni and has led to establishing Centres of Excellence on IIMA Campus. Currently IIMA has ten Research Centres which focus in areas like Innovation and Entrepreneurship, Telecom, Educational Innovations, Health Services, Public Systems, Agriculture, Retailing, Gender Diversity, to name a few.

Strategic imperatives and internationalisation strategy

• IIMA's internationalization strategy has become more ambitious and our goal is to move from being a predominantly national school with significant international activities to becoming a truly international school with a strong national focus and global aspirations. There is a strategic plan to increase the international linkages of the Institute with the top tier business schools in the world. The linkages include collaborative research, faculty exchange, double degree programmes, joint executive education programmes, and a deepening of the existing student exchange programmes. There is also a plan to offer more executive education programmes outside India, admit limited number of foreign students, exploring possibilities of joint degree programme with foreign partner institutions.

Opportunities for partnership and partner selection criteria

• IIMA is open to dialogue and explore collaboration in mutually beneficial areas of interest.

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

IIT GANDHINAGAR (IITG)	• Established in 2008, it offers undergraduate, masters and doctoral programmes in science and engineering • It has instituted a five-week immersion foundation programme for all new undergraduate students that nurtures creativity, ethics, communication skills, teamwork, social engagement and physical fitness

Current international and industry collaborations

- One-third undergraduate students undertook internships and project works at leading institutions and industries in the US, France, Germany, Israel, Canada, Singapore, Portugal, Malaysia and Scotland in 2013
- 10-20% of faculty in any given semester are visiting faculty or researchers from Italy, France, Switzerland, Portugal, United States, New Zealand, Canada and Singapore
- Further, IITG provides one-year leave for new faculty for international post-doctoral research opportunities
- It currently has joint courses and projects with the California Institute of Technology and University of Northampton
- It has an Industry Academic Associate Programme under which eminent engineers, managers, and professionals interact with students

Strategic imperatives and internationalisation strategy

- IITG is striving to become an international brand in technical education, evident from the current construction of IITG's permanent campus targeted to be operational in early 2015
- The Institute has established centres of excellence in Archaeological Sciences, Safety, Design & Innovation, and Biomedical Engineering and special programmes in Cognitive Science and Society & Culture
- Nielsen has established Nielsen Awards for IITG's students for international internships. Under these awards, 15 IITG students participated in an entrepreneurship workshop at Technion, Israel

Opportunities for partnership and partner selection criteria

- Student / faculty exchange and research are the major areas where the institute wants to collaborate with international higher education institutions
- International collaborations must serve student and faculty interests in terms of available training and programmes

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

SARDAR VALLABBHAI NATIONAL INSTITUTE OF TECHNOLOGY (SVNIT)	• Established in 1961 and located in Surat, SVNIT offers undergraduate and masters courses in engineering and sciences • It currently enrolls 944 undergraduate students, 359 masters and 68 doctoral students and has a faculty strength of 25 professors, 56 associate professors, 99 assistant professors and 140 teaching assistants

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• SVNIT has more than six collaborations with industry for curriculum development • The individual departments invite experts in the respective fields to design and modify curriculum as per industry requirements • It has tie-ups with Indian Institute of Petroleum Research, Dehradun and Council of Scientific and Industrial Research-Central Road Research Laboratory, New Delhi for collaborative research & development activities in the areas of chemical engineering and civil engineering	• SVNIT aims to become one of the best engineering schools in India, and to that end, it plans to set up an industry-driven innovation and incubation centre • It has invested INR 5 bn. (GBP 65 m) on various infrastructural works such as hostel buildings, department buildings and laboratories • Internationalisation is a means for the institute to deliver high quality education in India. In future, the institute aims to increase student and faculty exchange programmes	• Faculty exchange is of utmost importance to SVNIT, especially secondment of faculty to foreign institutes and faculty training on advanced technology • Improving curriculum to international standards features next on priority. Research and innovation collaborations will also be encouraged by the institute • While selecting an international partner, SVNIT shortlists on the basis of mutual areas of interest, accreditation status, R&D facilities and extension of support (finance and logistics) • It aims to establish strong links with UK, Germany and Austria because of high standard of education in these countries and strong contribution to research and development in these economies

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

MAHARAJA SAYAJIRAO UNIVERSITY OF BARODA (MS UNIVERSITY)	• Established in 1881 as the "Baroda College", the institution was granted university status in 1949 and became MS University • MS University offers undergraduate and masters courses in arts, commerce, science and other streams • It enrolls 37,295 students and has 1,112 teaching (662 Permanent) and 1,190 permanent support staff

Current international and industry collaborations

- It has collaborations with 18 international institutions from USA, UK, Germany, Finland, Thailand, Taiwan and France for exchange programmes and joint research with higher education institutions including State University of New York, Durham University and Leicester University
- It is a partner in 2 prestigious European Union funded Erasmus Mundus Mobility consortiums – GATE and EUPHRATES
- The university has students from Africa, America, East and South East Asia, Middle East and Indian Subcontinent

Strategic imperatives and internationalisation strategy

- It has collaborated with University of Mexico, which offers tuition fee scholarships to top 2 MS university students. 20% of tuition fee is waived for all other MS university students
- It has opened several new institutes and centres of learning, such as Institute of Policy Research and International Studies, Maharaja Ranjit Singh Gaekwad Institute of Design, Institute of Fashion Technology, Institute of Hotel Management and Catering Technology, Centre for Industrial Mathematics, Centre for Excellence in Polymers for research in particular fields

Opportunities for partnership and partner selection criteria

- The university is interested in establishing research chairs with best international universities
- It is keen on collaborating with higher education institutions from US and Europe and wants to explore the possibility of collaboration with institutions in China and Japan

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

SAURASHTRA UNIVERSITY	• Established in 1967 and located in Rajkot, it offers undergraduate and postgraduate programmes through its 28 post graduate departments and 297 affiliated colleges • It has faculty strength of 119 and 2% of its students are international; 80% students are from Gujarat and 18% students from other states • The university is accredited grade 'A' by NAAC

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• Saurashtra university has international collaborations with 10 institutions, including Vienna University of Technology, University of Lincoln, United Kingdom and others • It has research collaborations with institutions such as University of Strathclyde, Physics Department, Sultan Quboos University, National Institute of Space Research, Sao Jose dos Campos and Air Force Research Laboratory • It has collaboration with more than 5 companies for research, including Genetic Research Centre, Bio Care Formulations and others	• In order to fulfill its vision of internationalisation, the institute wants to enroll more foreign students in its courses • It has built a cell for managing international student affairs and a transit house for international students	• The university is interested in international collaborations in areas including research and innovation, student and faculty exchange and curriculum development • It wants to partner with best institutes irrespective of preference for any country

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

GUJARAT NATIONAL LAW UNIVERSITY (GNLU)	• Established by a government act in 2003 and located in Gandhinagar, it offers under-graduate and masters programmes in law • It enrolls 220 students and has faculty strength of 2 professors, 3 associate professors, 35 assistant professors and 9 others

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• GNLU has more than 15 student exchange collaborations with institutes such as Université Paris Ouest Nanterre La Défense, Université Montesquieu -Bordeaux , University of Cologne, University of Mauritius, and Hebrew University (Israel) among others • It has started 6 research and innovation centres in conjunction with industry • It has a scholarship programme for its students in association with Aditya Birla Group	• The institute is in a process of moving into a bigger and better equipped campus and a new wing to cater specifically to post-graduate students • The vision of GNLU is to become the best law school in India by 2020, toward which internationalisation will play an important role • The institute is aiming to increase faculty/ student exchange programmes, invite international scholars to its campus, organise international conferences and provide scholarships to students for international internships	• Student and faculty exchange represent the priority areas for collaboration followed by research and curriculum development • While shortlisting an ideal international partner, GNLU is mindful of the reputation of the university, curriculum taught, courses offered, faculty and research culture • GNLU has some collaborations in Europe, but would like to partner with more European institutions due to its world class education, high quality research and European government's support for internationalisation

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

DHIRUBHAI AMBANI INSTITUTE OF INFORMATION AND COMMUNICATION TECHNOLOGY (DAIICT)	• Established in 2001 and located in Gandhinagar, it offers undergraduate, masters and doctoral programmes in information and communication technology • It enrolls 500 students (10% students being international) and has faculty strength of 70 • It was conferred the status of university in 2003

Current international and industry collaborations

- DAIICT has student exchange programme with Institut supérieur d'électronique de Paris (ISEP), France. It also hosts students from University of Nancy, France for summer internship
- Faculty from University of Arkansas, Researchers from University of Tokyo, University of Malaga, Spain and ISEP, France have visited DAIICT for collaborative research and teaching
- It offers scholarships to students in collaboration with Tata Consultancy Services (TCS), Reliance and Indian Navy
- It has collaborated with TCS-HPC, IBM Research and others for curriculum development
- It also has placement-related partnerships with Ericsson, Oracle and others

Strategic imperatives and internationalisation strategy

- DAIICT was the first university in India to start a degree programme in ICT. It plans to expand its research and teaching to other fields in ICT
- It has in place a framework to facilitate faculty exchanges, e.g., there is provision for an international faculty visitor to spend 1–2 semesters in research and teaching at DAIICT
- DAIICT aims to have at least 20% international students and up to 5% international faculty in next 5 – 10 years

Opportunities for partnership and partner selection criteria

- DAIICT wants to collaborate in the areas of research, student exchange and faculty exchange
- It wants to bring together faculty from DAIICT and UK for potential collaborations and seeking funding to support the collaborative costs
- It wants to collaborate for curriculum development in the areas of cyber security, computational science, and energy informatics

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

PANDIT DEENDAYAL PETROLEUM UNIVERSITY (PDPU)	• Established in 2007 and located in Gandhinagar, it offers undergraduate and masters courses in technology, petroleum technology and management • It enrolls 3,100 students and has 150 strong faculty, of which 15% are professors, 40% are associate professors and rest are assistant professors and support staff

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• PDPU has student and faculty exchange collaborations with universities including University of Tulsa, University of Oklahoma, University of Houston, Texas A & M University and Georgia Tech University. • It also organises round table conferences involving experts from Canada, Australia, and the USA • It has a research centre of excellence in collaboration with Siemens	• PDPU plans to have more student and faculty exchanges and joint degree programmes with international universities	• PDPU is interested in collaboration in oil and gas professional education, followed by collaborations in liberal arts education • It is also interested in round table discussions with experts from different countries. • They have already partnered with US universities for Oil & Gas courses, Canada for general engineering and Australian universities for other courses. They are keen to work with more institutions from these countries

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

MICA AHMEDABAD	• Established in 1991 and located in Ahmedabad, it offers PGDM, FPM and PGCC programmes in strategic marketing and communication • It enrolls 353 students and has 27 permanent faculty members and 115 visiting faculty members

Current international and industry collaborations

- It has student exchange programmes with Institute of Applied Media Studies, ESCEM School of Business & Management, School of Communication, Nanyang Technological University (NTU), Department of Communication & Journalism, University of New Mexico and University of Southern Denmark

- It has visiting faculty from institutions across the world and collaboration in research with Bonn Rhein Sieg University of Applied Sciences and Sankt Augustine, Germany

- Industry professionals and MICA Alumni from companies like DDB Health & Lifestyle, Drive Dentsu Media, TATA Teleservices participate in curriculum development programme every year

Strategic imperatives and internationalisation strategy

- MICA aims to be in the top 5 international choices for Strategic Marketing and Communication courses and research in the next five years.

- In order to achieve this vision, MICA has undertaken student and faculty exchange programmes and is planning to undertake more such programmes in the future.

- It is also planning for credit transfer programmes with foreign institutes

Opportunities for partnership and partner selection criteria

- MICA is most interested in student and faculty exchange collaborations followed by research and curriculum development

- The choice of the partnering institution is based on the institution's repute and MICA's interest
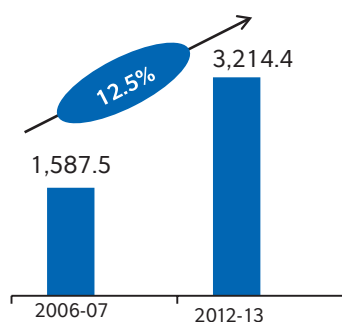
Source: Institute website; Response to questionnaire by institute

TAMIL NADU HAS THE HIGHEST HIGHER EDUCATION ENROLMENT AMONG INDIAN STATES WITH 3.2 M STUDENTS

TAMIL NADU DEMOGRAPHIC AND ECONOMIC OVERVIEW

TAMIL NADU IS THE SEVENTH LARGEST STATE IN INDIA BY POPULATION AND THE SECOND MOST INDUSTRIALISED STATE WITH THE HIGHEST URBAN POPULATION IN INDIA

Figure 12: Enrolment in higher education institutions in Tamil Nadu (in '000s)

Source: AISHE 2012-13 (provisional), MHRD; Census of India 2011; NAAC website; UGC; Planning Commission; Press articles
*Private universities include state private as well as deemed private universities

Parameter	Details
Population (2011)	71 m (seventh largest in India)
18–23 year population (2011)	7.8 m (eight largest in India)
Urban population and key cities (2011–12)	48.5%; capital: Chennai, Trichy, Coimbatore, Madurai are the main cities
GSDP (2013) at constant price 2004–05	INR 4,513 bn (GBP 46.5 bn) (second rank in India); CAGR of 9.5% from FY05–13 – higher than India's 7.9%
Composition of GSDP (2013) (Primary-secondary-tertiary sectors)	7–30–62 • Agriculture, leather industry, textiles and engineering, heavy industries , automobiles, electronics and software are the major sectors in the state
GDP per capita (2013)	INR 62,555 (GBP 648) (13th rank in India)
Unemployment percentage (2011)	As of 2011–12, Tamil Nadu's total unemployment rate was 2.3%
Political climate	AIADMK led alliance in power since 2011
Air connectivity	7 airports in total; 3 airports for international flights; Chennai airport is connected to 19 countries through 169 direct flights
Scale and maturity of higher education system	3.2 m students enrolled in 2,555 institutions in 2012–13 and 3rd largest state in terms of enrolment. Its GER of 42% is the highest amongst all states
Enrolment by level (2012–13)	PhD/M Phil: 0.8%; PG/PG diploma: 15.8%; UG degree/ diploma: 82.5%
Universities by ownership (2014)	Central: 2; state: 22; deemed: 28; institutes of national importance: 5
Quality metrics (2012–13)	• Pupil-teacher ratio of 18:1 higher than India's 22:1 • 156 higher education institutions accredited "A" out of the 568 accredited • 15 universities featuring among top 100 universities in India (Career 360 rankings)
Examples of institutions in the state	• **Central:** IIT Madras and NIT Trichy • **State:** Anna University and Annamalai University • **Private*:** Great Lakes, Loyola Institute of Business Administration, Christian Medical College Vellore and SASTRA University

TAMIL NADU'S PRIMARY FOCUS IS ENHANCING THE QUALITY OF HIGHER EDUCATION IN THE STATE, HAVING LARGELY SOLVED THE ACCESS AND EQUITY EQUATION

The Tamil Nadu government is focused on consolidating existing educational facilities and infrastructure and enhance quality of technical, as well as, high quality arts and science courses. In parallel, the government aims to address the needs of the marginalised sections of the society – women, rural population, socially and economically disadvantaged communities.

Axis	Targets	Initiatives planned
Access	Increasing enrolment in higher education institutions (including vocational education) to more than 50% by 2023	• Setting up of knowledge hub in Madurai / Tirunelveli in which the government will provide the infrastructure and land for development of higher education institutions
Equity	Overall aim is to promote inclusion of socio-economic development of the state by offering higher education to disadvantaged sections of society and women	• EVR Nagammai **scholarships for first woman graduate** in the family and scholarship schemes for OBC/SC/ST • Focus on initiatives for girls and physically challenged people
Excellence	Making Tamil Nadu an innovation centre and hub for higher education as part of the state's vision 2023	• Mandatory **NAAC accreditation,** establishment of a state level accreditation body and regular academic audit of colleges to ensure quality of institute/education • Programmes for **upgrading engineering curriculum** and syllabi at frequent intervals to capture new developments in the technology landscape • Initiatives to improve **quality of technical education** to develop high-quality technical professionals through national programmes such as the Technical Education Quality Improvement Programme (TEQIP) • Implementation of **e-Governance, e-Learning** and smart classes across colleges • Setting up international centre for research facilitation and training
Employability	Improving employability of graduates	• Setting up a fund of INR 60 bn (GBP 0.78 bn) to enhance employability skills of engineering graduates in the next three years • Facilitation of **institution-industry linkage** to inculcate entrepreneurial culture and encourage R&D • TANSCHE[1] schemes for developing **soft skills programmes and establishing foreign language laboratories,** and entrepreneurship-cum-skill development centres to promote employability • Establishment of centres for **technical and academic writing** to make students well-versed in professional writing

1. Tamil Nadu State Council for Higher Education (TANSCHE)
Source: MHRD; Tamil Nadu, higher education, policy note, 2014-15; Press articles; Interview with Vice Chairman, TANSCHE and state government officials

INFRASTRUCTURE DEVELOPMENT, KNOWLEDGE-SHARING AND CURRICULA DEVELOPMENT AMONG SEVERAL INITIATIVES IMPLEMENTED BY THE GOVERNMENT IN THE STATE'S HIGHER EDUCATION SECTOR

The Tamil Nadu Government has been implementing various initiatives to improve infrastructure, promote knowledge-sharing and develop course curricula to achieve its target of high enrolment and quality in its higher education institutions.

INFRASTRUCTURE DEVELOPMENT	KNOWLEDGE SHARING AND CONNECTIVITY	NEW COURSES, CURRICULUM, AND FACULTY POSITIONS	ACCESS
• Sanction of INR 1,000 m (GBP 10.3 m) for development of infrastructure in 93 government arts and science colleges, university constituent arts and science colleges and other colleges in the state • INR 1,500 m (GBP 15.45 m) sanctioned to Anna University to meet its infrastructure demands such as upgrading the current facilities and creation of new technical facilities	• Establishment of smart class rooms with video conferencing facilities in 10 universities to make the teaching-learning experience more interactive. Smart classrooms further enable sharing of knowledge and technology among colleges • Establishing incubation and technology transfer centres to create, store, develop and network learning resources, not only for academia but for the entire community • Minor research projects for teachers in government arts and science colleges and mini projects for PG students of these colleges	• A total of 797 new courses — 101 during 2011–12, 298 during 2012–13, 398 during 2013–14 sanctioned to government arts and science colleges along with 1,805 posts of Assistant Professors • Restructuring and up-scaling of curricula to make students industry-ready and establishment of curriculum-development cells	• Free education till Bachelor's course in government arts and science colleges, free books for students of polytechnics and free laptops for engineering graduates • Nominal fee structure in government colleges • Tamil Nadu State Council for Higher Education (TANSCHE) has introduced schemes for remedial teaching to reduce drop out rates

While Tamil Nadu has not yet received funding under RUSA, it is expected to hugely benefit from the scheme in 2014–15

State of privatisation: No umbrella act for establishing private universities exists, nor do they have plans to. Each new university will need to pass its own act through the state Legislative Assembly

TAMIL NADU IS ACTIVE IN INTERNATIONAL COLLABORATIONS IN HIGHER EDUCATION

- **Outbound student mobility:** Tamil Nadu sends a large number of students to all the major destination countries such as the UK, the US and Australia, which all have education promotion offices in the state. Most destination countries organize fairs in Chennai and some such as Australia and the UK hold fairs in Coimbatore as well. The major education agents have offices in both Chennai and Coimbatore to serve outbound students from the state

Table 5: Presence of international educational consultants in Tamil Nadu

Overseas education consultants	Number of offices in India	Number of offices in Tamil Nadu
The Chopras	30	2 (Coimbatore and Chennai)
Edwise	23	2 (Coimbatore and Chennai)
IDP Education	17	2 (Coimbatore and Chennai)
Global Opportunities	15	1 (Chennai)

- **Inbound student mobility:** Tamil Nadu was reported to have about 2,400 foreign students in its higher education institutions in 2010−11(fourth highest among all the states). This constituted 8.66% of the total number of foreign students studying in India at that time

- **International collaborations**: Institutions from the US, the UK, Australia, and Canada are actively collaborating with various institutions in Tamil Nadu

COUNTRY	COLLABORATIONS
UK	• Tamil Nadu has a Study Abroad Programme with the British Council under which students and faculty members can study one semester in UK universities with financial assistance provided by the State Government
US	• Great Lakes Institute of Management has tie-ups with Georgia State University and the University of Texas • The National Institute of Technology-Trichy, Avinashilingam Institute and Annamalai University received project grants under the Obama-Singh 21st Century Knowledge Initiative Award for 2013.
CANADA	• Tamil Nadu is a focus state for Australia and there are more than 39 collaborations between higher education institutions in Australia and Tamil Nadu. • The Australian Government is starting a "New Colombo Plan" under which it is interested in two-way exchange of students
AUSTRALIA	• Initiatives include a training programme, Problem Based Learning & Peer Instruction, under The Canada-India Partnership Programme for faculty members of polytechnic colleges in Tamil Nadu at Thiagarajar, a polytechnic college at Salem and the PAC Ramasamy Raja Polytechnic College at Rajapalayam in 2012

Source: The Chopras website; Edwise website; IDP website; Global Opportunities website; Press articles; International collaboration bodies websites; Institution websites; AISHE 2014 report, CII-Deloitte

THE STATE IS KEEN TO ENGAGE WITH FOREIGN HIGHER EDUCATION INSTITUTIONS TO DEVELOP CURRICULA, SKILLS AND TRAINING PROGRAMMES IN FOREIGN LANGUAGES

The Tamil Nadu State Council for higher education (TANSCHE) and the State Government have undertaken various initiatives as part of their Vision 2023 to facilitate international exposure for students and faculty members. The Government has established an International Relations Centre, TANSCHE, to facilitate interaction with foreign higher education institutions.

The TANSCHE Study Abroad Programme aims to enhance higher education- and research-related potential in students and facilitate inculcation of best practices of international standards by faculty. Institutions such as the University of Madras, Bharathidasan University, Manonmaniam Sundaranar University and Periyar University invite renowned faculty and academicians to deliver lectures and help them revamp their courses and syllabi. Some areas in which the state is keen to engage with foreign institutions include:

- **Curriculum development:** The state government is keen to collaborate with international institutions to develop curricula and programmes that are aligned with international industry standards

- **Training in foreign languages:** Tamil Nadu is establishing foreign language laboratories in 10 universities to enable local students to learn English, Chinese, Japanese, German, etc.

- **Skills development:** There are opportunities to collaborate in skills development of graduates to increase their employability

Source: Press articles; Interview with Vice Chairman, TANSCHE and state government officials

INTERNATIONAL OPPORTUNITIES WITH INSTITUTIONS IN THE STATE: SUMMARY

14 HIGHER EDUCATION INSTITUTIONS IN TAMIL NADU WERE APPROACHED TO PROVIDE INFORMATION, OF WHICH 9 RESPONDED

To ensure a balance of central, state and private institutes, we supplemented the responses with profiles of 1 more institutes, albeit based only on information available in the public domain

Table 6: Profiled higher education institutes from Tamil Nadu

NO.	INSTITUTION	YEAR OF EST.	TYPE OF INSTITUTION	FIELDS	OPPORTUNITIES
CENTRAL INSTITUTIONS					
1	IIT Madras	1956	Institute	Engineering	Faculty exchange is of top most priority, followed by student exchange and collaborations in research.
2	NIT Trichy	1964	Institute	Engineering	Student and faculty exchange is of top priority, followed by research partnerships and curriculum development
STATE INSTITUTIONS					
3	Anna University	1978	University	All faculties	Student exchange is of the utmost importance , followed by research & innovation . Curriculum development and faculty exchange are next in order of priority
4	Annamalai University	1929	University	All faculties	Preferred areas for partnership are research and exchange of students and faculty
5	Tamil Nadu Agricultural University	1971	University	Agriculture	Research and innovation , followed by student exchange and joint degrees in programmes are priority for TNAU
PRIVATE INSTITUTIONS					
6	SASTRA University	2001	University	Technology	Research collaborations are top priority for Sastra University, followed by student and faculty exchanges
7	Loyola Institute of Business Administration	1979	Institute	Management	Key opportunities to collaborate are industry academia partnerships, exchange programmes, dual degree and twinning programs and updating/upgrading curriculum
8	Christian Medical College	1900	Institute	Medical	The institution is open to collaboration based on institutions' interest and availability of a faculty for leading the initiative.
9	Asian College of Journalism	1994	Institute	Journalism	Joint degrees programs and twinning arrangements are on the top of the institute's agenda , followed by curriculum development, faculty exchange, research and student exchange
10	Great Lakes Institute of Management	2004	Institute	Management	Joint degrees and exchange programs are the most preferred modes for partnership

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

IIT MADRAS	• IIT Madras is one of the Institutes of National Importance in the country, and was set up in assistance with the German Government in 1956
	• It is part of the prestigious Indian IITs and has more than 550 full time faculty
	• IIT Madras was ranked 312 in the QS World rankings, 45 in QS Asian rankings, and 4 in India Today engineering institute rankings in 2012

Current international and industry collaborations

- IIT Madras has more than 160 student and faculty exchange agreements with leading institutions from Europe, Asia and North America

- It has research collaborations with more than 145 institutes across the globe

- It has joint doctoral programmes with institutions, such as NTHU, Taiwan, University of Passau, NUS Singapore, University of Melbourne, Australia and Swinburne University, Australia, and joint supervision programmes with Deakin University and Curtin University, Australia

Strategic imperatives and internationalisation strategy

- IIT Madras aspires to be a leading technology university, ranked amongst the top 50 institutions in relevant disciplines globally. It also aims to improve quality standards of its post-graduate and research programmes to match that of its under-graduate programmes

- With regards to internationalisation, the institute aims to become a partner of choice for foreign institutes in student and faculty exchange and joint degrees

- To that end, IIT Madras aims to increase the total number of exchange scholars (inbound and outbound) to at least 200 per year—from 30 inbound and 60 outbound in 2014 to 75 inbound and 130 outbound by 2020

- It also aims to increase the number of joint supervision and joint Ph.D. programmes to 45 and 20 respectively by 2020

Opportunities for partnership and partner selection criteria

- Since IIT Madras is a research-driven institute, faculty exchange is of the highest priority, followed by student exchange and research collaborations. Joint degrees and curriculum development, though important, are not an immediate priority

- IIT Madras selects institutions solely based on their individual reputation. Their current agreements are with leading institutes in the US, Germany and Australia due to strong research collaborations that exist between the faculty of IIT Madras and the foreign institutes

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

NIT TRICHY	• National Institute of Technology Trichy was established in 1964, to cater to the country's growing need for technological manpower • It is one of the 30 National Institutes of Technology in India and is declared as an Institute of National Importance by Government of India under NIT Act • Enrolment at the UG level is 1000 across 11 Engineering Departments, while it is 600 for PG and 150 for PhD across 15 Engineering Departments • 50% of the students are from outside the state • Total strength of the faculty is 403

Current international and industry collaborations

- NIT Trichy has been approved as a consulting organization by National Productivity Council for implementing Ministry of MSME funded Lean Manufacturing Cluster programme for Trichy SMEs

- NIT Trichy has successfully implemented a two-year long UK-India Education Research Initiative (UKIERI) project on Management Capacity Development of SMEs in collaboration with Brunel University and Uxbridge College-UK and BHEL-Trichy, BHELSIA and IIM, Trichy

- The institute has 10 faculty exchange programmes with institutes in USA, Canada and Australia

- NIT Trichy has 8 international partnerships for research and innovation with UKIERI, Obama-Singh Knowledge Initiatives, Asia Foundation, India- Australia strategic research Fund

- The institute also has 3 student exchange partnerships and 3 curriculum development partnerships

- It has tie-ups with industry for 35 scholarships which include TCS, Bharati, BHEL, NLC, etc..

Strategic imperatives and internationalisation strategy

- The institute plans to identify and collaborate with partners in mutually beneficial areas, through collaborative research, faculty exchanges and student exchanges, joint research funding etc.

- The institute plans to establish ties with at least one university for each department and Centre in the next 5-7 years

Opportunities for partnership and partner selection criteria

- Student and faculty exchange, research partnerships and curriculum development are the priority areas for international collaboration for NIT Trichy

- NIT Trichy looks at partners with complementarity competences, similar areas of focus for research and institutes with strong industry focus

- UK, US and Germany are the preferred countries for establishing ties

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

ANNA UNIVERSITY	• Anna University was established in 1978 and offers under-graduate and post-graduate courses in engineering, technology and allied fields. The University has a student strength of 9,157 and faculty of 557 members
	• In 2002, UGC accredited Anna University with a Five-star status (the highest rating)
	• Anna is also a member of Association of Indian Universities and a partner of UNESCO Centre for Engineering Education

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• Anna university has more than 56 student and faculty exchange agreements with institutions, such as Politechnico di Torino, Italy, KTH, Royal Institute of Technology, Sweden, Grenoble Institute of Technology, France, University of Gottingen, Germany, KU Leuven, Belgium, among others	• Anna is a well recognised university, with a reputable position in various international rankings	• Student exchange is of utmost importance for the university among international tie-ups, followed by research & innovation
• Apart from these, they also have a number of twinning and joint degree arrangements with several institutions	• The university aims to further improve its ranking in the near future by focusing on core existing programmes and new programmes, such as Power Engineering	• Curriculum development and faculty exchange are next in the order of priority
• Anna has several industry partnerships for guest faculty/lectures, research and innovation, internships and scholarships	• Internationalisation is high on the University's agenda and would be advanced through several international conferences, student/faculty exchange agreements, among others	• For the University, the country is of equal or higher importance, while selecting a partner institute
		• Before formalizing a partnership, Anna University prefers to have intensive interactions with foreign institutes on topics, such as hosting foreign faculty members, organizing conferences, among others

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
DEEMED INSTITUTION

SASTRA UNIVERSITY	• Shanmugha Arts, Science, Technology & Research Academy (SASTRA) was established in 1984 and was conferred the University status in 2001 • SASTRA has been re-accredited as a Grade 'A' University by NAAC, and its engineering programmes are accredited by the Institution of Engineers India

Current international and industry collaborations

- SASTRA has successfully completed over 60 research projects and currently undertaking 54 projects funded by public agencies, including the Department of Science & Technology, Department of Biotechnology, Department of AYUSH, Defence Research & Development Organization, Defence Research & Development Laboratory, Indian Space Research Organization, Council for Scientific & Industrial Research, and Indian Council for Medical Research. SASTRA also undertakes projects from private organizations, such as Tata Consultancy Services Ltd., Accenture, Orchid Pharmaceuticals Pvt. Ltd., and Brakes India Ltd.

- SASTRA also has collaborations with international institutions like Dartmouth University, USA; Ecole Poltechnique, France; Georgetown University, USA; MIT-Harvard, USA; Plymouth University, UK; Simon Fraser University, Canada; University of Aberdeen, UK; University of Utah, USA and Virginia Tech, USA

Strategic imperatives and internationalisation strategy

- SASTRA University aims to be a world-class university, with world-renowned research centres and schools of excellence. Accordingly, it seeks research collaborations with reputed universities globally

- Internationalisation is central to SASTRA's vision of becoming a top university. Through internationalisation, SASTRA aims to promote knowledge sharing, initiate new areas of research and generate international funding for its research and other initiatives

Opportunities for partnership and partner selection criteria

- Research collaborations are top priority for SASTRA University. SASTRA is also keen on student and faculty exchanges to boost its international reputation

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

ANNAMALAI UNIVERSITY	• Established in 1929, Annamalai University is one of Asia's largest public residential universities with 10 Faculties and 49 departments of study • Annamalai University has been Re-accredited with 'A' Grade by the National Assessment and Accreditation Council (NAAC) in 2014 • Annamalai University is a pioneer in Distance Education • In appreciation of the R&D contributions of the University, the Department of Science & Technology, Government of India has awarded substantive research grant in the form of DST-PURSE based on scientific publications in Science Citation Indexed Journals through SCOPUS Database

Current international and industry collaborations	**Strategic imperatives and internationalisation strategy**	**Opportunities for partnership and partner selection criteria**
• Annamalai University has faculty and student exchange programmes as well as joint research and innovation partnerships with 24 institutions across the USA, Europe, Japan, Sweden, the UK and Europe. The list of partners includes prestigious institutes like Karolinska Institute, Johns Hopkins University, and University of Michigan amongst others • Two of the most notable international collaborations in which Annamalai University is the Co-ordinating Institute include the Indo-EU FUNCFOOD Project and the 21st Century Indo-US Knowledge Initiative • It has several industry partnerships such as in-plant training of students, placement tie-ups with companies like HCL, L&T, Accenture, Mahindra & Mahindra and Huawei • There are 30 running research projects with international foundations and industrial players like Bayer, CavinKare, Dow Agrosciences, Bill & Melinda Gates Foundation, etc.	• New laboratory facilities in the fields of Nanotechnology and Proteomics have been developed • A dedicated R&D Cell to improve management of R&D projects and an Innovation Centre which acts as a hub for data repository and data processing activities have been created • The university aims at further development of its faculty and student exchange programmes as well as curriculum development to provide a global perspective and a broader knowledge base • There is also an aim to participate in international consortia projects in cutting edge fields of science	• Primary criterion for partner selection is compatibility and synergy as well as quality and accreditation of the potential partner • Joint degrees/ twinning programmes are of utmost interest followed by research and innovation intiatives. Curriculum development as well as faculty and student exchange are high on the University's agenda for the future • The university will prefer to partner with institutes across the USA, the UK, Germany and Sweden

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

TAMIL NADU AGRICULTURE UNIVERSITY (TNAU)	• Established in 1972, TNAU is a premier state university with over 7,500 students enrolled in under-graduate and post-graduate programmes in agriculture and allied studies • TNAU received the Federation of Indian Chambers of Commerce and Industry award for 'Overall Excellence Award' 2014

Current international and industry collaborations

- TNAU has more than 11 student exchange agreements with prominent institutions, including University of Cambridge (UK), Michigan State University, Ohio State University (US) and Chiba University (Japan), among others

- It also has more than 5 agreements for faculty exchanges with universities such as Rutgers University (US), Royal Institution for the Advancement of Learning, McGill University, and Dalhousie University (Canada)

- TNAU has more than 49 partnerships in agricultural research and innovation with leading universities, such as University of Cambridge (UK), North Carolina Global Insecticide Research University, University of Illinois (US), among others

- TNAU has curriculum development collaborations with Ohio State University and University of Manitoba

- It also has joint degree arrangements with several universities, including Cornell University, Florida International University (US), and Justus Liebig University (Germany)

Strategic imperatives and internationalisation strategy

- TNAU aims to improve delivery of education and raise standards of research

- To that end, TNAU seeks to develop innovative curriculum, increase linkages with industry, focus on research areas such as crop improvement and management, and develop capabilities in nano-technology, bio-technology, and ICT in agriculture

- TNAU seeks strategic international partnerships to partially achieve these goals

- TNAU has signed more than 72 MoUs with foreign partners and intends to deepen and increase such collaborations

Opportunities for partnership and partner selection criteria

- Research and innovation is paramount priority for TNAU (areas such as breeding genetics, molecular breeding, seed quality enhancement, crop protection and sustainability). This is followed by student exchange for UG and PG students and joint degrees in programmes with potential for global opportunities

- The institute's reputation, quality of research are critical for TNAU to collaborate with foreign university. US, Canada and European Union are their preferred countries/regions for tie-ups

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

LOYOLA INSTITUTE OF BUSINESS ADMINISTRATION (LIBA)	• Established in 1979, the Chennai-based LIBA is a premium management school enrolling about 550 students (240 regular PGDM, 300 part-time and executive diploma and 13 Ph.D.) taught by 24 faculty • LIBA was ranked 27th in 2012 according to Business Today • It offers Post Graduate Diploma in Management (full time and part time), executive diploma and doctoral degrees

Current international and industry collaborations

- LIBA has student exchange with 8 and faculty exchange with 5 business schools, including Bordeaux School of Management, France; Institute d'Economie Scientifique et de Gestion (IESEG) School of Management, France; Universita Cattolica Del Sacro Cuore (UCSC), Milan, Italy; University of Dayton, United States and University of Antwerp, Belgium, among others

- Though LIBA does not have any formal tie-ups for curriculum development, it solicits inputs from more than 21 visiting faculty members with vast experience in academics and industry to update the curriculum

- LIBA collaborates with industry for scholarships, academic advisory, placements and curriculum development

Strategic imperatives and internationalisation strategy

- LIBA aims to increase industry-academia partnerships, expand international exchange programmes to more institutions, and publish findings of research in different journals, among others

- LIBA firmly believes that international exchange programmes enrich both the students and faculty, and hence, actively expands the scope of existing collaborations, includes more institutions, and encourages its faculty to visit other institutions

- In the next 3-5 years, it aims to increase the number of students pursuing exchange programmes, have more faculty visit other institutions and establish wherever possible, dual degree programmes

Opportunities for partnership and partner selection criteria

- Key opportunities to collaborate with international counterparts is likely to be the following:
  - Industry academia partnerships
  - Exchange programmes
  - Dual degree and twinning programmes
  - Updating curriculum and bringing it at par with international standards
  - LIBA is quite keen to partner with institutes from the UK and USA due to presence of reputed institutions in these countries and cultural diversity
  - They are also keen to partner with Japan owing to increasing traction between the two countries

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

CHRISTIAN MEDICAL COLLEGE	• CMC Vellore was founded in 1900 by Dr. Ida Scudder, and today, it is run by Christian Medical College, a not for profit organization registered in the US • The medical college has more than 100 seats at the under-graduate level • CMC Vellore has been consistently ranked in top medical colleges in India. For example, India Today ranked CMC at second position in India in 2010, 2012 and 2013

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• CMC has student exchanges with Karolinska University, Sweden; Maastricht University, Netherlands; Kyoto University, Japan and faculty exchange with Karolinska University, Sweden • CMC has close collaboration with Haukeland University Hospital, Bergen, Norway, under which CMC helps train medical personnel from African nations such as Ethiopia and Kenya under a scheme funded by the Norwegian government • CMC has a Centre of Excellence in Stem Cell research and has extensive industry tie-ups with other medical hospitals and colleges for board representation	• Internationalisation is an important part of CMC's strategy to enhance delivery of medical education • It intends to extend availability of high-quality, ethical healthcare and education to stakeholders globally	• Prospective partners for CMC must have high-quality practical experience in healthcare and healthcare education, willingness to share information, a not-for-profit objective and concern for the marginalised • The existing international collaborations are largely with US, UK and Australia for historical reasons • However, CMC is keen to extend these and also develop links with new institutions from leading Asian countries such as Singapore, Indonesia and Malaysia

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

ASIAN COLLEGE OF JOURNALISM	• Asian College of Journalism, Chennai, was initially founded in Bangalore in 1994 by the Indian Express group, and in 2000, was shifted to Chennai • Enrollment is 187 students in various courses (Print: 62, New Media: 62, Television: 52) with teaching staff of 46 teachers • The college offers a one-year postgraduate diploma with specialisation in four streams–Television, Print, New Media and Radio

Current international and industry collaborations

- About 6% of the Asian college students are international
- The institute has collaborations with Department of Journalism, Cardiff University for faculty exchange & development, research & innovation related to its MA Degree programme. It is also working on joint PhD programme with Cardiff University
- Organizations such as South Asia Foundation, The Hindu, Mint, Red Phoenix and TNQ offer scholarships to Asian College of Journalism's students
- Guest faculty from 15 companies, including The Hindu, Mint, BBC, Hindustan Times, visit the campus regularly
- Asian College of Journalism also carries out collaboration in research and innovation with The Hindu and Mint

Strategic imperatives and internationalisation strategy

- Internationalisation is a part of the institute's vision as it continuously undertakes project-specific associations with institutions such as the Columbia School of Journalism, New York University (Department of Journalism), University of Birmingham and Newcastle University
- Asian College of Journalism wants to be at the forefront of international journalism and venture into media management as a related field of education
- The college would prefer international collaborations, which are funded by the respective users and institutions

Opportunities for partnership and partner selection criteria

- Joint degrees programmes and twinning arrangements are on top of the College's agenda for international collaborations, followed by curriculum development, faculty exchange, research and student exchange partnerships
- The primary criteria for choosing a partner is its top-notch reputation and expertise in its respective field
- Asian College regards the UK and the US as the top two choices for prospective academic partnerships due to academic and English excellence of the two nations. It is also interested in partnering with German institutes

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

GREAT LAKES INSTITUTE OF MANAGEMENT	• Established in 2004, the Chennai-based Great Lakes Institute of Management is a premier private management institution with full time and executive post graduate management programmes and faculty strength of 61 members • It was accredited in 2014 by the Association of MBAs (AMBA), UK, one of the three main global accreditation bodies

Current international and industry collaborations

- Great Lakes has several international collaborations ranging from student/ faculty exchange to management development programmes and research:

  - For student and faculty exchange, the institute has tie-ups with Georgia State University (US), Univeristy of Texas (US), Universiti Tun Abdul Razak (Malaysia), Fudan University (China), Fondazione CUOA (Italy), Nanyang Business School (Singapore), University of Luxembourg, (Luxembourg) and HHL Leipzig Graduate School of Management (Germany)

  - For management programmes, Great Lakes partners with management programmes of Illinois Institute of Technology, Chicago and University of Bordeaux, France

  - The institute and Illinois Institute of Technology, Chicago have a research collaboration

- Industry collaborations exist with leading industry players, such as Amazon, Schaeffler India, TCS Experiential, Wipro Consumer Care, Foster Wheeler, Robert Bosch, RedSeer Consulting, MI Sports, Bloomberg, Dexter Consultancy, McDonalds, Accenture, Cognizant and TCS Engineering Services for live projects and internships. For research and innovation, the institute has tied up with Union Bank

Strategic imperatives and internationalisation strategy

- The Institute has a wide variety of strategic goals:

  - Appropriately map academic disciplines to industry needs and encourage entrepreneurship and family businesses

  - Promote academic and industry-relevant research through Centres of Excellence

  - The institute consistently focus on Management and Executive development through timely 'Corporate Initiatives'

  - Direct the future of management education policy as a member of government-constituted committees

Opportunities for partnership and partner selection criteria

- The institute prefers joint degrees and student / faculty exchange programmes

- Value proposition, brand perception, legacy and repute, faculty and research quality of prospective partners would be the criteria for partner selection

- Great Lakes Institute also prefers partnerships in the USA, UK and South Korea and wants to collaborate in ground-breaking innovative research activities

Source: Institute website; Response to questionnaire by institute

PUNJAB — A RELATIVELY PROSPEROUS STATE IN NORTH INDIA

A DEMOGRAPHIC AND ECONOMIC OVERVIEW OF PUNJAB

Figure 13: Enrolment in higher education institutions in Punjab (in '000s)

Source: AISHE 2012-13 (provisional), MHRD; Census of India 2011; NAAC website; UGC; Planning commission; Press articles

*Private universities include state private as well as deemed private universities

Parameter	Details
Population (2011)	27.7 m (15th largest in India)
18–23 year population (2011)	3.4 m (15th largest in India)
Urban population and key cities (2011–12)	37.5%; capital: Chandigarh, Amritsar, Ludhiana and Jalandhar are the main cities
GSDP (2013) at constant price 2004–05	INR1,643 bn (GBP17 bn) (13th largest in India); CAGR of 6.8% from FY2005-2013 less than India's 7.9%
Composition of GSDP (2013) (Primary-secondary-tertiary sectors)	21-29-51 • Established industries: textile, sugar, dairy • Emerging industries: biotechnology, healthcare, IT /ITeS
GDP per capita (2013)	INR 59,235 (GBP 611) (14th largest in India)
Unemployment percentage (2011)	Unemployment rate of 4.2%, significantly higher than 2.5% for India
Political climate	Ruling party: Shiromani Akali Dal (coalition with BJP) ruling party since 2007
Air connectivity	Four domestic and one international airport (at Chandigarh); daily flights to the US, the UK, Canada and Australia
Scale and maturity of higher education system	768,094 students enrolled in 988 institutions in 2012–13 and is the 13th largest state in terms of enrolment; increase in GER from 12.87% in FY2007 to 22.7% in FY2013
Enrolment by level (2012–13)	PhD/M Phil: 0.4%; PG/PG diploma: 11.3%; UG/UG diploma: 88%
Universities by ownership (2014)	Central:1; state: 8; private: 9; deemed: 2; institute of national importance: 3
Quality metrics (2012–13)	• Pupil-teacher ratio of 18, better than India's 22 • 57 accredited "A" out of 213 accredited higher education institutions in the state; 8 universities featuring among top 100 in India (Careers360 ranking)
Examples of institutions in the state	• **Central:** IIT Ropar, National institute of Pharmaceutical Education and Research • **State:** Panjab University (Ranked in 141–150 bracket in QS BRICS rankings), Punjab Agriculture University and PTU • **Private*:** ISB Mohali, Thapar University and Chitkara University

PUNJAB AIMS TO SIGNIFICANTLY INCREASE ACCESS TO HIGHER EDUCATION IN URBAN AND RURAL AREAS BY 2022 AND IS FOCUSING ON ENSURING EMPLOYABILITY OF ITS GRADUATES

The Punjab Government is undertaking multiple initiatives to improve the quality of higher education and employability in the state. These include:

- Promoting private participation in higher education; the Private University Bill was passed in 2014 to set up Rayat-Bahra University and GNA University.

- Providing scholarships to talented students: in 2013–14, the Punjab state government launched a scheme worth INR 150 m (GBP 1.5 m) in scholarships to support higher education for students scoring 80% and above in their matriculation examinations.

- Enhancing employability: The Punjab Skill Training for Employment Potential (P-STEP) for graduates is an initiative that aims to increase the employability of students in the state with the help of the IT/ knowledge industry. The programme includes training on communication and soft skills as well as basic IT skills.

State of privatisation: No umbrella act exists in the state for the establishment of new private universities. Desh Bhagat University Mandi Gobindgarh came into existence as a State Private University under Punjab Govt. Desh Bhagat University Act, 2012. Similarly, The DAV University Act, 2012

was passed to establish DAV University in 2012. Every new university would have to be established on the basis of a new act passed by the state legislature, making it prone to more regulatory hurdles.

While the Punjab Government will continue to expand access and equity of its higher education system, its focus seems to be shifting to ensuring the employability of graduates (given the high unemployment rate in the state) as well as promoting research that is relevant at the state and national levels. Its main targets and initiatives to realise its goals are as follows:

Table 7: Higher Education targets and initiatives planned for Punjab

Axis	Targets	Initiatives planned
Access	To provide access to higher education to 100% of its population in urban and rural areas by 2022	• The Punjab Government has proposed setting up of a new medical college in SAS Nagar to the Union Ministry of Health and Family Welfare
Equity	To expand the reach of higher education to rural and tribal areas and to poor students (no specific targets)	• It is planning to start a programme to provide free higher education to poor students in collaboration with private universities in the state
Excellence	To make improvement in quality the key imperative for all institutes in the state (no specific targets)	• The government seeks to implement compulsory rating of institutes by independent agencies • It is planning at least one IIM in the state by 2022 • It is developing a concept to establish Chandigarh Region Innovation and Knowledge Cluster (CRIKC) to facilitate innovation, knowledge creation and excellence in the region
Employability	Making graduates globally employable (no specific targets)	• The Government plans to increase the number of vocational education institutions in the state • It will focus on imparting soft and IT skills through finishings schools

Punjab has been granted funding of INR 267 m (GBP 2.7) m from RUSA : setting up two model colleges: INR 146 m (GBP 1.5 m), providing infrastructure grants to universities: INR32 m (GBP 0.33 m) and 38 colleges: INR61 m (GBP 0.63 m)

Source: MHRD, Press articles

PUNJAB IS AN IMPORTANT MARKET FOR THE RECRUITMENT OF INDIAN STUDENTS BY FOREIGN HIGHER EDUCATION INSTITUTIONS

- **Outbound student mobility:** Punjab is an important market from a student recruitment point of view. This is reflected in the fact that four major destination countries — the US, the UK, Australia and Canada — have their education promotion arm offices in the state. The leading four major education consultants have 10 offices in the state; which represents 12% of their overall number of offices in the country.

Table 8: Presence of international educational consultants in Punjab

Overseas education consultants	Number of offices in India	Number of offices in Tamil Nadu
The Chopras	**30**	2 (Chandigarh)
Edwise	**23**	1 (Chandigarh)
IDP Education	**17**	4 (Chandigarh, Ludhiana and Jalandhar)
Global Opportunities	**15**	3 (Amritsar, Chandigarh and Jalandhar)

- **Inbound student mobility:** Around 235 international students were reported to be enrolled in higher education institutions in Punjab in 2010–11 out of which 8 were enrolled in PhD/M Phil courses, 44 in Masters' degree/diploma courses and 183 in UG degree/diploma courses.

- **International collaborations**: A number of Punjab universities are active in the collaboration space and have inked agreements covering curricula development, student/faculty exchange and research collaborations. Some of the main MoU's signed by Punjab's universities include the following:

COUNTRY	COLLABORATIONS
UK	• Lovely Professional University (LPU) has tie-ups with UK universities such as the University of Sunderland, the University of East London and Thames Valley University • Chitkara University has a tie-up with Glasgow Caledonian University • Panjab University has a tie-up with CERN as part of the ALICE collaboration
US	• Punjab Technical University (PTU) has signed an MoU with the University of California, Santa Cruz (UCSC) to set up an Institute of Excellence (IOE) at Chandigarh • LPU has tie-up with Troy University, Washburn and Iowa State University • Panjab University (PU), Chandigarh has been selected by the Government of India as the nodal agency for Indian Institutional collaboration with US institutions in research on neutrino physics
CANADA	• The Punjab Government has invited Canadian institutes to establish education and healthcare institutions in the upcoming Educity and Medicity in Chandigarh • The Government of British Columbia has opened an office in Chandigarh. The aim of the office is to promote joint research and development
AUSTRALIA	• The Australian Centre for International Agricultural Research has funded research programs in Punjab on improving crops, cropping systems and economics • Australian and Indian scientists from CSIRO and the Institute of Microbial Technology, Chandigarh have collaborated on developing a tool to diagnose tuberculosis

Source: The Chopras website; Edwise website; IDP website; Global Opportunities website; Press articles; International collaboration bodies websites

OPPORTUNITIES FOR INTERNATIONAL COLLABORATION IN STUDENT AND FACULTY EXCHANGE PROGRAMMES, AND CURRICULA/PROGRAMME DEVELOPMENT ALIGNED WITH EMPLOYMENT IN DOMESTIC AND INTERNATIONAL MARKETS

The Punjab Government is welcoming in its approach to international collaborations in higher education. Given the state's increasing focus on vocationalising higher education, its focus is on international collaborations that increase employability. It is specifically seeking collaborations in the following areas:

- **Student exchange programmes** that equip students with the necessary skills/ training to secure employment in the host country

- **Faculty exchange arrangements**

- **Development of curricula and programmes** that are aligned with international job requirements

The state is also keen that foreign institutions **collaborate with government colleges** and support the state in **creating infrastructure**, since there is an urgent need to improve the **quality of its higher education system.**

Source: Press articles; Interview with Principal Secretary higher education of Punjab and state government officials

INTERNATIONAL OPPORTUNITIES WITH INSTITUTIONS IN THE STATE: SUMMARY

16 HIGHER EDUCATION INSTITUTIONS IN PUNJAB WERE APPROACHED TO PROVIDE INFORMATION, OF WHICH 7 RESPONDED

To ensure a balance of central, state and private institutes, we supplemented the responses with profiles of 2 more institutes, albeit based only on information available in the public domain.

Table 9: Profiled higher education institutes from Punjab

NO.	INSTITUTION	YEAR OF EST.	TYPE OF INSTITUTION	FIELDS	OPPORTUNITIES
CENTRAL INSTITUTIONS					
1	National Institute of Pharmaceutical Education and Research	1991	Institute	Pharma	Interest in student exchange collaborations for training on new tools and techniques, and faculty exchange programmes for curriculum development
2	Indian Institute of Science Education and Research, Mohali	2007	Institute	Science	Seeking partnerships based on the research interests of faculty and students
3	Indian Institute of Technology, Ropar	2008	Institute	Engineering	The institute is looking for partnerships for faculty, student exchange, and joint research initiatives with the reputation of the institute being primary in their list of requirements
STATE INSTITUTIONS					
4	Panjab University	1882	University	All faculties	Interest in student and faculty exchange programmes and research initiatives
5	Punjab Technical University	1997	University	Technology & Management	Interest in twining programmes and student and faculty exchange programmes
6	Punjab Agricultural University	1962	University	Agriculture	NA
7	PEC University of Technology	1921	University	Engineering	Collaborative research, student and faculty exchange are areas of interest for collaboration
PRIVATE INSTITUTIONS					
8	Chitkara University	2010	University	All faculties	Interest in collaborations in student, exchange, faculty exchange and research in areas including healthcare and architecture
9	Lovely Professional University	2005	University	All faculties	Keen on collaborating in student exchange, faculty exchange, research and curriculum development

INSTITUTIONAL CASE STUDIES
DEEMED INSTITUTION

NATIONAL INSTITUTE OF PHARMACEUTICAL EDUCATION AND RESEARCH (NIPER)	• NIPER Mohali, an institute of national importance and the first pharmaceutical science institution set up by Government of India, admitted its first batch of students in 1998 • It is a centrally funded institute • It offers masters courses in 9 disciplines to 223 students and PhD programmes to 196 students and has a faculty strength of 39 members

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• NIPER has student exchange collaborations under the Canadian commonwealth fellowship with Canada and DAAD fellowship with Germany • Its faculty have active collaborations with their international counterparts, albeit without signed agreements • It promotes industrial collaborations in the form of scholarships (1 student/year), knowledge sharing through industry guest faculty, research project consultancies (115 in 2013–14), summer internship placements as well as final placements	• It regularly participates in international collaborations to become a global brand in pharmaceutical education and research • It has proposed that every year 60 students (Masters and Ph.D. students both) and 6 faculty members from NIPER will spend a period between 6 weeks to 6 months in collaborating institutions over the next three years • During the same period, 15 visitors from abroad will visit the institute	• NIPER is interested in international collaborations in interdisciplinary research in chemical, biological and pharmaceutical sciences • It is interested in student exchange collaborations to advance student training in new tools and programmes and faculty exchange programmes for curriculum development and training • Partner selection is based on the partner's emphasis on interdisciplinary studies, a good research publication record and co-operative administration

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH, MOHALI	• The IISER, a centrally funded institute, started its academic programmes in 2007 in S.A.S Nagar with a small batch of students in the BS-MS dual degree program. The PhD programme was started in 2008 and the integrated PhD programme was started in 2012 • The institute has a faculty and student strength of 70 and 870 respectively

Current international and industry collaborations	**Strategic imperatives and internationalisation strategy**	**Opportunities for partnership and partner selection criteria**
• The international collaborations at the IISER are chiefly for research and its faculty have partnerships with researchers from some of the prominent universities including MIT, Max Planck Institute of Physics, University of British Columbia, and Northwestern University • The institute undertakes faculty and student exchange programmes mostly during summers as students are expected to complete their coursework in the institution only	• The IISER has not signed any explicit MoUs with foreign universities, but its commitment to internationalisation is reflected in the grants for faculty to travel abroad for faculty exchange programmes and international conferences • It plans to become the best research institute in the country by embracing internationalisation	• The partnerships will be based on the research interests of faculty and students • The IISER would prefer research collaborations that offer sponsorships for buying research equipment • The IISER plans to open admissions to international students for full time degree programmes • It also plans to invite faculty from research-focused colleges and departments from foreign universities to teach full time courses

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

INDIAN INSTITUTE OF TECHNOLOGY ROPAR (IIT ROPAR)	• IIT Ropar was established in 2008 under the Institutes of Technology (Amendment) Act, 2011 along with 7 other new IITs. • Yet in a nascent stage of development, it offers undergraduate courses in Computer Science, Electrical & Mechanical Engineering with an annual intake of 40 students per stream. Currently, 462 undergraduate students are enrolled. • Postgraduate courses with a Master of Science in Mathematics, Chemistry & Physics along with a Master of Technology in Mechanical Engineering will commence in July 2015. Annual intake for postgraduate courses will be 52 students. • There are 110 Ph. D candidates in IIT Ropar across various fields of study.

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• Faculty members across departments are participating in industrial consultancy projects with various corporations like the Appen Butler Hill Group. There is also deep partnership with the manufacturing industry in Punjab with a focus on hand tools and boiler manufacturing industries. • Currently, 10-12 partnerships are in place for student exchange programmes focusing on international internships for students. More than 10 students undertake internships abroad during summer or winter breaks. • IIT Ropar has regular visiting faculty from various countries. Professors from IIT Ropar regularly attend development programmes. Majority of these programmes have been held in institutes across Germany and the UK.	• With the shift to the permanent campus planned for mid-2017, the immediate focus is on building and developing various new departments and centres to expand courses being offered. Departments for Bio-medical, Infrastructure & Environment Engineering are planned. • Interdisciplinary research centres for water management, climate science, cryptology amongst others will also be developed. • The institute is looking to further its internationalisation goals by hosting international students through student exchange programmes as well as increased international visiting faculty.	• The most immediate requirements for partnership are in the areas of student and faculty exchange programmes as well as research and innovation intiatives with joint research parks being a priority. Curriculum development and joint degrees/ twinning programmes do not figure highly on their list of immediate needs. • International reputation of the prospective partner institute is of paramount importance. There must also be synergy in research frontiers. • The institutes should preferrably be based in the USA, the UK or Germany. However, the nationality of the institute is not a deal breaker if the institute is of very high repute.

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

PANJAB UNIVERSITY	• Panjab University, one of the oldest central universities in India, was established in 1882 as University of Punjab at Lahore and is now based in Chandigarh • It was ranked number one in India and in the bracket 226-250 internationally in the Times Higher Education World University Rankings, 2013-2014 • The university has 75 teaching and research departments and 15 Centres/Chairs for teaching and research at the main campus located at Chandigarh • It has 188 affiliated colleges spread over Punjab and has one rural Regional Centre at Kauni, and 3 Regional Centres at Muktsar, Ludhiana and Hoshiarpur

Current international and industry collaborations

• Panjab University has been the hub for international collaborations in Punjab due to its prominent alumni in universities abroad

• International collaborations with Panjab University are done on departmental basis and not at the university level. Various departments of the university have signed 10 MoUs with foreign universities in the last four years prominent among these being with The University of Manitoba, Canada, Fancy Barristers - P.C. New York Law School, KOREA Institute of Energy Research

• Majority of student and faculty exchange programmes in the university are based on various scholarships including Shastri scholarship and Fullbright scholarship

Strategic imperatives and internationalisation strategy

• The university has been a strong supporter of internationalisation as evident from the fact that it has 10% additional seats in every course for international students and also provides travel grants to faculty to participate in faculty exchange programmes

• It is expanding the international students office for formulating a definitive long term strategy to focus on internationalisation

• It also plans to setup a study abroad department in the office of international students to help Indian students study abroad

Opportunities for partnership and partner selection criteria

• The major focus of university for international collaboration is in student and faculty exchange programmes and research initiatives

• Majority of international collaborations are expected with countries including UK, US, Australia and Canada due to English language and similarity in education systems

• Partner selection is based on departmental considerations. International student's office doesn't have any particular partner selection criteria

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

PUNJAB TECHNICAL UNIVERSITY (PTU)	• Established in the year 1997 and located in Jalandhar, PTU offers undergraduate, masters and doctoral courses in management, pharmacy, engineering and other streams to 500,000 students • It has about 600 professors, 1,300 associate professors and 11,600 assistant professors • It has more than 2000 Learning Centres, providing professional education in the country and abroad

Current international and industry collaborations

- It has student exchange collaborations with San Jose State University, Waiariki Institute Of Technology, Dongguk University, among others
- It has faculty exchange collaborations with Royal University Bhutan, National Taipei University of Technology, University of Fraser Valley, Canada, among others
- It has partnerships in research with National Taipei University of Technology, ASB University, and Canadian Education Consultancy Services

Strategic imperatives and internationalisation strategy

- The university is establishing a chain of institutes, called Punjab Institute of Technology, to prepare students to global employment standards
- PTU has collaborated with University of California Santa Cruz to start an Indian Institute of Excellence which will create a new institution to provide quality education to less privileged students
- It is also undertaking several collaborations in areas of student and faculty exchange

Opportunities for partnership and partner selection criteria

- It is interested in twinning programmes and curriculum mapping collaborations with prominent institutions
- In faculty exchange collaborations, it is keen on joint research projects and faculty training programmes
- In research collaborations, it has expressed its interest in projects that are on a cost sharing basis
- While shortlisting for collaborations, global ranking of the institutes, infrastructure and opportunities of learning available are taken into consideration
- The top 3 countries/regions for collaboration include the UK, Australia and North America

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

PUNJAB AGRICULTURAL UNIVERSITY (PAU)	• Established in 1962 and located in Ludhiana, PAU offers undergraduate and masters courses in agriculture and allied sciences. • It has faculty strength of 866 in 28 departments in four constituent colleges, including College of Agriculture, College of Agricultural Engineering, College of Home science and College of Basic Sciences & Humanities

Current international and industry collaborations

- It has collaborations with 16 international higher education institutions from US, Canada, Russia, Philippines, Netherlands, New Zealand and Mozambique with higher education institutions including Ohio State University, University of Leicester, University of Florida, University of British Columbia, and Moscow State Agro Engineering University

- It has linkages with several industrial bodies including National Research development Corporation, New Delhi; Fashion Technology Park, Mohali; Bharti Foundation; HDFC Bank; New Holland Tractors; Defense Food Research Laboratory and United Breweries Limited in areas of research and technology transfer

Opportunities for partnership and partner selection criteria

- PAU seeks several research and faculty exchange partnerships with agricultural institutions globally

- While selecting partners for collaboration, it looks for research excellence, expertise in tropical climate agriculture and state-of-the-art research facilities

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

PUNJAB ENGINEERING COLLEGE (PEC)	• Established in 1921 and located in Chandigarh, PEC offers undergraduate and masters courses in Aerospace, Civil, Computer Science, Elecrical, Electronics, Mechanical, Metallurgical and Production Engineering • It enrolls 699 students (50% from outside the state) and has a faculty strength of 137 which includes 14 professors, 47 associate professors, 60 assistant professors and 16 contractual faculty members

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• PEC has student and faculty exchange collaborations with ESIGELEC and New jersey Institute of Technology (NJIT) • It has research collaborations with City University, University of York, University of California, University of Rennes and others for joint research, research publications and conferences • It offers international scholarships to students through DAAD (Germany), Charpak (France), MITACS (Canada) • Curriculum development is done in collaboration with industry including Zscalar, Intel, Videocon and others	• The curriculum has internship element for one semester. Presently 15-20 students go to various institutes/industries of repute in different countries for internships. The institute intends to double this number in coming 3 years and increase it further in around 7 years • It has plans to conduct collaborative research in key areas with international institutes	• PEC intends to participate in collaborative research, student exchange and faculty exchange programmes • While shortlisting partners for collaboration, it looks for academic excellence and state of the art research facilities • USA, UK and EU countries are the top three preferred countries due to their globally top-ranked universities and high end research in the field of engineering and technology

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

CHITKARA UNIVERSITY	• Chitkara University, one of the leading private universities in Punjab was established in 1998 as Chitkara Institute of Engineering and Technology on the Chandigarh–Patiala National Highway. In the year 2010 Chitkara University was established by the Punjab State Legislature under "The Chitkara University Act" • The university offers courses to its 10,000 students in undergraduate and postgraduate degree courses in the fields including engineering, information technology, management, hospitality with the help of strong 600 faculty members

Current international and industry collaborations

- It has faculty and student exchange programmes with more than 50 institutes including Purdue University, University of Florida, Sciences Po Lille and China Medical University

- It has joint degree programmes / twinning arrangements with 15 institutes across US, France, Canada

- It has curriculum development programmes with institutes including Anglia Ruskin University, Institute D'Etudes Politiques De Toulouse and others

- Also, curriculum development in degree courses such as those offered by the School of Health Sciences is in collaboration with Fortis Healthcare

- It also has strong industry linkages with companies including CISCO, Ericsson, Dassault Systems, National Instruments and Oracle for industry trainings, summer internships and placements

- There is major emphasis on internationalisation as evident from events such as Global Engineering Week, a biannual feature and Global Business Week an annual event

Strategic imperatives and internationalisation strategy

- Chitkara University is working towards building a knowledge based society so internationalisation and globalisation are important assets to realise that vision

- It wants to continue on this path through internationalisation as evident from the regular international faculty from premier institutions visiting the campus

- It has strong focus on student and faculty exchange programmes which it feels will lead to research collaborations and articulation agreements

Opportunities for partnership and partner selection criteria

- Presently, the institutions seeks major collaboration opportunities in the areas of student and faculty exchange. The institute is highly interested in innovative research collaborations in the near future, with specific focus on healthcare and architecture programmes

- The institute proactively scouts for international collaborations by participating in international conferences

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

LOVELY PROFESSIONAL UNIVERSITY (LPU)	• Established in 2005, LPU is a premier private university based in Punjab. It has more than 25,000 students, 3,500 faculty members and more than 150 programmes in academic disciplines covering sciences & engineering, business & arts, medical sciences and education • The University aims to be in the top 200 global universities by 2025

Current international and industry collaborations

- LPU has more than 50 student exchange collaborations and 48 faculty exchange collaborations with international higher education institutions including Washburn, Troy University, Iowa State University, Tames Valley University, University of West London and University of Northampton

- It has more than 30 collaborations in research and 10 collaborations in curriculum development with international partners. In addition to this, LPU also has 5 twinning/ joint degree arrangements with foreign institutes

Strategic imperatives and internationalisation strategy

- LPU aspires to attract the best faculty to the university and has recently added a research & development block to promote research initiatives

- Internationalisation is important to LPU's strategy and they intend to have a two way flow in terms of international collaborations

- It aims to have at least 10% of its students from abroad and to create 300 mobility opportunities for inbound and outbound students as well as faculty by 2017

Opportunities for partnership and partner selection criteria

- The foremost priority for international collaboration is in student and faculty exchange, followed by research and curriculum development

- LPU prefers foreign partners that are proactive and encourage two way flow of ideas, students and faculty

- US, UK and Canada are countries of choice for LPU but they are also keen to work with universities from other European countries such as Spain and France
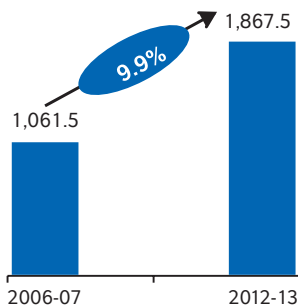
Source: Institute website; Response to questionnaire by institute

KARNATAKA — ONE OF THE LARGEST STATES IN INDIA AND CONSIDERED THE "SILICON VALLEY" OF THE COUNTRY; HAS THE FIFTH-LARGEST HIGHER EDUCATION SYSTEM

A DEMOGRAPHIC AND ECONOMIC OVERVIEW OF KARNATAKA

KARNATAKA HAS EMERGED AS THE THIRD LARGEST INVESTMENT DESTINATION FOR FDI IN THE COUNTRY FROM 2003-14. IT IS CONSIDERED AS "SILICON VALLEY" OF INDIA.

Figure 14: Enrolment in higher education institutions in Karnataka (in '000s)

	2006-07	2012-13
	1,061.5	1,867.5 (9.9%)
GER	15.47	25.5

Parameter	Details
Population (2011)	61 m (ninth largest in India)
18–23 year population (2011)	7.3 m (ninth largest in India)
Urban population and key cities (2011–12)	38.57%; capital: Bangalore, Mangalore and Mysore are the main cities
GSDP (2013) at constant price 2004–05	INR 2,966 bn (GBP30.57 bn) (7th largest in India); CAGR of 7.4% from FY2005-2013 slightly lower than India's 7.9%
Composition of GSDP (2013) (Primary-secondary-tertiary sectors)	13–27–59 • Established industries: mining, real estate, manufacturing • Emerging industries: aerospace, tourism, food and beverages
GDP per capita (2013)	INR 48,557 (GBP 501) (18th largest in India)
Unemployment percentage (2011)	Unemployment rate of 1.6%, less than India's average
Political climate	INC — won elections in 2013 with absolute majority
Air connectivity	13 domestic and 2 international airports; regular flights to the US, the UK, Canada and Australia
Scale and maturity of higher education syste	1.9 m students enrolled in 3,244 higher education institutions in 2012-13 and is the fifth largest state in terms of enrolment. GER of 25.5% is higher than India's GER
Enrolment by level (2012–13)	PhD/M Phil: 0.4%; PG/PG diploma: 13.7%; UG degree/diploma: 85.4%
Universities by ownership (2014)	central: 1; state/: 23; private: 9; deemed: 14; institute of national importance: 2
Quality metrics (2012–13)	• Pupil-teacher ratio of 14:1 better than India's 22:1 • 128 higher education institutions accredited 'A' out of 579 accredited higher education institutions • 9 universities featuring among top 100 in India (Career 360 rankings)
Examples of institutions in the state	• **Central:** IIM Bangalore (ranked 53 in FT's Executive MBA rankings) , NIT Surathkal, IISc • **State:** University of Mysore, Bangalore University • **Private*:** Manipal University (ranked 85 in QS BRICS rankings), Christ University, Azim Premji University

Source: AISHE 2012-13 (provisional), MHRD; Census of India 2011; NAAC website; UGC; Press articles

*Private universities include state private as well as deemed private universities

THE KARNATAKA GOVERNMENT IS PROACTIVELY IMPROVING THE STATE'S HIGHER EDUCATION SYSTEM

The Karnataka Government has undertaken several initiatives to improve its higher education system. The most important of these include:

PROMOTING PRIVATE INVESTMENT IN HE

- The State Government passed the Private University Bill in 2012 to enable establishment of 13 new private universities including Manipal University, Arka University, Sharana Basava University, Adichunchanagiri University, Dayanand Sagar University, Vellore Technical University and other

- Karnataka has received INR 32.5 m (GBP 0.42 m) under RUSA for monitoring evaluating and conducting research on management
- While RUSA's plan is still being developed, news articles suggest that it plans to set up eight model degree colleges under its ambit

Source: Press articles; DoHE, Karnataka government website; Karnataka higher education vision 2020 document

IMPROVING EQUITY THROUGH GOVERNMENT SPONSORED LOANS

"OUT OF SEVEN M STUDENTS IN THE STATE ONLY 1.7 M STUDENTS OPT FOR HIGHER EDUCATION. THE GOVERNMENT WILL PROVIDE FACILITY FOR HIGHER EDUCATION TO ALL STUDENTS BY BORROWING LOANS FROM THE BANKS IN ORDER TO BRING THEM TO THE MAINSTREAM AND THE INTEREST ON THE LOANS WILL BE PAID BY THE GOVERNMENT"
–R V DESHPANDE, KARNATAKA'S MINISTER FOR HIGHER EDUCATION MINISTER, FEBRUARY 2014

PROMOTING SCIENCE AND TECHNOLOGY EDUCATION

- Vision Group on Science and Technology (VGST) was constituted in October 2008 and is an apex advisory body to encourage and promote science and technology education and research in the state
- The Vision Group in 2013-14 has selected 40 educational Institutions for awarding grants for upgradation of Science related infrastructure at a cost of INR 50 m (GBP 0.65 m) under the K-FIST program.

Additional initiatives include:

- Setting up of 17 Institutions to establish centres of excellence in science, engineering and medicine at a cost of INR22 m (GBP 0.28 m)
- Implementing 85 science and engineering projects for students at a cost of INR 3 m (GBP 39,120)

"Karnataka expects at least INR 25,000 M (GBP 258.2 M) during the 12th plan and INR 75,000 M (GBP 765 M) at the end of the 13th plan, under the central government's RUSA"
R V Deshpande, Karnataka's Higher Education Minister, February 2014

KARNATAKA — PLANNING TO INCREASE ITS FOCUS ON RESEARCH BY CREATING NEW RESEARCH DEPARTMENTS AND UNIVERSITIES AND REFORMING CURRICULUM AT UG LEVEL

Karnataka has the 12th-highest GER (of 25.5%) among Indian states. This is higher than the Indian average. The state's primary focus is on enhancing the quality of higher education imparted in it and it is undertaking major initiatives to improve these. Its main targets and initiatives to realise its goals are

Table 10: Higher Education targets and initiatives planned for Karnataka

Axis	Targets	Initiatives planned
Access	GER of 30% by 2020	• Establishing new universities and other institutions of higher learning in all disciplines • Upgrading five academic staff colleges to Advanced Interdisciplinary Research and Training Centres
Equity	No specific targets	• Incentives, scholarships and freeships such as C.V. Raman scholarships planned and currently offered to attract students to pursue higher education • Free college education to provided to female students starting 2015 • Setting up of 20 model colleges in 20 educationally backward districts
Excellence	No specific targets	**Accreditation:** • Establishing monitoring and facilitating cells to obtain funding from UGC and other agencies • Establishing its own higher education institution ranking agency • Creating an alternative system of academic audit along with the NAAC/NBA **Research:** • Establishing an advanced research centre at Mangalore University by using funds under RUSA • Inculcating research capability at universities by reforming curriculum at undergraduate level • Converting some existing higher education institutions into purely research-based institutions **Others:** • Setting up smart classrooms at government colleges • Filling vacant teacher posts • Setting up a state-level undergraduate studies board to regulate curricula and academic quality
Employability	No specific targets	• Implementing schemes such as Angla and Maanavathe to impart English speaking and life skills to rural students

RECOMMENDATIONS AS PART OF VISION 2020

• Develop a broad-based recruitment policy to ensure a mix of students/faculty from all parts of the state and country to avoid a specific region/district focus

• Develop a robust forecasting mechanism to grow the private segment, 80% investments in HE, to streamline educational related planning in the state

• Set up an expert committee to recommend, review and mentor the entry of private players in the state's higher education sector

• Develop state-level equivalents of INFLIBNET, which can be mandated to provide full-spectrum ICT support to higher education institutions

Source: Interview with higher education state officials of Karnataka; Press articles; Karnataka higher education vision 2020 document

KARNATAKA HAS HIGH INBOUND MOBILITY AND A LARGE NUMBER OF FOREIGN COLLABORATIONS

• **Outbound student mobility:** Karnataka is an important market for outbound students which is reflected in the fact that four major destination countries—the US, the UK, Australia and Canada — have their education promotion offices in the state. The market is also catered to by several major education consultants.

Table 11: Presence of international educational consultants in Karnataka

Overseas education consultants	Number of offices in India	Number of offices in Tamil Nadu
The Chopras	**30**	5 (Bangalore and Mangalore)
Edwise	**23**	1 (Bangalore)
IDP Education	**17**	1 (Bangalore)
Global Opportunities	**15**	1 (Bangalore)

• **Inbound student mobility:** As of 2011-12, Karnataka is reported to have 12,058 foreign students, which constitutes around 36.37% of the total number of foreign students studying in India. It ranks first in attracting students from abroad.

• **International collaborations**: Karnataka's universities have a reputation of delivering high quality education and, therefore, a number of international universities have entered collaborations with them. Some of these collaborations are listed below:

COUNTRY	COLLABORATIONS
UK	• IIM Bangalore and Hull University UK collaboration on research on the agriculture supply chain • IISC, Bangalore and Imperial College London collaboration on research on "Local and remote influences on rainfall" by using the UKIERI grant • Christ University has international collaborations with Liverpool Hope University, Sheffield Hallam University and Swansea University
US	• Christ University, Bangalore has tie-ups with several American universities including Western Michigan University and Baldwin Wallace University • The Medical College at Manipal has tie-ups with the University of Missisipi , the University of Kentucky and Vanderbelt • The US-based Institute of International Education led a delegation to Bangalore (among two other Indian cities) to develop deep collaborative ties between Indian and American universities
CANADA	• Canadian institutions have tie-ups with several higher education institutions in the state including IIM Bangalore, IISc and Manipal University
AUSTRALIA	• The State Government of Victoria, Australia, in collaboration with the Asia Education Foundation has finalised a partnership programme in Bangalore • Bangalore-based ABB India collaborated with Australia's RMIT University to set up the Australia-India Research Centre for Automation Software Engineering (AICAUSE) • Education and skill development has been identified by AUSTRADE as a priority area for engagement of Australian entities with higher education institutions in Karnataka

Source: The Chopras website; Edwise website; IDP website; Global Opportunities website; Press articles; International collaboration bodies websites

THE STATE GOVERNMENT ENCOURAGES FOREIGN INSTITUTES TO ENGAGE WITH THE STATE'S INSTITUTIONS TO FURTHER THEIR RESEARCH AGENDA AND ADD VALUE THROUGH LONG-TERM AND SUSTAINABLE RELATIONSHIPS

While the Karnataka Government does not have specific plans/agendas for internationalising the higher education institutions in the state (since these are largely institute-driven and specific), it would like to see the increased participation of foreign institutions in the state in following areas:

- **Student exchange programmes:** While the Government encourages student exchange programmes, it is particularly keen on long-term mobility options and internships / fellowships that can result in eventual employment of students in host countries.

- **Development of faculty:** The Government **plans to develop faculty** through workshops on international best practices on pedagogy.

- **Research collaborations:** It is encouraging research-based collaboration on in the areas of Science, Technology, Engineering, Mathematics (STEM), cutting-edge technology, ICT, nanotechnology, medicine, etc.

The Karnataka Government is eager to engage with reputed departments in top-ranked universities across the world to collaborate on the initiatives mentioned above.

Source: Interview with higher education state officials of Karnataka; Press articles

INTERNATIONAL OPPORTUNITIES WITH INSTITUTIONS IN THE STATE: SUMMARY

13 HIGHER EDUCATION INSTITUTIONS IN KARNATAKA WERE APPROACHED TO PROVIDE INFORMATION, OF WHICH 8 RESPONDED

To ensure a balance of central, state and private institutes, we supplemented the responses with profiles of 3 more institutes, albeit based only on information available in the public domain.

Table 12: Profiled higher education institutes from Karnataka

NO.	INSTITUTION	YEAR OF EST.	TYPE OF INSTITUTION	FIELDS	OPPORTUNITIES
CENTRAL INSTITUTIONS					
1	NIT Surathkal	1960	Institute	Engineering/ Tech	Opportunity exists to develop research collaborations in the fields of material sciences, energy, and product development. NIT is also interested in collaborations leading to student and faculty exchange programme with leading global universities and institutes
2	IIM Bangalore	1972	Institute	Management	Student & faculty exchange programmes and research partnerships are the most preferred modes of partnership for IIM Bangalore
3	IISc	1909	Institute	Science	Key areas for partnership include International exchange of academic staff and cooperation in education and research with foreign institutions/industry, student exchange and collaborative research
4	National Law School of India University	1986	University	Law	Exchange programmes, twining programmes and collaborative research are key focus for collaborations
STATE INSTITUTIONS					
5	Visveswarya Technological University	1998	University	Engineering	Key areas for partnership include International exchange of academic staff and cooperation in education and research with foreign institutions/industry, student exchange and collaborative research
6	Bangalore University	1886	University	All faculties	Faculty exchange is the top opportunity for tie-up with Bangalore University. This is followed by collaborations in research & innovation
7	University of Mysore	1916	University	All faculties	Institution is open to collaboration based on institutions' interest and availability of a faculty for leading the initiative
PRIVATE INSTITUTIONS					
8	Christ University	1969	University	All faculties	Christ University is interested in exploring partnership options in faculty exchange as well as establishing joint centres for research and innovation
9	CMR University	2013	University	All faculties	CMR is keen on collaborations in student/faculty exchange, curriculum development and joint courses
10	MS Ramaiah College of Arts, Sciences & Commerce	1962	Institute	All faculties	Institute prioritises research and innovation partnership, followed by faculty and student exchanges
11	Manipal University	1952	University	All faculties	Priorities for Manipal include joint degree programmes, credit articulation arrangements, and participation in writing grants overseas with partner institutions

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

NIT SURATHKAL	• NIT Surathkal, a central institute, was founded in 1960 as Karnataka Regional Engineering College (KREC). • It offers undergraduate and graduate programmes in Engineering, Science, and Management • The institute has 14 departments, 11 support centres, 200 faculty members, 300 support staff, and 5,500 students

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• NIT Surathkal has student exchange collaborations with École catholique des arts et métiers, Lyon; Faculty of Engineering, Kagoshima University and Graduate School of Science and Technology, Kumamoto University • It has faculty exchange collaborations with institutions including Pennsylvania State University, Michigan State University, among others • It has extensive collaborations with industry majors such as Advance Micro Devices (AMD) and AB Volvo Group Sweden for student internships	• NIT Surathkal aspires to increase visibility of the institute, improve teaching and research quality and benchmark itself with the best institutions in the world • Therefore, NIT Surathkal aims to provide student internships in foreign universities, increase faculty exchange programmes to build capability and competence of its faculty, and collaborate on research initiatives	• NIT Surathkal's primary objective is to develop research collaborations in the fields of material sciences, energy and product development • It is also interested in collaborations leading to student and faculty exchange programmes with leading global universities and institutions • The institute seeks partnerships with reputed institutions with a focus on, but not limited to, the US, UK and Germany

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

INDIAN INSTITUTE OF MANAGEMENT BANGALORE (IIM-B)	• IIM Bangalore is a premier management institute in India, established in 1972. It offers doctoral, postgraduate and executive programmes to 530 students with the help of 93 faculty members, 10 visiting and 43 adjunct faculty • For the seventh consecutive year in 2014, IIM-B was ranked the best business school in Central Asia by Eduniversal, Paris

Current international and industry collaborations

- IIM Bangalore has more than 114 exchange partnerships with 33 partner countries. It also has research partnerships with Singapore Management University, University of Exeter, Harvard Business Publishing, Richard Ivey School of Business, and the Indian Institute of Science

- IIM-B is the only Indian B-school in the Global Network for Advanced Management (GNAM) list that features Yale, LSE, INSEAD and other top B-schools in the world

- IIM Bangalore has extensive tie-ups with the industry for scholarships, curriculum development (case studies), research and innovation, live projects, and internships

- IIM-B is India's first B-school to join edX, a non-profit enterprise created by Harvard University and MIT. IIM-B aims to leverage new technologies and deliver education via MOOC's (Massive Open Online Courses)

Strategic imperatives and internationalisation strategy

- The institute aspires to build a solid research eco-system, hire international faculty and build stronger doctoral programmes

- IIM-B seeks to build its reputation as a research powerhouse, particularly on emerging market issues, through the following strategic investments:
  - Creation of high-quality databases on emerging market topics
  - Scholarly articles and publications to leading international journals
  - Exceptional faculty with strong international representation

- Internationalisation is high on the agenda of the institute driven by initiatives like summer school for international undergraduate and graduate students. The summer school will be structured like the highly successful 'Doing Business in India' programme that IIM-B conducts for Stern School, NYU

- IIM-B also plans to offer joint and dual degree programmes with international institutes. Cornell University and HEC, Paris, have shown interest in partnering with IIM-B on this initiative

Opportunities for partnership and partner selection criteria

- Student and faculty exchange programmes and research partnerships are the most preferred modes of partnership for IIM Bangalore

- Preferred countries for partnership include the following:
  - US – Excellence of Research
  - UK – Interest in Faculty collaboration in research
  - Singapore – Proximity to India and extensive business ties between the two countries

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

IISc BANGALORE	• The Indian Institute of Science (IISc) was founded in 1909 due to joint efforts from Mr. Jamsetji Nusserwanji Tata, the Government of India, and the Maharaja of Mysore • IISc has become the premier institute for advanced scientific and technological research and education in India • IISc has 39 departments, units, or centres, 3500 students, and about 500 academic and scientific staff, supported by 600 administrative personnel • The Institute has about 2,200 PhD students, 900 Masters degree students, and 400 students in the new, research oriented, four-year BSc (Research) programme, whose first batch will graduate in 2015

Current international and industry collaborations

- IISc collaborates with various government organizations like DRDO, ISRO, Bharat Electronics Limited, Aeronautical Development Agency, National Aerospace Laboratories, CSIR, and Department of IT (Government of India)

- IISc also works in collaboration with private industry and research labs like Centre for Development of Advanced Computing, Google Inc., General Motors, Microsoft Research, IBM Research, Boeing, Robert Bosch Foundation and Pratt & Whitney

- A number of start-ups, such as Morphing Machines, SandI have been incubated by Society for Innovation and Development (SID) at the IISc campus

- IISc actively promotes and supports ventures by faculty, students and alumni. Strand Life Sciences and Ittiam are some success stories of this initiative

- IISc hosts international students, post doctoral fellows and visiting scholars from Australia, Canada, UK, US, Finalnd, France, Germany, Greece, Nepal, Iran, Nigeria, Sri Lanka, and Ethiopia

Strategic imperatives and internationalisation strategy

- The institute has focused on construction of modern buildings, acquisition of new research facilities, and induction of a large proportion of new faculty

Opportunities for partnership and partner selection criteria

- Since IISc is the leading scientific institution in India, it constantly seeks cutting-edge partnerships to further its contributions in the field of scientific research

- Key areas for partnership include student/ faculty exchange and joint research with foreign institutions and industry

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

NATIONAL LAW SCHOOL OF INDIA UNIVERSITY	• The National Law School Of India University was established in 1986 through the culmination of efforts by the Judiciary, the Bar Council of India, the Karnataka Bar Council, the Bangalore University and the Government of Karnataka to reform legal education and to establish a centre of excellence for legal education and research in India • The Chief Justice of India is the Chancellor of the University • NLSIU, Bangalore, has been ranked '1' in the 2014-15 surveys of India Today, Outlook, Education World and The Week • Total enrolment is around 550 students with 410 students in the flagship 5 year BA LLB (Honours) degree programme while the total faculty strength is 42

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• Student exchange programmes with 46 foreign institutes such as the National University of Singapore, Osgoode Hall Law School, York University, Canada and Buceuius Law School, Germany. Students from the Law School have spent a semester in these Law Schools and their students have spent at least a trimester here • Faculty members of this University have gone to the Universities of Wales, Warwick and Nottingham and faculty from these Universities have spent some time here doing teaching and research under the Exchange and Faculty Improvement Programmes facilitated by the British Council, Chennai • A number of professors and judges from the U.S.A., Canada, U.K., Australia, Singapore, Hong Kong, China, South Africa, Malaysia and New Zealand have visited and interacted with and even taught at the Law School	• Institutional and faculty mobilisation and collaboration are key elements of the internationalisation strategy of NLSIU • The university would like to set up twinning programs with reputed institutions in the next 3-5 years • In view of the increasing importance of International Contracts, number of programmes have been instituted including Training Programme for the capacity enhancement in the areas of International Contract	• Academic credentials and institute reputation are the selection criteria being used for selecting partners • Student and faculty exchange, twinning programs and collaborative research are the top most priority for international collaboration • UK, Australia and China are preferred countries for partnerships

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

VISVESWARYA TECHNOLOGICAL UNIVERSITY (VTU)	• Established in 1998, VTU is one of the biggest Technological University in India, having 201 colleges affiliated to it with under graduate course in 28 disciplines and post graduate programme in 71 disciplines. • The intake at under graduate level is about 67,100 students and at the post graduate level it is about 12,666 students. Further, the university has more than 1,800 doctoral students • Focused on technology and engineering disciplines, the university offers courses such as civil, mechanical, electronics, computer science and automobile engineering among other subject areas • The University was awarded the '2014 International Quality Award' by BID Group One, a global consulting firm in the USA

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• The University has several MoU's with leading organizations like Microsoft, IBM, Intel Asia Electronics Inc., Ingersoll-Rand (India) Ltd., Bangalore and Microsoft to train its faculty, conduct teacher training workshops, and provide project opportunities to students	• VTU aims to be in the top 10 universities in India • Internationalisation is also one of their key objectives, with the institute aspiring to be recognised as a world class technological university globally	• The preferred areas for partnership for VTU are collaborations in research and innovation, followed by collaborations in student and faculty exchange

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

BANGALORE UNIVERSITY	• Established in 1886, Bangalore University is a public state university and one of the oldest in India • It has 43 post graduate departments, a post graduate centre at Kolar, 3 constituent colleges, 665 affiliated colleges, and several other centres and directorates of higher learning and research under its purview • It offers 50 post graduate courses and diploma / certificate courses, 5-year integrated courses, and a 4-year BSc programme

Current international and industry collaborations	**Strategic imperatives and internationalisation strategy**	**Opportunities for partnership and partner selection criteria**
• International collaborations of Bangalore University include the student exchange programme under the NOHA Erasmus Mundus scholarship. The University also has collaborations to design curriculum, suited to Indian needs but tailored to global standards	• The University has undertaken several initiatives such as: 　• Provisions have been made to revise the curriculum based on CBCS scheme, comprising learner-friendly features at par with global standards 　• PhD programme has been revamped with a strong emphasis on course work to encourage research pursuits in all disciplines 　• ICT facilities for teaching, conducting research, and smooth functioning of administrative tasks are implemented as part of an overarching e-governance and e-learning infrastructure 　• Collaborative programmes are expanded for more rigorous endeavours in the University arena • Internationalisation is certainly a priority for the University. The student and faculty exchange programmes promote mutual understanding and appreciation of culture. The international initiatives are likely to be funded by the Government but certain research initiatives could be funded both by foreign partner and Bangalore University	• Faculty exchange is the top opportunity for tie-up with Bangalore University, followed by research & innovation collaborations and student exchange • Criteria used for selecting international partners by Bangalore University are expertise of specialisation in the foreign universities and availability of funding for such initiatives • USA, Germany and UK are preferred countries for collaboration for the University

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

UNIVERSITY OF MYSORE	• The University of Mysore was established in 1916 and it has 42 postgraduate Departments in the main Campus
	• It enrols more than 85,000 students, of which over 10,000 are postgraduates. As many as 1,400 students are from 50 countries pursuing higher studies in this University
	• The University covers subjects such as Arts, Science & Technology, Commerce, Education and Law
	• University of Mysore was first accredited by National Assessment and Accreditation Council (NAAC) with Five Star status in the year 2000 and reaccredited A grade in 2013
	• Current Science has ranked the University of Mysore as one of the top 20 Universities in Scientific and Research activities

Current international and industry collaborations

- University of Mysore has a strong record of attracting foreign students to its campus

- Currently, the University has students from China, Iran, Jordan, Thailand, Indonesia, Egypt, Syria, Tanzania, Uzbekistan, Kajkhastan, Kirghizia, Mongolia, Uganda, Yemon, Kenya, Palestine, Sri Lanka, Bangladesh and Nepal

- The University also organises several international conferences, wherein reputed academicians are invited from India and abroad

Strategic imperatives and internationalisation strategy

- The Ministry of Human Resource Development, Government of India has considered the University of Mysore as an 'Institution of Excellence' and has awarded special grant of INR 1 bn. to establish a Centre of Excellence in "Biodiversity, Bio prospecting and Sustainable Development" and to strengthen infrastructural facilities in the University

- Department of Science and Technology has awarded a special grant of INR 90 m under the PURSE (Promotion of University Research and Scientific Excellence) scheme in recognition of the quality publication output of the university faculty

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

CHRIST UNIVERSITY	• Christ University, formerly known as Christ College, is affiliated to the Bangalore University. • It was established in July 1969 and located in Bengaluru. It offers undergraduate and postgraduate programmes in diverse fields, including law, medical, and engineering to 14,000 students. • It was declared to be a deemed university in 2008 and was the first institution in Karnataka to be accredited by the UGC's National Assessment and Accreditation Council (NAAC) for quality education

Current international and industry collaborations

- It has partnerships for degree programmes with IESEG (France), Sheffield Hallam University (UK), Liverpool Hope University (UK), Griffith University (Australia), Western Michigan University (USA), Swansea University (UK) where the degree is offered by the partner university
- It also has a twinning programme with ISA Engineering Institute, Lille Catholic University, and Western Michigan University

Strategic imperatives and internationalisation strategy

- Christ University aims to internationalise its educational practices and improve quality of its programmes to match the standards of top universities globally
- It plans to extend student exchange programmes beyond semester exchange, share best practices and course credits programmes

Opportunities for partnership and partner selection criteria

- The University is interested in exploring partnership options in faculty exchange as well as establishing joint centres for research and innovation
- It is keen on developing partnerships with foreign universities, wherein the partner can provide unique education and learning models based on their experience
- Reputation of the institute is of paramount importance while entering into a partnership
- Also, cost effective exchange programmes will be a welcome addition to collaborations

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

CMR UNIVERSITY (CMRU)	• Established in 2013, CMR University is a private institution located in Bengaluru and offers undergraduate, postgraduate and research programmes in the field of management, economics, social sciences, humanities to 241 students with 27 faculty members

Current international and industry collaborations

- CMRU has a collaboration with Mzumbe University, Tanzania in collaborative teaching, research & student outreach programmes

- CMRU is a signatory of the United Nations' Global Compact's Principles for Responsible Management Education (PRME) initiative

- It has an industry collaboration with IBM Systems Centre of Excellence for UG/PG programmes in non-engineering areas, NASSCOM-Sector Skills Council to integrate Global Business Foundation Skills (GBFS) Curriculum in UG & PG programmes, and Institute of Product Leadership to offer Executive MBA and certificate programmes

Strategic imperatives and internationalisation strategy

- CMRU has an ambitious vision to design, develop and deliver industry-integrated curriculum in all its UG / PG & Ph.D. programmes. Further, it intends to attract students from foreign countries starting from July 2015.

- Internationalisation is a key component of their future growth plans, wherein CMRU plans to have a minimum of 5 international tie-ups in the next 3 years and 10 tie-ups in the next 5 years

Opportunities for partnership and partner selection criteria

- CMRU places highest importance on collaborations for short-term joint degrees (with aim to launch in 2017), student/faculty exchange for management, economics and commerce programmes, and curriculum development

- CMRU prefers institutions from UK due to the common educational history between India and the UK. It also is open to partner with US-based institutions due to proven Indo-US relations.

- Lastly, CMRU is also keen to collaborate with African institutions due to their emerging educational potential.

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

MS RAMAIAH COLLEGE OF ARTS, SCIENCE & COMMERCE	• The institute was established in Bangalore, Karnataka, in 1962 as a private institute. It offers courses at both under-graduate and post-graduate levels. • Subject areas range from core sciences and arts courses to management and commerce courses as well. The institute has a faculty strength of 311 • It was rated by NAAC as a Grade 'A' institute in 2009

Current international and industry collaborations

• The college has tie-ups with more than 19 institutions, including University of St. Petersburg, Russia; Coventry University, UK; University of Siena, Italy; Hong - Kong University; University of Illinois, Chicago, (UIC); and UNESP, Brazil, across Europe, Asia and North America for student/ faculty exchanges

• The college has one curriculum development arrangement with Coventry University, UK

• MS Ramaiah has industry partnerships with Covidien, Convatec and Himalaya Drug Company for research and innovation

Strategic imperatives and internationalisation strategy

• MS Ramaiah aspires to be among the top five medical schools in India and would like to provide medical consultancy to various developing countries

• To this end, they have set up a high-end research lab, along with a division of research and patents to support researchers, faculty and students. Additionally the institute also has industry – academia collaborative research projects

• Internationalisation is firmly on the institute's list of priorities, especially student and faculty exchange. To this end, they have partnered with a consortium of Indo-European academic, industry and governmental institutions

• The institute aims to establish an international centre for students and researchers across the globe to work together

Opportunities for partnership and partner selection criteria

• The institute prioritises research and innovation partnership, followed by faculty and student exchanges. The least priority is given to curriculum development. All these collaborations will be in the medical and allied fields

• International accreditation, values & ethos of the foreign institute, willingness to collaborate and innovate are some of the criteria that the institute uses to shortlist foreign institutes

• The institute prefers to collaborate with US institutes for their flexibility and ease of communication, UK-based institutes for their approach and modern technology and European institutes are preferred for their cultural plurality

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

MANIPAL UNIVERSITY	• Established in 1953 as Kasturba Medical College, the institution received deemed university status in 1993 and became Manipal university • The university currently offers over 300 courses in 15 disciplines, with over 28,000 students from 57 nations and faculty strength of 2,500 and support and service staff of 10,000 • It has off-campuses in Mangalore and Bangalore, which offer courses in Medicine, and six international campuses in Dubai, Nepal, Malaysia, and Antigua • The university is ranked 85 in the QS BRICS rankings (2014-15) and is particularly known for Medicine

Current international and industry collaborations

• The campus has over 3,000 overseas students from nearly 60 countries, and has a medical programme specifically tailored for Malaysian students to study in India

• It offers an engineering twinning programme with a foreign institute as an option for its students

• The National Chapter of International Association for the Exchange of Students for Technical Experience (IAESTE) is located in its campus, enabling 200 international students to study in India and vice-versa

• It has more than100 MoUs with overseas institutions for student and faculty exchange and twinning programmes

Strategic imperatives and internationalisation strategy

• It is establishing a new campus in Malaysia (Manipal International University) to cater to the need for affordable quality education by the local population

• It has set up a dedicated office to deal with international collaborations, and as a result, expected to increase its partnerships over the next few years

• Being a self-financing private institution, Manipal has always funded and will continue to fund all its internationalisation initiatives

Opportunities for partnership and partner selection criteria

• Priorities for Manipal include joint degree programmes, credit articulation arrangements, and participation in writing grants overseas with partner institutions

• it is also keen to attract an increasing number of international students to its campuses globally as a measure of its international reputation

• Key factors that Manipal considers important while selecting a partner include similarity in size, scale and courses, the reputation of the institution, and its recognition by various accreditation agencies. It also considers state of the economy, heterogeneity of its population, and the ability of the country to absorb foreign citizens for gainful employment while selecting countries.

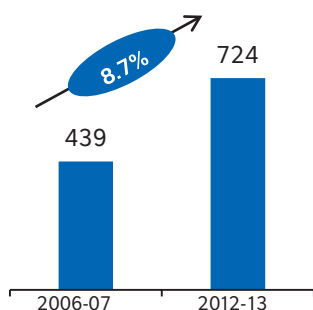• Students from Manipal seek exchange semesters at institutions in the US, Australia, Europe, and UK

Source: Institute website; Response to questionnaire by institute

ODISHA – A KEY STATE WITH A STABLE GOVERNMENT IN EASTERN INDIA

A DEMOGRAPHIC AND ECONOMIC OVERVIEW OF ODISHA

ODISHA IS AN IMPORTANT STATE IN EASTERN INDIA. IT IS WITNESSING A STRUCTURAL SHIFT FROM AN AGRICULTURE- AND MINERAL-DRIVEN ECONOMY TO A SERVICE-FOCUSED ONE.

Figure 15: Enrolment in higher education institutions in Odisha (in '000s)

	2006-07	2012-13
	439	724
GER	10	15.4

8.7%

Source: AISHE 2012-13 (provisional); Census of India 2011; NAAC website; UGC; Press search

*Private universities include state private as well as deemed private universities

Parameter	Details
Population (2011)	41.1 m (11th largest in India)
18–23 year population (2011)	4.7 m (12th largest in India)
Urban population and key cities (2011–12)	16.7%; Bhubaneswar (state capital), Rourkela and Cuttack key cities
GSDP (2013) at constant price 2004–05	INR1,403 bn (GBP 14.47 bn) (15th rank in India); CAGR of 7.6% from FY05-13 slightly less than India's (7.9%)
Composition of GSDP (2013) (Primary-secondary-tertiary sectors)	16–35–49 • Established industries: mining, construction, trade, hotels • Emerging industries: IT, bio-technology, food processing, commercial floriculture
GDP per capita (2013)	INR 33,441 (GBP 345) (26th largest in India)
Unemployment percentage (2011)	Unemployment rate of 7.2% in 2011
Political climate	Biju Janata Dal Government in power since 2000; currently in it's fourth term
Air connectivity	Six domestic and one international airport (Bhubaneshwar) - flights to the UK, the US, Singapore and Spain
Scale and maturity of higher education system	723,729 students enrolled in 1,116 higher education institutions in 2012–13 and is the 14th largest state in terms of enrolment. Its GER of 15.4% is lower than India's GER of 21%
Enrolment by level (2012–13)	PhD/M Phil: 0.3%; PG/PG diploma: 7.2%; UG/UG diploma: 90.8%; certificate / integrated programmes: 1.7%
Universities by ownership (2014)	Central: 1; state: 12; private: 3; deemed: 2; institute of national importance:2
Quality metrics (2012–13)	• Student teacher ratio of 19 (India's average – 22) • 17 higher education institutions accredited 'A' out of the 217 accredited higher education institutions • 3 universities featuring among top 100 universities in India (Career's 360 rankings)
Examples of institutions in the state	• **Central:** IIT Bhubaneshwar, NIT Rourkela, NISER • **State:** Utkal University, National Law University Odisha • **Private*:** KIIT University, XIMB

IN ADDITION TO FUNDING FROM RUSA, ODISHA IS IN DISCUSSION WITH THE WORLD BANK TO SUPPORT DEVELOPMENTS IN ACCESS, GOVERNANCE, EQUITY, QUALITY AND FINANCE ASPECTS OF HIGHER EDUCATION

Given Odisha's moderate GER, the focus of its government has been primarily on access and equity, but it is also looking at improving the quality of employability, faculty, research and governance of higher education institutes in the state.

ACCESS RELATED INITIATIVES	EMPLOYABILITY RELATED INITIATIVES	RESEARCH AND INNOVATION RELATED INITIATIVES	ADMINISTRATION AND GOVERNANCE
• The Government of Odisha has been focusing on establishing new higher education institutions ; in the state for the past 5-10 years. These include reputed institutions such as the Indian Institute of Handloom Technology; the Indian Institute of Public Health; Indian Institute of Technology, Bhubaneshwar; the National Law University of Odisha and AIIMS, Bhubaneshwar. Some of these have been recently established and some are under construction	• In Nov 2014, the Odisha government introduced a Bachelor in vocational education (B.Voc.) to enhance the employability of graduates and meet industry requirements for ready-to-work students. The Directorate of Vocational Education, Odisha selected 50 degree college across the state to introduce this three-year course from the academic year 2014-15	• Universalisation of IT literacy among all sections of society such as students, businessmen, senior citizen and women, by Formation of Odisha Knowledge Corporation Ltd. • Interdisciplinary Social Science research by providing research and extension activities in social sciences • Set up Women's study research centre	• The Government has established 25 District Monitoring Cells to track the performance of the faculty of colleges in the state • It has introduced its e-Admission scheme under its Student Academic Management System (SAMS), which was introduced in the 2009 -10 academic session • It has implemented e-Scholarships • It has reformed the higher education examination system to focus on the qualitative aspects of learning

Initiatives for privatisation: Each private university shall be established by a separate Act, which will be passed by Odisha Legislative Assembly.

In June 2014, Odisha received INR 340 m (GBP 3.5 m) under RUSA to set up eight model colleges. Its higher education sector is to receive funding of around INR1000 m (GBP 10.3 m) in the current academic year, and based on its utilisation of current allocated funding, this may be increased to INR 5000 m (GBP 51.5 m) in the following academic year.

Furthermore, the Odisha Government is in discussions with the World Bank to obtain finance for its higher education-related initiatives, specifically to improve the quality of teaching, learning, and research, and improve the state's GER. The discussions are ongoing and no formal announcement has been made yet on the grant /assistance that may be given to it.

Source: Press articles; DoHE, Odisha government website

THE ODISHA GOVERNMENT AIMS TO ACHIEVE A GER TARGET OF 32% BY 2022 AND IS TAKING MEASURES TO IMPROVE ACCESS AND QUALITY

A number of initiatives have been suggested by Vice-chancellors of state universities in Odisha to improve the higher education institutions in the state, e.g., NAAC accreditation, improvement of infrastructure and modernisation of its education system, which is a focus area they and the Government should prioritise to implement reforms in the state's higher education sector.

Some of the state's key targets and initiatives to realise its goal /targets are:

Table 13: Higher Education targets and initiatives planned for Odisha

Axis	Targets	Initiatives planned
Access	• GER of 32% by end of Thirteenth Five year plan (by 2022) • To achieve 40%-50% increase in GER in higher technical education by 2017	• Expanding institutional base of higher education (including technical, professional and vocational education) by creating additional capacity in existing institutions, and incentivising state and non- government organizations/ civil society • Creating 8 government/private colleges, 10 engineering colleges and 10 general education colleges • Appointing of more than 20,000 lecturers • Upgrading existing autonomous colleges to universities
Equity	• To achieve 25% increase in enrolment of rural students, enrolment of SC and ST students/ girls and differently abled by the end of 2017 and 2022	• Setting up quality institutions in urban and semi urban areas • Setting up model colleges in educationally disadvantaged districts such as Boudh, Deogarh, Jharsuguda, Malkangiri, Nayagarh, Nuapada, Nawrangpur, Rayagada and Sonepur where there is no government college at present. There is an urgent need for a college in each of these districts • Taking steps to attract central institutes (IIM, National Teachers Training Institute, Tribal University etc. to the state • Encouraging private sector investment in remote , tribal and low GER districts • Setting up Institute for TribalArt and Culture at Phulbani – already allocated with investment of INR 50 m by 2017
Excellence	• Improvement in quality of higher education (no specific targets)	**Research and innovation:** • Promoting use of ICT in higher education through Wi-Fi systems, smart classrooms, e- Learning, e-Evaluation ICT Cells and e-Admission rooms • Establishing a research university by 2017 • Setting up centres of excellence in the fields of physical and chemical science, oceanography, social sciences, minerals and materials to attract, retain and nurture local talent and provide industry-academia interface for R&D **Training and collaboration:** • Establishing technology enabled learning centres for faculty • Collaborating with foreign governments on knowledge sharing **Governance and administration:** • Making affiliation system more manageable and fast • Implementing robust screening of and interviews with newly appointed vice-chancellors of government universities • Converting colleges to cluster universities to redistribute load
Employability	• Improvement in employability of graduates (no specific targets)	• Introducing compulsory vocational courses as part of curriculum • Encouraging leadership and soft skill development initiatives for students • Promotion of technical and vocational skill development to reap benefits of demographic profile

Source: Interview with Principal Secretary higher education of Odisha and government officials; Press articles; DoHE, Odisha government website; State higher education plan

ODISHA HAS A GROWING NUMBER OF INTERNATIONAL COLLABORATIONS AND TRACTION WITH LEADING PRIVATE INSTITUTIONS

- **Outbound student mobility:** Odisha does not seem to be a focused market from a student recruitment perspective, since none of the major pan India education consultants and education promotion arms of leading countries have a presence in the state

- **Inbound student mobility:** Around 82 international students were reported to be enrolled in higher education institutions in Odisha in 2010-11 (AISHE) —7 enrolled in PhD/M Phil courses and 75 in UG degree courses. Private universities such as KIIT have been able to enroll a significant number of international students (200–300)

- **International collaborations:** While universities are free to enter international collaborations, state universities seem less active in this area. However, those such as KIIT have several international partnerships and regularly organise international conferences and seminars. KIIT has signed more than 100 international MoUs on research, faculty- and student-exchange programmes

COUNTRY	COLLABORATIONS
UK	• Indian Institute of Technology (IIT)-Bhubaneswar signed an MoU with the Warwick Manufacturing Group (WMG) for faculty members and students to work with industry on a collaborative basis.
US	• Odisha Society of Americas' (OSA's) higher education arm promotes higher education, collaborative research, training and other programmes of mutual interest and benefits between Odisha's universities and North American ones. • The OSA held its first higher education open house at Ravenshaw University, Cuttack in 2012. This was attended by representatives from Michigan State University, the University of California, West Virginia University, the University of Wisconsin and Miles College in the US.
CANADA	• IIT Bhubaneshwar has entered a collaboration with the University of Edinburgh, UK and the University of Western Ontario, Canada. • The Centre for Canadian & Russian Language studies was created at Berhampur University to promote exchange of ideas and culture between India, Canada and Russia.
AUSTRALIA	• In August 2014, the Prime minister of South Australia indicated that South Australia was keen to collaborate with India in the fields of education and vocational training. The HRD Minister mentioned that IIT, Bhubhaneshwar could collaborate with Australian institutions in the area of mining technology. • KIIT has signed an MoU with Deakin University.

Source: The Chopras website; Edwise website; IDP website; Global Opportunities website; Press articles; International collaboration bodies websites

THE ODISHA GOVERNMENT IS FOCUSING ON ACCESS, QUALITY OF FACULTY AND VOCATIONALISATION OF HIGHER EDUCATION

While the Odisha Government does not have a specific international strategy, there are certain initiatives that can be accelerated or conceptualised with help of and partnership with foreign higher education institutions. Some of the areas where the Government is keen to engage with foreign institutes include:

Employability-related initiatives:

• While Odisha has made significant progress in rolling out a reform road map to restructure and develop its vocational and higher education system, its Department of Education is strongly considering implementing vocational courses and introducing new degree programmes such as B.Voc to improve the employability of graduates in the state's higher education institutions

   • Vocational education is a key area for possible international collaborations to create a ready-to-employ workforce of graduates in the future

• A main focus of Odisha's Department of Higher Education is interpersonal skills development, with a focus on English language, communication and soft skills

Faculty development:

• The Government plans to invite foreign faculty to visit its universities and train local faculty members, and also to send qualified and distinguished faculty from Odisha abroad for training and to obtain international exposure

Joint research collaborations

• There is a potential for collaborative research in areas where Odisha is particularly strong, e.g., in marine science, biotech and life sciences. Many key institutions such as IIT Bhubaneshwar, KIIT, and Utkal University focus on these research areas. Other important areas where key Odisha universities are focused for research include physical and chemical sciences, earth system sciences, oceanography, social sciences, and minerals and materials

• Odisha has a vision for collaboration with the international community, foreign governments, universities/institutions for advancement of universal knowledge and intellectual property rights in the state

Source: Interview with Principal Secretary higher education of Odisha and government officials ; Press articles

INTERNATIONAL OPPORTUNITIES WITH INSTITUTIONS IN THE STATE: SUMMARY

14 HIGHER EDUCATION INSTITUTIONS IN ODISHA WERE APPROACHED TO PROVIDE INFORMATION, OF WHICH 6 RESPONDED

To ensure a balance of central, state and private institutes, we supplemented the responses with profiles of 2 more institutes, albeit based only on information available in the public domain.

Table 14: Profiled higher education institutes from Odisha

NO.	INSTITUTION	YEAR OF EST.	TYPE OF INSTITUTION	FIELDS	OPPORTUNITIES
CENTRAL INSTITUTIONS					
1	Indian Institute of Technology Bhubaneshwar	2008	University	Engineering/ Technology	Student and faculty exchanges and collaborative research are the top priorities for IIT Bhubaneshwar
2	National Institute of Science Education and Research	2006	University	Specific-Science	Facilitating mutual exchange of faculty for teaching and research activities and students primarily for research and development purposes is the first and foremost priority for the institute
STATE INSTITUTIONS					
3	Utkal University	1943	University	All faculties	The university is looking for opportunities of faculty exchange, knowledge sharing and curriculum development
4	National Law University, Cuttack	1962	University	Agriculture	NLUO is looking to collaborate in student exchange and faculty exchange programmes
5	Odisha University of Agriculture and Technology	1962	University	Agriculture	NA
6	Berhampur University	1967	University	All faculties	NA
PRIVATE INSTITUTIONS					
7	Kalinga Institute of Industrial Technology, Bhubaneshwar	1992	University	All faculties	KIIT takes assistance of international faculty to design curricula and is keen to explore the possibility of joint degrees provided the regulatory constraints can be minimised
8	Xavier Institute of Management, Bhubaneswar (XIMB)	1987	Institute	Business	XIMB plans to have greater connect with global business schools for increasing student and faculty exchange programmes across the various programmes in business management, human resource management, rural management and global management

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

INDIAN INSTITUTE OF TECHNOLOGY, BHUBANESWAR	• Established in 2008, IIT Bhubaneswar is one of the eight new IITs offering B. Tech, M. Tech and Ph.D. programmes in engineering and science • It has 900 students currently enrolled in its courses, wherein 55% are undergraduates, 30% masters, and 15% PhDs, and a strength of 100 faculty members

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• Since the institution has just started, it does not have a mature international collaboration network; however it has signed MoU's with University of Edinburgh, UK; University of Western Ontario, Canada; University of Texas, North Denton, USA; University of Warwick UK and Dartmouth University, USA, among others	• IIT Bhubaneshwar is focused on establishing centres of excellence in multiple disciplines to carry out joint research with like-minded, international and national institutions • It has a provision for temporary contracts for visiting professors and guest lecturers • It also offers master students the opportunity to conduct research abroad in collaboration with an international partner institute for one semester	• It aims to become the number one research institution in the eastern region of India • Accordingly, it seeks partnership opportunities with research focused institutions, particularly in the fields where IIT Bhubaneshwar is most active such as climate science, materials, manufacturing and energy

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
CENTRAL INSTITUTION

NATIONAL INSTITUTE OF SCIENCE EDUCATION AND RESEARCH (NISER)	• Founded in 2006, NISER is currently functioning under the Institute of Physics, Bhubaneswar; however, its permanent campus (under construction) is expected to have 2,000 students and 300 faculty • Presently, NISER is conducting a 5-year integrated M.Sc. programme in Biology, Chemistry, Mathematics and Physics. In future, it plans to offer B.Sc., integrated M.Sc.+ Ph.D. and Ph.D. programmes • It envisions that a faculty member will devote 30 to 40 percent of his/ her annual time for teaching and will devote the rest to research and guiding research scholars

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• NISER has three international partnerships for student exchange with the University of Cologne, University of Freiburg, and the University of Turku, Finland • Most current internationalisation efforts are funded directly by the institution	• In the next 2-3 years, NISER aims to build a solid base of research and reputation and collaborate with the 'right' international partners for research work • It is focused on creating a rigorous research and teaching culture, advanced through student and faculty exchange programmes • In March 2014, the institute also established an international affairs department, which aims to reach out to potential international partners through research publications, events and alumni connects • The majority of funding for internationalisation initiatives is expected to come from international funding agencies from EU and Canada	• NISER is mainly interested in student and faculty exchange programmes and joint research initiatives with prospective partners • Bringing together faculty and students for joint clinical research activities is also of interest • While selecting international partners, repute of the institution is of paramount importance and regions such as USA, Canada and EU are preferred over others for collaboration

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

NATIONAL LAW UNIVERSITY, ODISHA (NLUO)	• National Law University, Odisha, a state university was established in 2009 and is located in Cuttack. • It offers B.A./LL.B. (Hons.) and BBA/LL.B. (Hons.) courses along with an LLM programme to 582 students with the help of 24 regular professors and additional visiting faculty. • 15% of students are from Odisha and rest are from over 25 Indian states

Current international and industry collaborations

- The university currently does not have any international collaborations as it has been recently established.
- The university has regular guest lectures from High Court Judges, members of various Bar Councils, among others.
- It is currently working on a research project with UNDP on "Access to justice for marginalised people and socially relevant legal education."
- The university's governing council has prominent members from Odisha's High Court, Indian Supreme Court and Bar Council.

Strategic imperatives and internationalisation strategy

- The university aims to strengthen the functioning of its research centres, thus advancing academic growth of the university.
- It aspires to broaden its horizons with greater international collaboration as well as deepen the understanding of social, economic and political realities of India.
- It has applied to make Fulbright Scholarship[1] available for its students, and is expected to obtain requisite approvals for the same.

Opportunities for partnership and partner selection criteria

- NLUO is looking to collaborate in student exchange and faculty exchange programmes.
- The institution is also planning to launch joint degree programmes and invite foreign scholars for short term, credit-based courses
- It plans to collaborate with international institutes such as United Nations Development Programme for research

Source: Institute website; Response to questionnaire by institute
[1] : USIEF website

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

UTKAL UNIVERSITY	• Utkal University was established in the year 1943 • The University has twenty-seven Post-Graduate Departments located in the University Campus for Post-Graduate studies and research in various disciplines of Science, Humanities, Business Administration, Social Science, Law and Commerce • The total number of students in the masters programme of the campus at Vani Vihar is nearly 3,000 • It has approximately 267 affiliated Colleges—including 219 degree colleges, 44 professional colleges, and 2 other constituent colleges—under its jurisdiction

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria

• Currently, Utkal university does not have any international partnerships
 	
 • The Industry placement cell develops networks with leading corporate houses, PSUs, Banks, Government and Non-Government Organizations and facilitates the placement process
	• Utkal University aspires to be ranked amongst the top universities in India and has adopted several initiatives to reach its goal:
	    • The university has taken steps to establish a High Performance Computing (HPC) facility, and an inter-disciplinary research facility
	    • It plans to start the Summer Postgraduate Research Grant for Excellence programme, wherein postgraduate students from Utkal University and other participating institutions undertake 8-10 week, research projects
	    • It plans to provide add-on courses and impart the best training through academia, industry and development sectors to increase the employability of its students
	 • Internationalisation initiatives are presently funded by the government or external parties
		• The university primarily seeks partnerships, such as faculty exchange, knowledge sharing and curriculum development
		
		 • Utkal university would select prospective partners based on common research and teaching interests
		
		 • UK, USA, and Germany are the preferred countries for partnerships

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

ODISHA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY (OUAT)	• Established in 1962, it is the second oldest agricultural university in the country offering courses in 35 disciplines including agriculture and allied sectors like veterinary science and animal husbandry, agricultural engineering, fisheries, forestry, home science, basic science and humanities • The University enrolls 1,374 students and has a faculty strength of 511 supported by over 1,290 technical, administrative and support staff

Current international and industry collaborations

• The University provides hands-on training to its students through intensive internship programmes in association with industry

• For example, horticulture students of the University undergo an intensive training programme at Krishi Vikas Kendras (KVK) and the veterinary students undergo training under veterinary assistant surgeons for practical work experience

Strategic imperatives and internationalisation strategy

• OUAT aims to promote advancement in research and education in agriculture and allied fields. Some of the identified objectives of the University are:

  • Impart professional education in different branches of studies, particularly Agriculture, Veterinary Science & Animal Husbandry, Agricultural Engineering, Fisheries, Forestry, Home Science and other allied branches of learning and scholarship

  • Further the advancement of learning and technology generation through research in agriculture and allied sciences

  • Undertake extension education for refining technologies and transferring technological knowledge for empowering the farming community

• Internationalisation is an important tool to achieve high-quality research for the University

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
STATE INSTITUTION

BERHAMPUR UNIVERSITY	• Established in 1967, Berhampur University offers undergraduate and postgraduate courses in Arts, Science, Commerce, Law, Education, Medicine, Engineering, Pharmacology, Homoeopathy, Ayurveda, Nursing, Military Science, Library Science and Fine Arts. • It has eleven government colleges, sixty-two non government colleges and twenty-six professional technical colleges affiliated to the university • There are twenty post-graduate departments in the university offering specialised subjects and M. Phil programmes. • The University has been accredited B+ by NAAC

Current international and industry collaborations

- It runs a one-year diploma in Banking and Insurance Management in collaboration with ICICI Bank on a self-financing basis
- Berhampur university has two-month, faculty exchange programmes as ICSSR-NOW Fellows under the Social Science Scholars Exchange Programme with the University of Maastricht
- The University also organizes several international institution visits for Its faculty to countries, such as Netherlands, China, Bangladesh and Germany

Strategic imperatives and internationalisation strategy

- One of the main objectives of the University is research and therefore the University has taken several steps toward improving the quality of research. Funding agencies like the UGC, CSIR, Department of Science and Technology, Ministry of Earth Sciences have been promoting and encouraging research by way of providing financial assistance to the teachers and scholars

*This profile is purely based on information available on the institute website

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

KALINGA INSTITUTE OF INDUSTRIAL TECHNOLOGY (KIIT)	• Established in 1992, KIIT is one of the largest private universities of Odisha enrolling more that 20,000 students across 28 constituent schools in more than 100 programmes offering UG and PG courses in engineering, bio-technology, medicine, management, law, computer application, rural management, fashion, film studies, journalism and sculpturing with help of its 1,500 academic and research staff • KIIT is given grade 'A' by the NAAC • It was declared a deemed university in 2004

Current international and industry collaborations

• KIIT has academic partnerships and collaborations with 100 institutes across the world and has 300 international students from 22 nationalities studying across its campuses

• The NBA accreditation under Washington accord provides KIIT students seamless mobility across 17 countries, including the UK and US, to purse further courses and degree

• KIIT has obtained membership of various prestigious world bodies, accreditation boards and associations such as International Association of Universities (IAU), Association of Commonwealth Universities (ACU), University Mobility of Asia and the Pacific (UMAP) , International Association of University Presidents (IAUP), and Association of Universities of Asia and the Pacific (AUAP)

• It has an International programme Cell to facilitate international exchange of faculty and students

Strategic imperatives and internationalisation strategy

• KIIT aims to have strong bi-lateral partnerships with universities across the world to promote student and teacher exchange both ways and aims to increase foreign student enrollment to 10% from the current 1-2%

• KIIT has a strong traction with students from developing economies such as Nepal, Bhutan, Bangladesh which it further wants to expand while maintaining a keen focus on other source countries

Opportunities for partnership and partner selection criteria

• KIIT School of Biotechnology has the largest number of international partnerships, followed by the schools of law and engineering

• It takes assistance of international faculty to design curricula and wishes to explore the possibility of joint degrees if regulatory constraints can be minimised

Source: Institute website; Response to questionnaire by institute

INSTITUTIONAL CASE STUDIES
PRIVATE INSTITUTION

XAVIER INSTITUTE OF MANAGEMENT, BHUBANESHWAR (XIMB)	• Established in 1987 through a PPP contract between the Government of Odisha and the Odisha Jesuit Society, XIMB is one of Odisha's premier management institute • In the academic year 2014-15, it enrolled 540 students across general MBA, MBA-HR and MBA-Rural management, 27 in Ph.D., 30 in the 3 Continent Masters in Global Management Programme, 24 in 1-year Exec-programmes and 57 in B.Com. Programmes • It has faculty strength of 110 professors, and has been ranked the 13th best B-School in India according to Outlook in 2011

Current international and industry collaborations	Strategic imperatives and internationalisation strategy	Opportunities for partnership and partner selection criteria
• International students from countries like US, Russia, Belgium, Portugal, Brazil, South Africa, Switzerland and France are part of it's 3C MGM and other exchange programme • It has 14 partnerships for masters level, business management programmes with universities such as Fordham University, New York, Antwerp Management School, Antwerp; and Kedge Business School, Marseille, France and others across US, EU, South Africa • It has 14 external members involved in curriculum development and 60 industry tie-ups for guest lectures and student interactions • It has 20 partnerships with government departments, private/public sector, NGO's and the UN for research and innovatio	• XIMB is developing partnerships with many international business educational institutions for twinning and multi-continent management programmes, collaborative research, and North-South and South-South student and faculty exchange programmes • XIMB is a member of the Learning Mobility with Non-industrialized Countries (LEMONOC) project, supported by European Commission with an objective to improve exchange programmes with developing countries available at European higher education institutions • It plans to commence a Master of Science in Global Finance (MSGF) programme in collaboration with Fordham University, New York • The University does not rely on government funding; thus, its plans to invest or have users sponsor internationalisation initiatives such as twinning or multi-continent programmes	• It plans to have greater connect with global business schools for increasing student and faculty exchange programmes across business management, human resource management, rural management and global management disciplines • XIMB is most interested in joint degrees/twinning arrangements in global management, HR, finance and marketing, followed by student and faculty exchange programmes

Source: Institute website; Response to questionnaire by institute

CONCLUSION

AS STATES ARE ON THE RISE IN INDIA, SO ARE THE OPPORTUNITIES

While internationalisation is still in its nascent stages in India, it is one of the top priorities of the Indian government; it aims to put Indian higher education on the global map in research, innovation and teaching. There are a growing number of new initiatives at the central and state level which are responding to this ambition and which are enabling Indian institutions to partner with foreign institutions. The reforms in higher education also appear to support this aim; as states receive more autonomy, fresh policies and opportunities are beginning to emerge in some states for international collaboration with new partners in the state and private sectors. There has never been a better time to collaborate with India in higher education.

Our study indicates that private institutions have been quicker and more active in forming international connections than central and state institutions, which are generally quite risk averse. Of the five states examined, Gujarat appeared particularly proactive when it came to international collaboration; others, while encouraging, seem to have a more reactive / opportunistic approach to internationalisation, but were very open to international cooperation when aligned to their priorities and agendas.

There is significant interest from various institutions to partner with international institutions on multiple fronts, including:

• Faculty and student exchange

• Research collaboration

• Academic content development

• Employability

Given the scale of reform in higher education at state level, there are also indications of potential opportunities for system-level collaboration. These have yet to be explored with individual states.

Considering that the Indian higher education system is the second largest in the world in terms of enrolment and largest in terms of number of institutions, only a handful of institutes represent the country in the global arena - there is pressing need for internationalisation. As states are on the rise in India, so are opportunities.

GLOSSARY

AICTE
All India Counil for Technical Education

AISHE
All India Survey on Higher Education

AUD
Australian Dollar

B. Voc
Bachelor of Vocation

BBA
Bachelor of Business Administration

BCA
Bachelor of Computer Application

BFSI
Banking and financial services

BITS
Birla Institute of Technology And Science

BSR
Basic Scientific Research

CAD
Canadian Dollar

CAGR
Compounded Annual Growth Rate

CBCS
Choice Based Credit System

CDAC Pune
Centre fo rdevelopment and Advanced Computing

CIHEC
Council of Industry-Higher Education Collaboration

CSIRO
Commonwealth Scientific and Industrial Research organization

DEC
Distance Education Council

DEI
Distance Education Institute

DoHE
Department of higher education

EY
Ernst & Young

FDI
Foreign Direct Investment

FEI
Foreign Education Institutes

FICCI
Federation of Indian Chambers of Commerce and Industry

FPM
Fellowship Porogram in Management

FY
Financial Year

GAR
Gross Attendance Ratio

GBP
Great Britain Pound

GDP
Gross Domestic Product

GER
Gross Enrolment Ratio

GERMI
Gujarat Energy Research & Management Institute

GSDP
Gross State Domestic Product

HE
Higher Education

HEI
Higher Educational Institute

HRD
Human Resource Department

ICT
Information and Communication Technology

IFRS
International Financial Reporting Standards

IGNOU
Indira Gandhi National Open University

IIM
Indian Institute of Management

IISc
Indian Institute of Science

IISER
Indian Institute of Science Education and Research

IIT
Indian Institute of Technology

INR
Indian National Rupee

ISB
Indian School of Business

IT / ITeS
Information technology/ Information Technology enabled Services

ITI
Industrial training Institute

KUSHAL
Knowledge Upgradation Centres for Skilled Human Action and Learning

LPU
Lovely Professional University

MBA
Masters of Business Administration

MHRD
Ministry of Human Resource Development

NAAC
National Assessment and Accreditation Counci

NBA
National Board of Accreditation

NIILM
Northern Institute of Integrated Learning in Management

NIIT
National Institute for information Technology

NIT
National Institute of Technology

NRI
Non Resident Indian

NSQF
National Skill Qualification Framework

1 GBP = 96.92 INR and 1 GBP = 1.56 USD (Average exchange rate Dec 2013-Dec 2014)

OBC
Other Backward Classes

PG
Postgraduate

PGDM
Post Graduate Diplonma in Management

R&D
Research and Development

RBI
Reserve Bank of India

RUSA
Rashtriya Ucchatar Shiksha Abhiyaan

SME
Small and Medium Enterprise

TANSCHE
Tamil Nadu State Council for Higher Education

TEQIP
Technical Education Quality Improvement Programme

UG
Under Graduate

UGC
University Grants Commisssion

UKIERI
UK-India Education and Research Initiative

UP
Uttar Pradesh

UT
Union Territory

VIT
Vellore Institute of Technology

YOY
Year-on-year

FIGURES AND TABLES CITATIONS

ACKNOWLEDGMENTS

ANNEXURE A:
STRUCTURE OF THE INDIAN HIGHER EDUCATION SYSTEM

ROLE OF THE CENTRAL AND STATE GOVERNMENTS IN INDIAN HIGHER EDUCATION

EDUCATION IS A CONCURRENT SUBJECT

Education as a subject, features in the Concurrent List of the Constitution of India [Entry 25], thereby empowering both the Central and the State Governments to make laws to regulate it.

ROLE OF CENTRAL GOVERNMENT

The Central Government has assumed a key role in formulation of public policy, funding for higher education and has been responsible for the coordination and determination of standards in institutions for higher education in India [Entry 66 of the Union List].

ROLE OF STATE GOVERNMENT

The State Governments have been playing a major role in the funding of education and in administrative and operational matters.

Figure 16: Government expenditure on higher education – State and Central (INR m)

	State	Central
2010-11	558,960	418,380
2011-12	685,850	455,170
2012-13	769,290	570,220

Expenditure as percentage of GDP

2010-11	2011-12	2012-13
1.34%	1.36%	1.53%
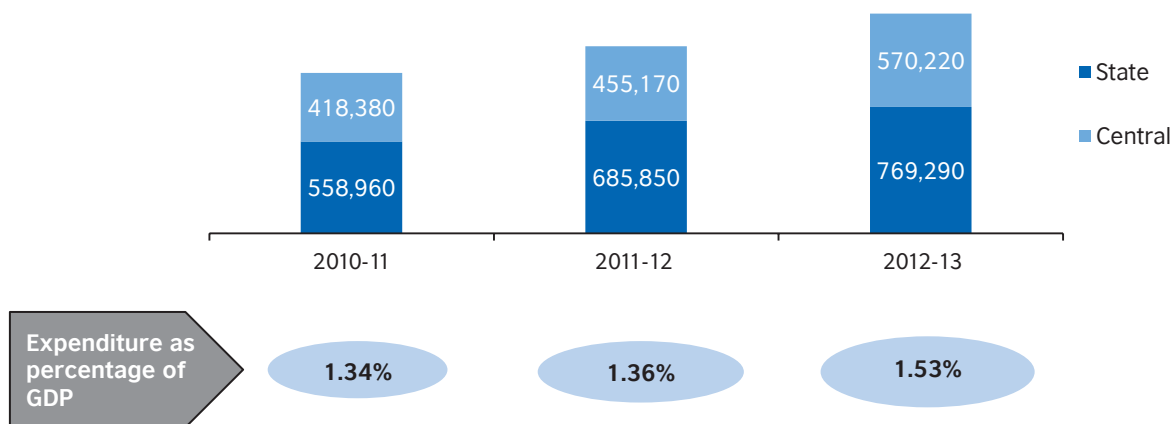
KEY REGULATIONS AND ACCREDITATIONS IN INDIA

STATUTORY BODIES IN HE

UGC

- The provision of university and higher education in India is regulated by the University Grants Commission Act, 1956.
- The UGC regulations apply to all Universities established in India under Central or State Legislations.

AICTE

- Technical education is governed by All India council of Technical Education (AICTE).
- The term technical education is defined to include programmes such as engineering, architecture, management and applied arts and crafts.
- The AICTE regulations are comprehensive and regulate several aspects of the functioning of technical educational institutions in India.
- The AICTE has also framed regulations for the entry and operation of foreign universities / institutions in India.

OTHER BODIES

- HE in India is also governed by a number of Councils established under applicable statutes for the regulation of education in specific fields.
- Some of the Councils and the specific fields that they govern include Council of Architecture (Architecture), Pharmacy Council of India (Pharmacy), Indian Nursing Council (Nursing), etc.
- Distance education in India is governed by the Distance Education Council within the IGNOU framework.

ACCREDITATION IN INDIA

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL (NAAC)

- Autonomous body established by the UGC to assess and accredit higher educational institutions in India
- Assessment and accreditation is based on a prescribed criteria which includes curricular aspects, teaching, research, consultancy and learning, infrastructure, student support and progression, leadership and innovation
- Grading pattern used as a performance indicator of institutions
- Accreditation is currently voluntary (except in few states) and there are proposals to make it compulsory

NATIONAL BOARD OF ACCREDITATION (NBA)

- Autonomous body established by the AICTE to provide a framework for accreditation of technical educational institutions in India
- Technical educational institutions approved by the AICTE (i.e. Engineering and Technology, Management, Architecture, Pharmacy, Hotel management and Catering Technology, Town and Country Planning and Applied Arts and Crafts), subject to conditions are eligible to apply for accreditation
- Accreditation is currently not mandatory

DIFFERENT TYPES OF INSTITUTIONS IN THE INDIAN HIGHER EDUCATION SYSTEM

Indian higher education landscape

UNIVERSITY

In India, "University" means a University established or incorporated by or under a Central Act, a Provincial Act or a State Act and includes any such institution as may, in consultation with the University concerned, be recognised by the University Grants Commission (UGC) in accordance with the regulations made in this regard under the UGC Act, 1956.

CENTRAL UNIVERSITY

Central universities are set up by an act of Parliament. The President of India is a visitor at all central universities. The University Grants Commission (UGC) is the agency that provides funding for maintenance and development of these universities.

STATE UNIVERSITY

Universities set up or recognised by an act of the state legislature are known as state universities. State governments are responsible for establishment of state universities and provide grants for their development and non-plan grants for their maintenance. The UGC makes budgetary plan allocations.

DEEMED UNIVERSITY

The status of a deemed university is accorded by the UGC. Section 3 of the UGC Act, provides for the conferring of this status of autonomy granted to high performing institutes and departments of various universities. Deemed university status enables not just full autonomy in setting course work and syllabus but also allows institutes to set their own guidelines for the admissions, fees and instruction of the students.

STATE PRIVATE UNIVERSITY

A private university is an institution of higher learning established through a state or central act by a sponsoring body, such as a society registered under the Societies Registration Act, 1860, or any other corresponding law for the time being in force in a state or a public trust or a company registered under Section 25 of the Companies Act, 1956. For an institution to be given the status of a private university, the state legislature conferring the status has to pass an act by which the institution will receive the status of an university. Private universities have to be recognised by the UGC so that the degrees awarded by them have to be of any value.

COLLEGES

AFFILIATED COLLEGES

Affiliated colleges refer to institutions which operate programmes leading to the award of degrees/diplomas in India; they are affiliated to degree-granting universities in the jurisdiction where they are located.

AICTE-APPROVED DIPLOMA-GRANTING INSTITUTION

AICTE-approved diploma-granting institutions are institutions approved by the AICTE for offering diploma programmes in technical fields such as engineering, pharmacy and management.

Source: MHRD, Press articles; EY analysis

LIST OF INDIAN HIGHER EDUCATION INSTITUTIONS IN GLOBAL RANKINGS AND TOP 50 UNIVERSITIES IN INDIA

Figure 17: Number of institutes by country in QS World University Rankings (top 500) 2014/15

Country	Number
US	97
UK	48
Australia	23
China	18
Russia	10
Brazil	7
India	7
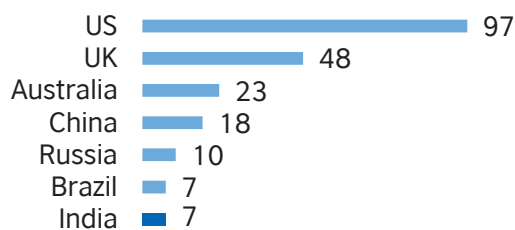
List of Indian institutions

- IIT Bombay
- IIT Delhi
- IIT Kanpur
- IIT Madras
- IIT Kharagpur
- University of Delhi
- IIT Roorkee

Figure 18: Number of institutions by country in Times higher education World University Rankings (top 400) 2014/15

Country	Number
USA	102
UK	46
Australia	21
China	11
India	4
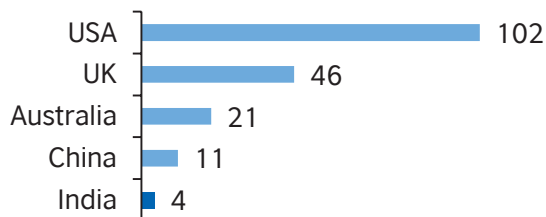
List of Indian institutions

- IIT Bombay
- Indian Institute of Science
- Panjab University
- IIT Roorkee

TOP 50 UNIVERSITIES - INDIA TODAY 2013 RANKINGS

Rank	University
1	Delhi University
2	University of Calcutta
3	Jawaharlal Nehru University
4	Banaras Hindu University
5	University of Mumbai
6	University of Hyderabad
7	Osmania University
8	Aligarh Muslim University
9	Jamia Millia Islamia
10	Pondicherry University
11	University of Mysore
12	Andhra University
13	Kurukshetra University
14	Visva Bharti
15	Birla Institute of Technology and Science
16	Bangalore University
17	Jain University
18	Maharaja Sayajirao University of Baroda
19	University of Kerala
20	Goa University
21	Amity University
22	Guru Nanak Dev University
23	Christ University
24	SNDT Women University
25	Mangalore University
26	University of Calicut
27	Utkal University
28	Gujarat University
29	Manipal Academy of Higher Education
30	Karnataka University
31	Banasthali Vidyapith
32	Bharathiar University
33	Kakatiya University
34	Gauhati University
35	Bharati Vidyapeeth
36	Mahatama Gandhi University
37	Rajasthan University
38	Sri Venkataeswara University
39	Burdwan University
40	North Maharashtra University
41	Cochin University of Science and Technology
42	SRM Institute of Science and Technology
43	Assam University
44	Ranchi University
45	Sri Krishnadevaraya University
46	Dr. Babasaheb Ambedkar Marathwada University
47	Jaipur National University
48	Hemchandracharya North Gujarat University
49	Mahatma Gandhi Kashi Vidyapeeth
50	Maharaha Krishnakumarsinhji Bhavnagar University

Source: QS World ranking website; Times of India

ANNEXURE B: PROFILE OF ALL STATES AND UNION TERRITORIES

ANALYSIS OF STATES AND UNION TERRITORIES (UTS)

Figure 19: Enrolment in higher education (m)
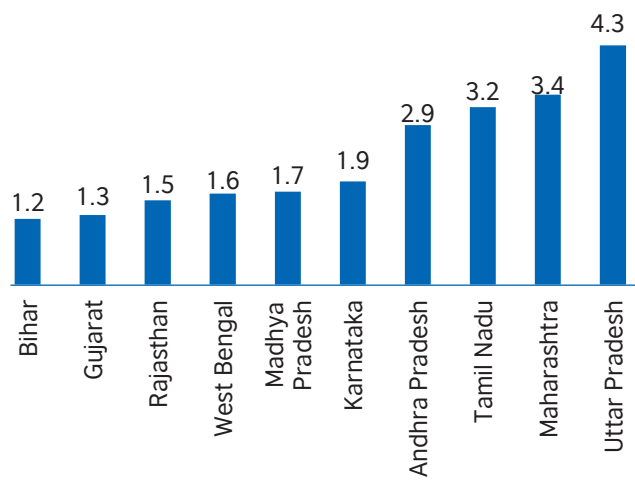
UP, which has the maximum enrolment in higher education in India is the only northern state in the top 10 list; where as key Southern and Eastern states account for heavy higher education enrolment

Figure 20: Gross Enrolment Ratio (Percentage)
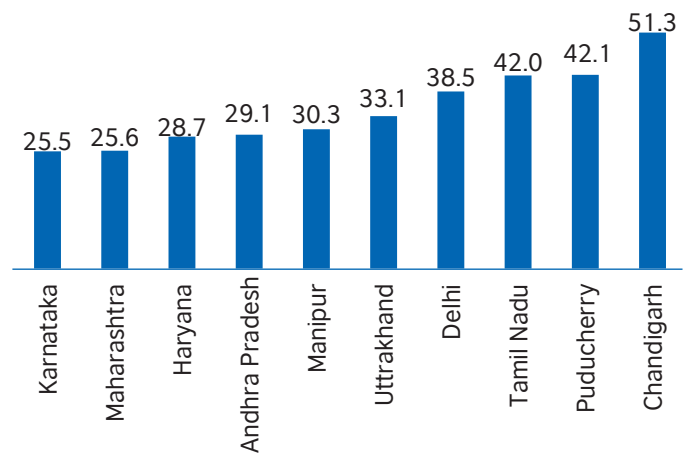
Chandigarh with GER of 51.3% stands apart form the closest competing states such as Puducherry, Tamil Nadu and Delhi who are a bit behind at a GER of 38-42%

Figure 21: Pupil-to-teacher ratio
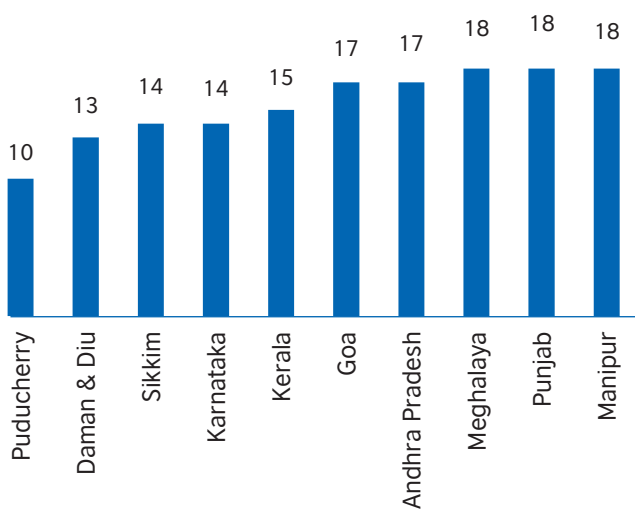
Smaller sized Southern UT's Puducherry and Daman & Diu, along with Eastern state Sikkim, have been able to provide the maximum attention to students with least PTR

Figure 22: No of universities & colleges accredited A by NAAC
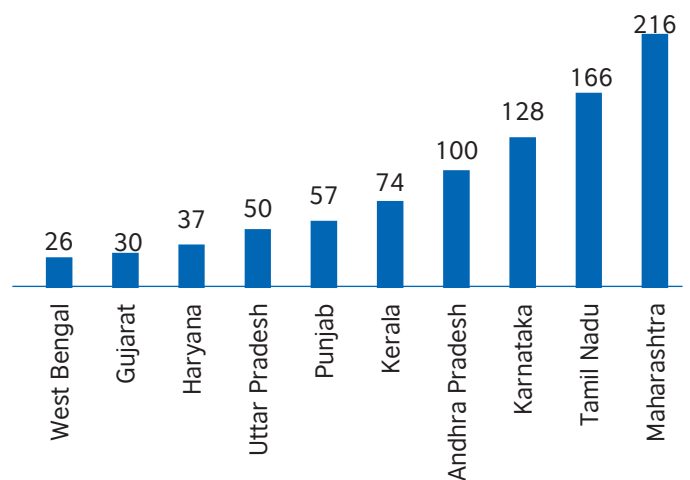
Southern states which constitutes the maximum number of accredited institutions

STATE PROFILES – (1/6)

Parameters	Year	Andaman & Nicobar Islands	Andhra Pradesh	Arunachal Pradesh	Assam	Bihar	Chandigarh
DEMOGRAPHICS, ECONOMIC AND POLITICAL PARAMETERS							
Population	2011	3,80,581	8,45,80,777	13,83,727	3,12,05,576	10,40,99,452	10,55,450
Gender ratio	2011	876	993	938	958	918	818
Literacy rate	2011	86.63	67.02	65.38	72.19	61.8	86.05
Urbanization (% population living in urban areas)	2011-12	35.67	33.49	22.67	14.08	11.3	97.24
Major urban areas (Population > 1Mn)	2011	Nil	Vizag, Vijaywada	Nil	Nil	Patna	Chandigarh
Gross State Domestic Product (INR mn) – at constant price 2004-05	2012-13	43100	4321120	58780	836300	1641210	165320
GSDP composition (Primary-Secondary-Tertiary)	2012-13	9-21-70	19-23-57	28-33-39	21-21-57	20-23-57	0-15-85
Per capita income (current price) – INR	2012-13	89748	78177	77647	42036	28317	142869
Previous 3 governments & last elections held (year)	2014	NA	TDP/ YSR Congress / INC ,2014	INC,2014	INC,2011	JDU / JDU / President's Rule / RJD,2010	INC / INC / BJP,2012
HIGHER EDUCATION – ACCESS							
Enrolment in higher education	2012-13	6938	2888703	31864	467111	1190595	78131
GER	2012-13	15.9	29.1	19.3	12.8	11.2	51.3
GER - Senior Secondary (Class XI-XII)	2012-13	104	49	48	24	14	105
Enrolment by level of study (PhD or M Phil/ PG or PG Diploma / UG / Diploma / Others)	2012-13	25/ 994 / 4985 / 801 / 133	9091 /441634 / 2271410 / 154082 / 12486	322 /2896 / 25556 / 2747 / 343	2503 /48272 / 398774 / 15362 / 2200	2556 /93523 / 1078676 / 13270 / 2570	1221 /18903 / 53952 / 1859 / 2196
Share of Enrolment in Government / Private institutions	2012-13	100% / -	13% / 87%	92% / 8%	96% / 4%	86% / 14%	43% / 57%
Total number of higher education institutions	2012-13	6	4847	29	523	685	30
Central University/ Central open university	2012-13	0	01/03/00	01/01/00	01/02/00	01/01/00	0 / 0
Institution of National Importance	2012-13	0	2	1	2	2	1
State Public University / State open university / Institution Established Under State Legislature Act	2012-13	0	31/01/02	0 / 0 / 0	04/01/00	14/01/01	1 / 0 / 0
State Private University	2012-13	0	0	0	3	0	0
Deemed University – Government / Private	2012-13	0	01/02/00	01/01/00	0 / 0	01/01/00	01/01/00
Total Colleges – Government and Private	2012-13	6	4801	26	511	665	27
Government expenditure on higher education (INR mn)/ % of GSDP	2009-10/ 2011-12	0 / -	57600 / 0.85%	280 / 0.30%	11830 / 1.02%	14380 / 0.55%	0 / -
HIGHER EDUCATION – QUALITY							
Pupil-Teacher Ratio	2012-13	40	17	36	22	42	32
Total Institutes college and universities rated 'A' / total accredited college and universities / Total number of higher education institutions	2014	0 / 0 / 6	100 / 356 / 4847	01/06/29	9 / 198 / 523	6 / 55 / 685	05/12/30

Parameters	Year	Chhattisgarh	Dadra & Nagar Haveli	Daman & Diu	Delhi	Goa	Gujarat
DEMOGRAPHICS, ECONOMIC AND POLITICAL PARAMETERS							
Population	2011	2,55,45,198	3,43,709	2,43,247	1,67,87,941	14,58,545	6,04,39,692
Gender ratio	2011	991	774	618	868	973	919
Literacy rate	2011	70.28	76.24	87.1	86.21	88.7	78.03
Urbanization (% population living in urban areas)	2011-12	23.24	46.62	75.16	97.5	62.17	42.58
Major urban areas (Population > 1Mn)	2011	Raipur	None	None	Delhi	None	Ahmedabad, Surat, Vadodara, Rajkot
Gross State Domestic Product (INR mn) – at constant price 2004-05	2012-13	922050	N/A	N/A	2159710	298000	4272190
GSDP composition (Primary-Secondary-Tertiary)	2012-13	19-39-42	N/A	N/A	1-9-NA	3-32-65	11-39-50
Per capita income (current price) – INR	2012-13	52689	N/A	N/A	201083	167838	89668
Previous 3 governments & last elections held (year)	2014	BJP/ BJP / BJP,2013	N/A	N/A	President's Rule/ INC / INC,2013	BJP/ INC / INC,2012	BJP,2012
HIGHER EDUCATION – ACCESS							
Enrolment in higher education	2012-13	356051	3379	2047	826754	36921	1257835
GER	2012-13	11.8	6.3	4.3	38.5	23.2	17.6
GER - Senior Secondary (Class XI-XII)	2012-13	45	49	57	96	63	41
Enrolment by level of study (PhD or M Phil/ PG or PG Diploma / UG / Diploma / Others)	2012-13	1011 / 49009 / 273648 / 29497 / 2886	0 /271 / 2406 / 702 / 0	0 /0 / 1102 / 945 / 0	13160 /110885 / 641864 / 53918 / 6927	49 /5615 / 28335 / 2895 / 27	3046 /131937 / 963786 / 138726 / 20340
Share of Enrolment in Government / Private institutions	2012-13	51% / 49%	9% / 91%	66% / 34%	67% / 33%	41% / 59%	45% / 55%
Total number of higher education institutions	2012-13	603	5	3	212	55	1904
Central University/ Central open university	2012-13	01/01/00	0	0	04/01/14	0 / 0	01/01/00
Institution of National Importance	2012-13	1	0	0	3	1	2
State Public University / State open university / Institution Established Under State Legislature Act	2012-13	11/01/00	0	0	5 / 0 / 0	1 / 0 / 0	23/01/00
State Private University	2012-13	5	0	0	0	0	12
Deemed University – Government / Private	2012-13	0 / 0	0	0	09/02/14	0 / 0	0 / 1
Total Colleges – Government and Private	2012-13	584	5	3	186	53	1863
Government expenditure on higher education (INR mn)/ % of GSDP	2009-10/ 2011-12	10600 / 0.78%	0 / -	0 / -	7980 / 0.25%	2730 / 0.61%	19910 / 0.39%
HIGHER EDUCATION – QUALITY							
Pupil-Teacher Ratio	2012-13	23	24	13	46	17	26
Total Institutes college and universities rated 'A' / total accredited college and universities / Total number of higher education institutions	2014	2 / 51 / 603	0 / 0 / 5	0 / 1 / 3	10 / 22 / 212	5 / 22 / 55	30 / 423 / 1904

Parameters	Year	Haryana	Himachal Pradesh	Jammu and Kashmir	Jharkhand	Karnataka	Kerala
DEMOGRAPHICS, ECONOMIC AND POLITICAL PARAMETERS							
Population	2011	2,53,51,462	68,64,602	1,25,41,302	3,29,88,134	6,10,95,297	3,34,06,061
Gender ratio	2011	879	972	889	948	973	1084
Literacy rate	2011	75.55	82.8	67.16	66.41	75.36	94
Urbanization (% population living in urban areas)	2011-12	34.79%	10.04	27.21	24.05	38.57	47.72
Major urban areas (Population > 1Mn)	2011	Faridabad	Nil	Srinagar, Jammu	Dhanbad, Ranchi, Jamshedpur	Bangalore	Trivandrum, Kochi
Gross State Domestic Product (INR mn) – at constant price 2004-05	2012-13	1880330	444800	453990	1055970	2966580	2218500
GSDP composition (Primary-Secondary-Tertiary)	2012-13	15-27-58	19-38-43	20-24-57	16-40-45	13-27-59	9-24-67
Per capita income (current price) – INR	2012-13	122660	82611	50641	43384	77015	315206
Previous 3 governments & last elections held (year)	2014	INC/ INC / INLD, 2014	INC / BJP / INC. 2012	J&KNC / President's Rule / INC, Dec 2014	JMM/ President's Rule / BJP, Dec 2014	INC/ BJP / BJP, 2013	INC / CPM / INC, 2011
HIGHER EDUCATION – ACCESS							
Enrolment in higher education	2012-13	912493	183514	338656	365518	1867496	719846
GER	2012-13	28.7	23.8	24.1	10.1	25.5	22.9
GER - Senior Secondary (Class XI-XII)	2012-13	61	97	39	26	17	67
Enrolment by level of study (PhD or M Phil/ PG or PG Diploma / UG / Diploma / Others)	2012-13	3065 / 89635 / 728662 / 85730 / 5401	1296 / 25208 / 138307 / 17437 / 1266	1102 / 54603 / 280849 / 1335 / 767	625 / 45361 / 317137 / 706 / 1689	8198 / 254910 / 1351442 / 243366 / 9580	4536 / 101728 / 544034 / 60179 / 9369
Share of Enrolment in Government / Private institutions	2012-13	35% / 65%	78% / 22%	85% / 15%	84% / 16%	29%% / 71%	22% / 78%
Total number of higher education institutions	2012-13	1087	317	340	277	3244	1079
Central University/ Central open university	2012-13	01/01/00	01/01/00	01/02/00	01/01/00	01/01/00	01/01/00
Institution of National Importance	2012-13	1	2	1	1	1	3
State Public University / State open university / Institution Established Under State Legislature Act	2012-13	10 / 0 / 0	4 / 0 / 0	7 / 0 / 1	24/01/00	11 / 0 / 0	0 / 0 / 0
State Private University	2012-13	8	15	0	1	3	0
Deemed University – Government / Private	2012-13	01/02/00	0 / 0	0 / 0	01/01/14	01/04/00	01/02/00
Total Colleges – Government and Private	2012-13	1062	295	329	265	3199	1062
Government expenditure on higher education (INR mn)/ % of GSDP	2009-10/ 2011-12	11930 / 0.39%	5350 / 0.85%	6820 / 1.09%	1640 / 0.14%	97900 / 0.21%	22080 / .68%
HIGHER EDUCATION – QUALITY							
Pupil-Teacher Ratio	2012-13	21	21	36	41	14	15
Total Institutes college and universities rated 'A' / total accredited college and universities / Total number of higher education institutions	2014	37 / 289 / 1087	1 / 43 / 317	12 / 63 / 340	4 / 24 / 277	128 / 579 / 3244	74 / 196 / 1079

Parameters	Year	Lakshadweep	Madhya Pradesh	Maharashtra	Manipur	Meghalaya	Mizoram
DEMOGRAPHICS, ECONOMIC AND POLITICAL PARAMETERS							
Population	2011	64,473	7,26,26,809	11,23,74,333	25,70,390	29,66,889	10,97,206
Gender ratio	2011	946	931	929	992	989	976
Literacy rate	2011	91.85	69.32	82.34	79.21	74.43	91.33
Urbanization (% population living in urban areas)	2011-12	78.08	27.63	45.23	30.21	20.08	51.51
Major urban areas (Population > 1Mn)	2011	None	Indore, Bhopal, Jabalpur	Mumbai, Pune, Nagpur, Nashik, Aurangabad	None	None	None
Gross State Domestic Product (INR mn) – at constant price 2004-05	2012-13	N/A	2147410	8435650	78920	119580	53700
GSDP composition (Primary-Secondary-Tertiary)	2012-13	N/A	29-26-45	8-29-63	19-28-0	16-28-56	18-16-66
Per capita income (current price) – INR	2012-13	N/A	43864	107670	36290	60156	54689
Previous 3 governments & last elections held (year)	2014	N/A	BJP, 2013	INC, 2014	INC, 2012	INC / INC / President's Rule,2013	INC / MNF / INC,2013
HIGHER EDUCATION – ACCESS							
Enrolment in higher education	2012-13	803	1679492	3442676	89923	60546	28302
GER	2012-13	3.2	19.5	25.6	30.3	17.3	21.3
GER - Senior Secondary (Class XI-XII)	2012-13	99	30	53	54	16	54
Enrolment by level of study (PhD or M Phil/ PG or PG Diploma / UG / Diploma / Others)	2012-13	0 /25 / 778/ 0 /0	5183 /281801 / 1286174 / 102636 / 3698	7727 /383098 / 2657527 / 384102 / 10222	901 /3848 / 84485 / 488 / 201	344 /5032 / 52410 / 2063 / 697	204 /2747 / 1721 / 25
Share of Enrolment in Government / Private institutions	2012-13	N/A	62% / 38%	27% / 73%	64% / 36%	27% / 73%	98% / 2%
Total number of higher education institutions	2012-13	N/A	2313	4703	86	72	32
Central University/ Central open university	2012-13	N/A	01/02/00	01/01/00	01/02/00	01/01/00	01/01/00
Institution of National Importance	2012-13	N/A	3	3	1	1	1
State Public University / State open university / Institution Established Under State Legislature Act	2012-13	N/A	17/01/00	19/01/00	0 / 0 / 0	0 / 0 / 0	0 / 0 / 0
State Private University	2012-13	N/A	9	0	0	8	1
Deemed University – Government / Private	2012-13	N/A	36586	41677	0 / 0	0 / 0	0 / 0
Total Colleges – Government and Private	2012-13	N/A	2277	4658	83	62	29
Government expenditure on higher education (INR mn)/ % of GSDP	2009-10/ 2011-12	N/A	32950 / 1.27%	13980 / 0.14%	1260 / 1.23%	580 / 0.33%	740 / 1.22%
HIGHER EDUCATION - QUALITY							
Pupil-Teacher Ratio	2012-13	N/A	27	20	18	18	19
Total Institutes college and universities rated 'A' / total accredited college and universities / Total number of higher education institutions	2014	0 / 0 / 0	23 / 175 / 2313	216 / 1098 / 4703	1 / 15 / 86	26637	2 / 20 / 32

Parameters	Year	Nagaland	Odisha	Puducherry	Punjab	Rajasthan	Sikkim
DEMOGRAPHICS, ECONOMIC AND POLITICAL PARAMETERS							
Population	2011	19,78,502	4,19,74,218	12,47,953	2,77,43,338	6,85,48,437	6,10,577
Gender ratio	2011	931	979	1037	895	928	890
Literacy rate	2011	79.55	72.87	85.85	75.84	66.11	81.42
Urbanization (% population living in urban areas)	2011-12	28.97	16.68	68.31	37.49	24.89	24.97
Major urban areas (Population > 1Mn)	2011	None	None	None	Ludhiana, Amritsar	Jaipur, Jodhpur, Kota	None
Gross State Domestic Product (INR mn) – at constant price 2004-05	2012-13	104920	1403670	129250	1643370	2342300	54910
GSDP composition (Primary-Secondary-Tertiary)	2012-13	26-13-61	16-35-49	4-38-0	21-29-51	20-29-51	8-59-33
Per capita income (current price) – INR	2012-13	59535	59706	122652	88783	53735	142625
Previous 3 governments & last elections held (year)	2014	NPF / NPF / President's Rule,2013	BJD,2014	INC,2011	SAD / INC / SAD,2012	BJP / INC / BJP,2013	SDF / SSP / SSP,2014
HIGHER EDUCATION – ACCESS							
Enrolment in higher education	2012-13	35003	723729	57091	768094	1526565	18882
GER	2012-13	13.9	15.4	42.1	22.7	18.2	23.6
GER - Senior Secondary (Class XI-XII)	2012-13	31	1	74	65	42	53
Enrolment by level of study (PhD or M Phil/ PG or PG Diploma / UG / Diploma / Others)	2012-13	127 /9027 / 25099 / 750 / 0	2382 /52226 / 598580 / 58213 / 12328	386 /12199 / 37774 / 5851 / 881	2645 /86755 / 573438 / 101794 / 3462	4778 /149305 / 1307283 / 51291 / 13908	88 /4185 / 13014 / 1158 / 437
Share of Enrolment in Government / Private institutions	2012-13	51% / 49%	34% / 66%	40% / 60%	38% / 62%	59% / 41%	86% / 14%
Total number of higher education institutions	2012-13	63	1116	87	988	2727	18
Central University/ Central open university	2012-13	01/01/00	01/01/00	01/01/00	01/01/00	01/01/00	01/01/00
Institution of National Importance	2012-13	1	2	2	4	2	1
State Public University / State open university / Institution Established Under State Legislature Act	2012-13	0 / 0 / 0	12 / 0 / 0	0 / 0 / 0	8 / 0 / 0	14/01/00	0 / 0 / 0
State Private University	2012-13	2	2	0	4	20	4
Deemed University – Government / Private	2012-13	0 / 0	0 / 0	0 / 0	01/01/00	0 / 0	0 / 0
Total Colleges – Government and Private	2012-13	59	1097	83	969	2681	12
Government expenditure on higher education (INR mn)/ % of GSDP	2009-10/ 2011-12	640 / 0.53%	12580 / 0.56%	670 / 0.49%	8840 / 0.34%	13420 / 0.41%	190 / 0.34%
HIGHER EDUCATION - QUALITY							
Pupil-Teacher Ratio	2012-13	20	19	10	18	25	14
Total Institutes college and universities rated 'A' / total accredited college and universities / Total number of higher education institutions	2014	02/09/63	17 / 217 / 1116	6 / 15 / 87	57 / 213 / 988	23 / 199 / 2727	0 / 2 / 18

STATE PROFILES – (6/6)

Parameters	Year	Tamil Nadu	Tripura	Uttar Pradesh	Uttarakhand	West Bengal
DEMOGRAPHICS, ECONOMIC AND POLITICAL PARAMETERS						
Population	2011	7,21,47,030	36,73,917	19,98,12,341	1,00,86,292	9,12,76,115
Gender ratio	2011	996	960	912	963	950
Literacy rate	2011	80.09	87.22	67.68	78.82	76.26
Urbanization (% population living in urban areas)	2011-12	48.45	26.18	22.28	30.55	31.89
Major urban areas (Population > 1Mn)	2011	Chennai, Trichy, Coimbatore, Madurai	None	Kanpur, Lucknow, Varanasi, Ghaziabad, Agra, Meerut, Allahabad	None	Kolkata, Asansol
Gross State Domestic Product (INR mn) – at constant price 2004-05	2012-13	4513130	169970	4451320	729840	3515850
GSDP composition (Primary-Secondary-Tertiary)	2012-13	7-30-62	24-20-55	22-22-57	10-38-27	16-19-64
Per capita income (current price) – INR	2012-13	98550	55004	33269	92607	62831
Previous 3 governments & last elections held (year)	2014	AIADMK / DMK / AIADMK,2011	CPI(Marxist) / CPM / President's Rule,2013	SP / BSP / SP,2012	INC / INC / BJP,2012	All India Trinamool Congress/CPM/CPM,2011
HIGHER EDUCATION – ACCESS						
Enrolment in higher education	2012-13	3214426	62546	4331946	411007	1644139
GER	2012-13	42	14	18.1	33.1	15
GER - Senior Secondary (Class XI-XII)	2012-13	65	36	44	67	41
Enrolment by level of study (PhD or M Phil/ PG or PG Diploma / UG / Diploma / Others)	2012-13	26822 / 508305 / 2205385 / 447932 / 25982	148 /7649 / 52120 / 2536 / 93	9198 /392001 / 3778994 / 57527 / 94226	2325 /58773 / 323750 / 23396 / 2763	4117 /156272 / 1412331 / 59594 / 11825
Share of Enrolment in Government / Private institutions	2012-13	17% / 83%	95% / 5%	16% / 84%	57% / 43%	58% / 42%
Total number of higher education institutions	2012-13	2555	49	5045	417	976
Central University/ Central open university	2012-13	01/02/00	01/01/00	01/04/00	01/01/00	01/01/00
Institution of National Importance	2012-13	5	1	4	2	4
State Public University / State open university / Institution Established Under State Legislature Act	2012-13	20/01/00	0 / 0 / 0	21/01/01	07/01/00	19/01/00
State Private University	2012-13	0	1	18	6	0
Deemed University – Government / Private	2012-13	0 / 1	0 / 0	03/03/14	01/01/14	0 / 0
Total Colleges – Government and Private	2012-13	2499	46	4986	396	950
Government expenditure on higher education (INR mn)/ % of GSDP	2009-10/ 2011-12	95500 / 1.50%	2170 / 1.10%	12190 / 0.18%	3540 / 0.41%	16980 / 0.31%
HIGHER EDUCATION - QUALITY						
Pupil-Teacher Ratio	2012-13	18	28	30	32	38
Total Institutes college and universities rated 'A' / total accredited college and universities / Total number of higher education institutions	2014	166 / 568 / 2555	0 / 6 / 49	50 / 476 / 5045	0 / 51 / 417	26 / 284 / 976

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