

NIRMA UNIVERSITY

STATEMENT OF ENVISIONING THE FUTURE (2020-30)

BE THERE AND GET AHEAD



Higher Education Institutes (HEIs) play a significant role in shaping the present and future of humankind. History has witnessed the HEIs nurturing and improving civilizations through education, research, innovation, and extension.

The role of higher education in sustainable economic and social development has increased decade by decade, and this will continue in times to come. Today the role of any HEI is not just limited to the boundaries of its native state or nation, but globalization and Information Technology (IT) intense world have propelled the HEIs to widen their scope in contributing to the upliftment of the entire humankind. The present statement envisages the future directions, priorities, and commitments of Nirma University, and outlines the various pathways and routes that it will traverse to realize its aspirations.



As the adage goes, only change is permanent. Change is rapidly taking place in all the professions and in the different walks of life. Humankind faces new challenges - natural as well as man-made - from time-to-time. Universities have the responsibility to produce competent and committed manpower that can face the challenges and cater to the needs of the rapidly changing times. For example, the world may never be the same again because of the consequence of the COVID-19 crisis. Universities, therefore, have greater responsibilities of supplying qualified and skilled graduates as well as of producing tangible research outcomes to overcome the post-pandemic challenges. However, every challenge comes with an opportunity hidden in it. Therefore, universities must inculcate requisite technical knowledge, life-long learning skills, and research aptitude among their graduates, so that they deliver out-of-the-

box solutions, at the local and global levels, to such unpredictable and complex problems.

Such goals are achievable by the university through a complete paradigm shift in curriculum, pedagogy, and engagement of students through the innovative and blended teaching-learning processes. Working in isolation may not lead many times a university to provide solutions for global challenges. It demands from any university a great deal of collaborative efforts with industries and academia across the globe. Additionally, universities have to establish multidisciplinary and interdisciplinary programmes to address the demands of new realities. Most jobs of the future shall be different from current jobs; as a consequence, universities must visualize and respond to the needs of futuristic job scenarios. Industry 4.0 is fundamentally different from industry 2.0; therefore, higher education has to come out with a new paradigm.

As the adage goes, only change is permanent. Change is rapidly taking place in all the professions and in the different walks of life. Humankind faces new challenges - natural as well as man-made - from time-to-time. It demands from any university a great deal of collaborative efforts with industries and academia across the globe.

India is the third largest higher education system in the world, next only to the United States and China. While Gross Enrollment Ratio (GER) in the tertiary education in India is on an increasing trend, it still lags when compared with some other countries. The Ministry of Human Resource Development (MHRD), Government of India (GoI) has set a target of achieving 32% GER by 2022.

Expectations of the society from the HEIs are constantly increasing, and it, in turn, levies greater responsibilities on the universities. As India is at the cusp of transformation, her expectations from Indian universities are immense and on the rise. India is the third largest higher education system in the world, next only to the United States and China. While Gross Enrollment Ratio (GER) in the tertiary education in India is on an increasing trend, it still lags when compared with some other countries. The GER is around 27% in India as compared to 94% in South Korea, 88% in the United States, 70% in Iran, 69% in Canada, 60% in the United Kingdom, and 51% in China. The Ministry of Human Resource Development (MHRD), Government of India (GoI) has set a target of achieving 32% GER by 2022. This target demands the addition of more colleges (approximately 6000) and universities in India. While the country is on the

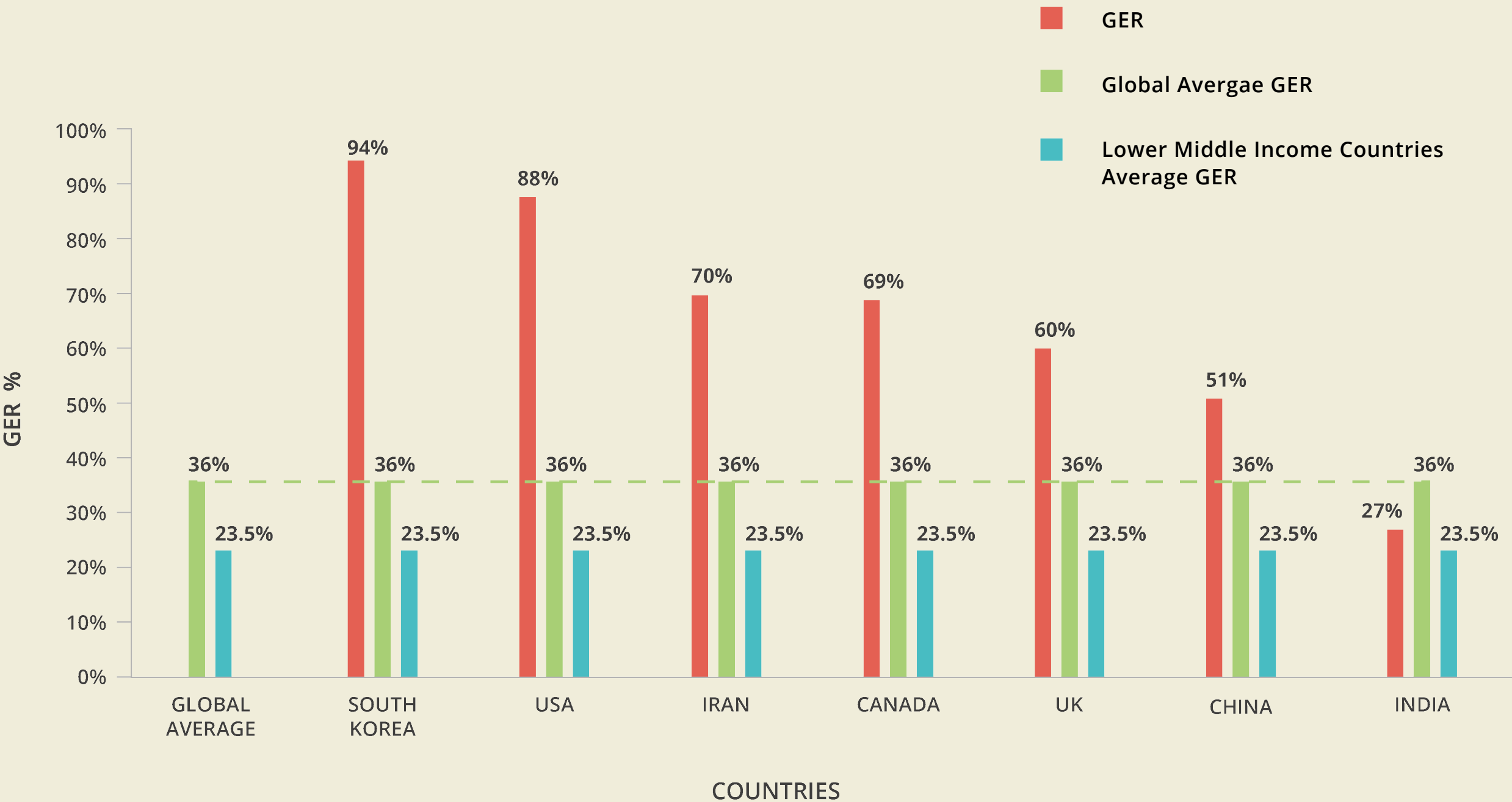
way to the massification of higher education, serious questions about the quality of education and the employment of all the graduates remain worrisome and daunting.

The dynamic society requires educational offerings in not only traditional fields, but also in emerging areas, like design, communication, healthcare, entertainment, etc. Design serves several sectors of the economy. Improved products and services can be offered through better designs in hardware, software, infrastructure, organisations, policies, procedures, and business models. The number of designers required by 2020 in industrial, graphic, communication, packaging, and other design domains will be 62,000, provided the design potential is fully realized. Currently there are approximately 7,000 qualified designers in the country and approx. 5,000 students in design education.

Gross Enrollment Ratio of India

NIRMA UNI. 2020-30

(In comparision with other countries)



The capacity to deliver quality healthcare depends on having a sufficient, competent, and flexible pharmaceutical workforce that can deliver the pharmaceutical and medicines-related services needed to achieve Universal Health Coverage (UHC) within our health systems. This, in part, explains why pharmacists have been recognised in the indicator selected by the United Nations (UN) to follow-up on the achievement of the Sustainable Development Goal 3 (SDG 3): to ensure healthy lives and promote wellbeing for all at all ages.

The Indian pharmaceutical industry is one of the largest pharma industries in the world. Indian pharmaceutical industry supplies over 50% of global demand for various vaccines, 40% of generic demand in the US, and 25% of all medicine in the UK. India contributes the

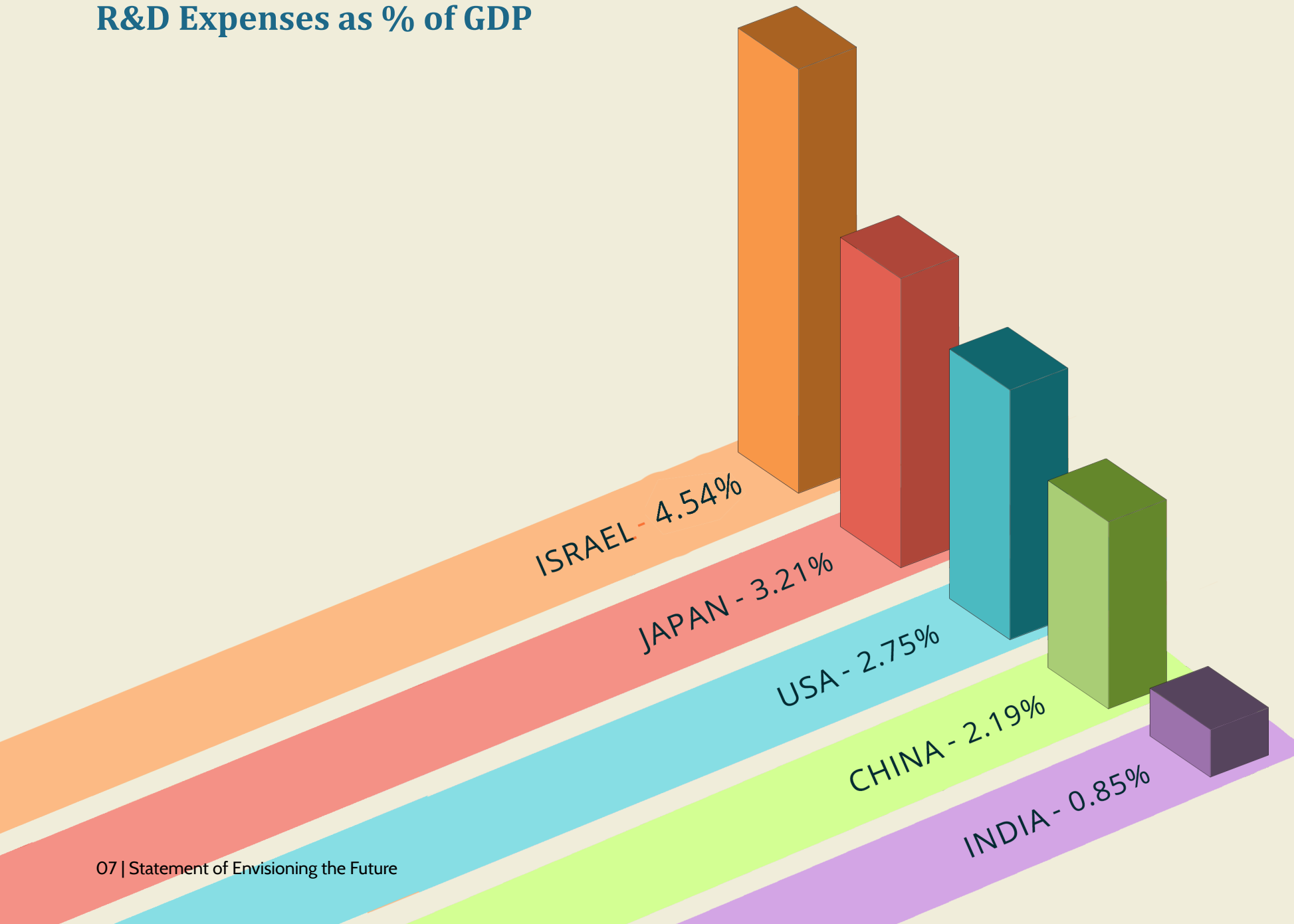
second largest share of the pharmaceutical and biotech workforce in the world.

The country also has a large pool of scientists and engineers who have the potential to steer the industry ahead to an even higher level. This increases the scope of pharma studies in India.

Micro, Small and Medium Enterprises (MSMEs) are the engines of economic growth, as they not only provide a large part of employment, but also provide inputs to large industries as an integral part of their value chain. As per the World Bank, the MSMEs represent about 90% of businesses and more than 50% of employers worldwide. In addition, the MSMEs contribute up to 40% of national income (GDP) in emerging economies. Universities are not supposed to only provide graduates to large business organizations, but also to the MSMEs and conduct applied research for them.

The Indian pharmaceutical industry is one of the largest pharma industries in the world. Indian pharmaceutical industry supplies over 50% of global demand for various vaccines, 40% of generic demand in the US, and 25% of all medicine in the UK.

R&D Expenses as % of GDP



Contributions through research and innovation are essential for a university. Invariably research outcomes determine the global prominence of a university. India's research and development expenses as percentage of Gross Domestic Product (GDP) is hardly 0.85%, vis-à-vis 4.54% of GDP in Israel, 3.21% of GDP in Japan, 2.75% of GDP in the United States, and 2.19% of GDP in China. It is estimated that 37% of colleges conduct postgraduate programmes in India, while only 4% of colleges run doctoral programmes. It amply demonstrates that the magnitude of research and innovation is small in India and the Indian HEIs are not in the mainstream of research.

The meager number of active researchers also hampers the comparative research outcome from India that has 216.2 researchers per one million inhabitants, against 1,200 in China, 4,300 in the United States, and 7,100 in South Korea. A high density of researchers has a direct relationship with the quality of education in a country and how it benefits the industry, thusly the economy. Although research publications in India have grown seven-fold in the last two decades, India is still far behind several countries, such as China and the United States. While China produces 4,83,595 research publications annually, the number of publications in India is just 1,48,832.

The Times Higher Education (THE) recently rolled out World University Rankings 2020, which features only six Indian institutes in the top 500 (IISc Bangalore, IIT Ropar, IIT Indore, IIT Bombay, IIT Delhi, and IIT Kharagpur). Whereas, only 11 universities from India were ranked this year in the top 100 in the latest Times Higher Education's (THE's) Emerging Economies University Rankings 2020. Indian universities are yet to make a big mark on a global scale. Hence, there is still a huge scope for Indian universities to produce tangible research outcomes. Cutting-edge research outcomes from the HEIs will give a boost to the mission of self-reliant India.

A high density of researchers has a direct relationship with the quality of education in a country and how it benefits the industry, thusly the economy. Although research publications in India have grown seven-fold in the last two decades, India is still far behind several countries, such as China and the United States.

The Contemporary Demands from the HEIs

NIRMA UNI. 2020-30

A university is essentially a knowledge enterprise typically engaged in production, improvisation, and dissemination of knowledge and preparing young people for various sectors of the economy. Higher education enhances employability and social mobility of the graduates. Knowledge is the true basis of higher education, and the university facilitates its generation via research and its transmission via teaching. Eventually, the knowledge is to be put at the service of the society to create a better world. Hence, education and research are the prime objectives of any higher education institution. Additionally, higher education prepares active and responsible citizens for a democratic society and shapes leaders for making society just, equitable and democratic.

The draft New Education Policy, issued by the Government of India, specifically emphasizes on the overall development of students. The policy advocates application of a multidisciplinary approach for the complete growth of the student by developing the right as well as the left brain. Hence, discipline-specific boundaries of the curriculum must be widened to include flavours of other interdisciplinary courses. The time has come when the universities should ensure innovative programmes and research practices, irrespective of disciplines, domains, and geographical boundaries. They must, in a true sense, leverage their interdisciplinarity to address the complex problems of the society.

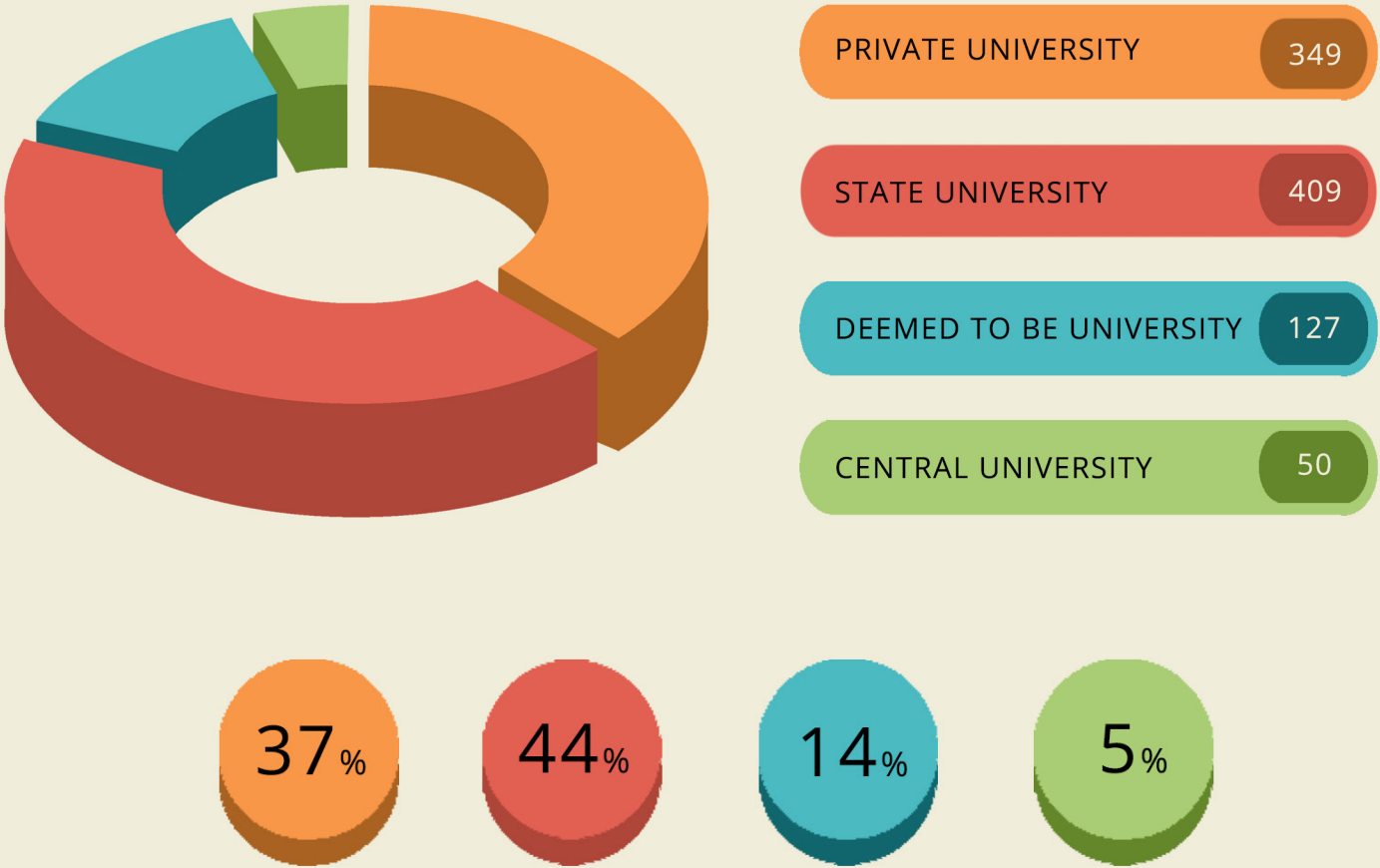
Knowledge is the true basis of higher education, and the university facilitates its generation via research and its transmission via teaching. Eventually, the knowledge is to be put at the service of the society to create a better world. Hence, education and research are the prime objectives of any higher education institution.

‘The 2030 Agenda for Sustainable Development’ - adopted by all United Nations (UN) member states in 2015 - provides a shared blueprint for peace and prosperity for people and the planet, now and into the future.

At the same time, universities must also strengthen side-by-side, their new age “digital learning platforms” for exercising modern-day flexible teaching-learning practices and offering enhanced learning experiences to the students of ‘Generation Z’.

‘The 2030 Agenda for Sustainable Development’ - adopted by all United Nations (UN) member states in 2015 - provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries - developed and developing - in a global partnership.

They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change and working to preserve our oceans and forests. The universities must develop the curriculum embedded in line with the SDGs so that graduating students are made aware of the needs of the globe and they can effectively contribute to them.



Classification of 935 universities in INDIA

(As per the list published by UGC - 01.02.2020)

Private participation in higher education is increasing in India. As per the UGC data in 2020, there are 349 private universities, out of a total of 935 universities in India (i.e., 37.3% private participation). There are almost 70% of students enrolled in private colleges and universities. Further, the participation of private HEIs in higher education is on the rise.

The private HEIs, nonetheless, are confronted with a host of problematic issues such as quality of education, lesser emphasis on research and innovation, lack of resources, and poor governance practices. Besides, they hardly get any support from government agencies. One of the major challenges for a private university is its sole dependency on student fees. Hence, it needs to be on the constant lookout for other sources of revenue, especially through research, innovation, intellectual property rights (IPR), consultancy, and testing services. It is going to be very risky for sustainable growth of the country, if only government institutions are supported for research. Rather, both types of excellent institutions should be supported in their research and innovation endeavours.

The Nirma University, Ahmedabad has been highly successful in achieving its strategic goals in the past fifteen years through the meticulous planning and stringent implementation processes. The university is quite young, quickly emerging as an HEI of repute in the western part of India. Its alumni are spread across the entire globe and are making a substantial contribution to their communities. Now, Nirma University aspires to emerge as a national university, known for its high quality education, leadership development, cutting edge research and innovation, and impact on the society. It also aims to focus on diversity and inclusivity on the campus and strong national and international linkages.

VISION

Shaping a better future for mankind by developing effective and socially responsible individuals and organizations.

MISSION

Nirma University emphasizes the all-round development of its students. It aims at producing not only good professionals but also good and worthy citizens of a great country, aiding in its overall progress and development.

It endeavours to treat every student as an individual, to recognize their potential and to ensure that they receive the best preparation and training for achieving their career ambitions and life goals.

In the prevailing conditions, the vision of the university for the next decade (i.e., for the duration 2020-30) is woven around several identified crucial strategic themes. In order to fulfil this vision in the next ten years, a detailed strategic plan is also prepared for the entire university (including the individual plan for all its constituent institutes also) for the duration of the first five years (i.e., for the duration 2020-25).



After doing a thorough analysis of the educational scenario at international, national, and state levels, and carrying out detailed SWOC (strengths, weaknesses, opportunities, and challenges) analysis of the university, several themes are identified for the next ten years through a consultative process. These themes are, of course, under the wider umbrella of vision and mission statements of the university. The identified themes on which the university will focus in the next decade - to emerge as a well-respected centre of higher education and research nationally and globally - are:

- 1. Adopting current and relevant curricula, modern teaching-learning processes, and blended pedagogy practices for producing industry-ready professionals, entrepreneurs, innovators, and responsible citizens**
- 2. Attracting, retaining, and developing high-quality human resources**
- 3. Offering interdisciplinary and continuing education programmes to address the contemporary industry needs**
- 4. Developing academic infrastructure with special focus on intensely IT-enabled campus and enhanced learning resources**
- 5. Increasing research and innovation output by producing viable solutions for industry products/services and societal problems, nurturing ideas through incubation, and broadening outreach through extension activities**
- 6. Leveraging the well-spread presence of alumni across the globe and their networks**
- 7. Enhancing university visibility nationally by improving its national rankings, obtaining accreditations for different programmes, and establishing the university known for its excellence in education, research and innovation**
- 8. Internationalizing through foreign collaborations, international accreditation, and participation in world rankings**

The university must progress focusing actions on all the eight themes above. Therefore, several priorities are set by the university for each of the above-mentioned themes. Implementation steps for these priorities are then planned in terms of strategic goals, strategies, and targets in the strategic plan of the university. The priorities of the identified themes forming the university's future are broadly described.



Adopting current and relevant curriculum, modern teaching-learning processes, and blended pedagogy practices for producing industry-ready professionals, entrepreneurs, innovators, and responsible citizens

- 1. Responding to the needs of 'Generation Z' and 'Industry 4.0' through 'Education 4.0'**
- 2. Enhanced involvement of different stakeholders in the design, development, and deployment of contemporary, flexible, and interdisciplinary curricula to foster life-long learning and problem solving skills among the students**
- 3. Mapping new skill requirements, appropriately embedding UN's SDGs, and redesigning curricula to boost employability and entrepreneurship**
- 4. Developing e-contents and introducing on-line courses, simulation exercises, virtual learning environments, interdisciplinary elective courses, and virtual laboratories in different programmes**
- 5. Enhancing student-centric teaching-learning processes with deeper engagement from the students**
- 6. Engaging students in applied research, field-based training, project-based learning, and solving societal problems**
- 7. Increasing diversity and inclusivity on the campus for contributing to a just and equitable society**
- 8. Strengthening entrepreneurial activities by nurturing the innovative ideas of students and faculty, and providing ecosystem support for start-ups**
- 9. Enhancing the alumni involvement in the teaching-learning process and recruitment**
- 10. Continuously sensitizing students and faculty about the vital issues of ethics, values, integrity, and societal responsibilities**



THEME : 2

NIRMA UNI. 2020-30

Attracting, retaining, and developing high-quality human resources

1. Attracting high-quality faculty from India and abroad
2. Recruiting a greater number of faculty equipped with industry experience
3. Providing excellent developmental exposure to faculty, in terms of attending international conferences, training programmes, seminars, workshops, faculty development programmes (FDPs), research orientation programmes (ROPs), etc.
4. Achieving Faculty-Student Ratio (FSR) in line with best-in-the-class universities
5. Implementing appropriate reward mechanisms for faculty and staff members
6. Fostering work culture that is conducive to freedom, innovation, flexibility and adaptability





Offering interdisciplinary and continuing education programmes to address the contemporary industry needs

- 1. Enhancing the activities of Centre for Continuing Education (CCE) through greater collaboration with MSMEs, industries, NGOs, and rural development agencies with an emphasis on skill development and vocational training**
- 2. Establishing new institutions to meet the emerging needs of industry and society**
- 3. Starting new interdisciplinary undergraduate, postgraduate and doctoral programmes in various disciplines (e.g., Robotics and Automation, Data Science, Transportation and Infrastructure Engineering, Artificial Intelligence, Urban Design, Media Communications, Banking & Insurance, Bioinformatics and Drug Discovery, Medical Devices, Advanced Materials, etc.)**
- 4. Providing certificate and diploma programmes to industry professionals**
- 5. Conducting hybrid, interdisciplinary programmes for practitioners**
- 6. Offering customized training programmes and tailor-made skill development programmes to identified clusters of Small and Medium Scale Enterprises (SMEs)**
- 7. Conducting a greater number of executive training programmes for senior managers**
- 8. Ensuring Finishing School experience for students**



THEME : 4

NIRMA UNI. 2020-30

Developing academic infrastructure with special focus on intensely IT-enabled campus and enhanced learning resources

1. Developing rugged Information and Communication Technology (ICT) backbone of the university
2. Enhancing the capabilities of Moodle LMS (Learning Management System)
3. Streamlining all the academic and administrative processes, and data management practices through integrated ERP (Enterprise Resource Planning)
4. Developing capabilities to address the students' needs by facilitating on-line learning and video lectures, conducting on-line exams, and arranging the meetings, conferences, workshops, seminars on-line
5. Designing and developing e-learning resources through own production studios, equipped with the latest technologies
6. Renovating and modernizing identified laboratories of constituent institutes
7. Creating a state-of-the-art central library with the latest digital technology
8. Creating social and learning spaces for greater collaboration and knowledge sharing amongst students
9. Setting-up industry-sponsored laboratories for enhanced hands-on training of students, experiential learning, research, and consultancy
10. Developing an environment-friendly green campus, equipped with appropriate renewable energy technologies



Increasing research and innovation output by producing viable solutions for industry products/services and societal problems, nurturing ideas through incubation, and broadening outreach through extension activities

1. Implementing a comprehensive research plan in identified thrust areas of each constituent institute for tangible research output
2. Positioning the university in the front-row of Indian universities by producing quality and socially relevant research outcomes and by producing research publications in quality journals, and generating patents
3. Establishing research chairs in different institutes of the university
4. Establishing the Centre of Excellence for Research in the areas like; Artificial Intelligence, Robotics and Automation, Industrial Design, e-Commerce, Electric Vehicles, Medical Devices, Drug Development and Discovery, Immunology, Cancer Therapeutics, etc.
5. Strengthening research in undergraduate education
6. Increasing the number of doctoral and post-doctoral fellowships (PDFs)
7. Increasing the number of minor and major research projects funded by the university
8. Strengthening the functioning of Centre for Advanced Instrumentation (CAI)
9. Establishing Incubator, Research Park, and Technology Transfer Centre
10. Establishing Research Centres (Centres of Excellence) in highly specialized interdisciplinary areas in different institutes
11. Strengthening the research activities in collaboration with government agencies and enterprises
12. Procure funding for translational research from nationally and internationally reputed agencies to address societal health issues suggested by the World Health Organization (WHO), National Institute of Health (NIH) and by Indian Government agencies
13. Establishing strong linkages with government organizations, NGOs, and villages for extension activities and outreach



Leveraging the well-spread presence of alumni across the globe and their networks

1. Strengthening the bond between alumni and the university by developing the spirit of belongingness
2. Adding value to alumni through networking, continuing education and professional support
3. Reinforcing the culture of alumni interaction and their involvement for the progress of the university through 'Nirma University Alumni Forum'
4. Exploiting the social media for connecting the alumni and creating a virtual backbone support in terms of networking platform for graduating students in their early career stage when placed in any place of the world
5. Extending the benefits of the outspread alumni presence, their expertise and network to the existing student community of the university through stronger and continuous alumni connect
6. Increasing the presence of alumni members in the statutory bodies of the university, such as Board of Studies, Faculty Councils, and Academic Council for their active involvement and apt feedback
7. Alumni week celebration in all the constituent institutes with deeper involvement of the students and faculty members
8. Increasing the number of alumni chapters in different countries and organizing alumni meets there at constant frequencies
9. Encouraging alumni donations for research and specialized lab developments
10. Setting-up a separate office of the 'Alumni Relations' and operating it through involvement of volunteering alumni
11. Encouraging alumni initiated and driven fractional courses, mentorships, scholarships, internships, projects, career prospects, skill development programmes, and other professional development activities for the students
12. Establishing a strong pool between alumni and faculty members for research, training and extension activities
13. Encouraging alumni to work as brand ambassadors for developing appropriate reputation of the university



THEME : 7

NIRMA UNI. 2020-30

Enhancing university visibility nationally by improving its national rankings, obtaining accreditation for different programmes, and establishing the university known for its excellence in education, research and innovation

1. **Securing a position in the top 50 in National Institutional Ranking Framework (NIRF) of Ministry of Human Resource Development (MHRD), the Government of India (GoI)**
2. **Applying for the third cycle of accreditation of NAAC (National Assessment and Accreditation Council) in the year 2020 and the fourth cycle in 2025, and securing the highest grade in each cycle**
3. **Figuring in The Times Higher Education Impact Rankings which are the performance measurement instruments that assess Universities for their remarkable work towards sensitization on any of the United Nations' Sustainable Development Goals (SDGs)**
4. **Consciously increasing the outreach through vibrant presence on the social media for enhanced societal perception and visibility**





THEME : 8

NIRMA UNI. 2020-30

Internationalizing through foreign collaborations, international accreditation, and participation in world rankings

1. Fostering student and faculty exchange, joint degree programmes, joint funded research project, and collaborative research lab developments with reputed foreign universities
2. Executing the global collaborations with at least 15 global Universities ranked amongst top 500 in the world
3. Providing short term courses for attracting international students interested in exploring about Indian heritage, languages, cultures, diversity, indigenous medicines, ayurvedic sciences, yoga, etc.
4. Introducing international immersion in different programmes
5. Attracting foreign faculty as global adjunct faculty
6. Encouraging and deputing faculty to spend a semester at foreign universities and inviting faculty members from reputed foreign universities, in reciprocation
7. Collaboration with international funding agencies such as Fulbright, UK India Education Research Initiative (UKIERI), Bill Gates Foundation, etc.
8. Availing membership (research focused) of international professional bodies/ association/ research group/ communities.
9. Figuring in the university in QS 500 World University Rankings
10. Encouraging different constituent institutes to go for international accreditation

CONCLUSION

NIRMA UNI. 2020-30

Nirma University, with the dedicated and channelized efforts of all its faculty, staff, and students shall realize the ten year vision. Systematic implementation of strategic plans for the two slots of five years (i.e., for 2020-25 and 2025-30) will enable the university to achieve its goals and objectives. At the same time, the support of other stakeholders of the university, such as parents, industries, employers, peers, government and non-government funding agencies, NGOs, other collaborators, and society as a whole will also play a crucial role in completely fulfilling the vision of the university.



Designed by : Aanshal, Ghanshyam, Riya | 3rd Year | B.Des. Students | Communication Design



Nirma University

Sarkhej-Gandhinagar Highway

Ahmedabad - 382481, Gujarat, INDIA

Phone: +91-79-71652000, +91-2717-241900 to 04, +91-2717-241911 to 15

<https://nirmauni.ac.in>