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#Let'sBeatCoronaTogether

In This Issue

The University Teachers: The Tasks Ahead with COVID-19

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The university teachers contribute to the society primarily through teaching and research. They play the pivotal roles in turning out the graduates as global citizens who make us proud by transforming the society through their active participation and leadership functions in various domains like the industries, education, entrepreneurships, climate change, biodiversity, politics and services to humanity and research and development leading to new inventions and new discoveries.

Research is an integral part of the educational activities in a university. The teachers and the students dedicate themselves to research creating new knowledge leading to new understanding of the nature, new discoveries in science and engineering, development of new technologies and new economic activities leading to wealth creation.

Excellence in teaching and research demands that the teachers also involve themselves in co-curricular and extra-curricular activities like academy-industry collaborations, revenue generation through extramural research funding, industrial consultancy, publications, mentoring and nurturing the students and related academic administration. The teachers bring in awards and accolades to their respective universities through their phenomenal contributions that continue to make significant changes in all spheres of our life.

The universities attract bright scholars to the teaching profession and motivate them to grow in the academia. It would be interesting to learn how the universities are harnessing the full potentials of the teachers in this coronavirus pandemic. The present article deliberates on how the university teachers have been facing the challenges with the multiple tasks namely the teaching-learning, mentoring and nurturing the students and research activities under the current situation.

The Teaching-learning Process

The teaching-learning process has been evolving since time immemorial. The process has seen rapid changes due to some phenomenal advances in our understanding of new ways of learning, new medium of learning or other technological inventions that changed the speed of information sharing. The intervention of the

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new technologies, the information and communication technology in particular has brought in a sea change in the teaching-learning process.

The changes in the teaching-learning process demands that the teachers not only adjust themselves with the new realities but also help the students to learn in the new ambience. The unprecedented disruption on account of the pandemic and the consequent switch over to online education had, however, caught both the teachers and the taught unprepared. In fact, many students could not access online education during the recent months in the absence of necessary IT infrastructure. The universities cannot afford to leave a section of students aside while adopting distance mode of education. Strategic plans are thus the need of the hour on how to deal with the complex situation.

While teaching on the digital platform, the teachers too faced challenges in the absence of IT support at home. Further, working from home may not be conducive for those who may not be in possession of enough space for the purpose. Working from home may have constraints of both space and distractions from activities of other members of the family. Online and remote teaching would certainly require a calm and quiet study equipped with all devices for effective teaching.

A major task of the universities is to train and equip the teachers to teach online in the pandemic induced environment. Apart from providing the necessary connectivity, gadgets and devices, the teachers have to be trained not only to use the educational technologies skilfully but also to follow the pedagogy of online teaching. The teachers have to learn to engage each and every student while communicating through a digital platform and ensure participation of the latter through an interactive mode.

The success of online education does not depend on the IT infrastructure alone. The teaching-learning process needs access to text books and reference books for preparation of comprehensive teaching materials. Both the students and teachers were borrowing hard copies of the books from the university libraries in the pre-pandemic days. The lockdown blocked the access to the libraries and the only option was to read e-books and e-journals. While struggling with connectivity and trying to focus on the lectures on their mobile phone,

the students are likely to pass through difficult time accessing e-books. It certainly is more of a challenge for those comfortable reading from hard copies only.

Although the concept of online education is not new, the efficacy of the same is not beyond questions and the academic leaders have been debating on the way forward. The pandemic has posed a huge challenge to the universities and the academia at large to maintain the standards in teaching as well as research and at the same time to protect the health of the faculty, staff and students. The functioning of the universities in a blended mode, combining online and on site teaching is on the agenda and need exhaustive strategic planning. The teachers are required to find ways and means for continuing the academic programmes enabling the students to remain on track. They are required to bring in significant changes in their modes of operations to ensure safety while carrying on with the educational activities in a blended mode. The universities have to avoid crowding and appropriate measures would be required to protect everyone from the lethal corona virus infections.

The pandemic offers an opportunity for the teachers to be more creative and to discover new ways of teaching subjects including the laboratory courses. This is also an opportunity for the students to be more creative and receptive to new ideas and discover new ways of learning. The teachers have to design the teaching pedagogy for a laboratory course in such a way that effective in-person teaching hours could be reduced and offered in small groups enabling social distancing. Even the teachers could conduct some experiments themselves and collect data under the lens and pass on the video to the students for further analysis. Additionally, such videos can be used later in the next semester for the next batch of students with improved and more thoughtful additions.

While engaging the students online, the health concerns of the students must be of prime importance. The students must not be glued to the laptop or smart phone for long duration attending classes. They should be able to move away from the laptop and smart phones and work on real time solving assigned problems, analyzing data and return for online lecture after an appropriate gap. Limited exposure to screen time, staggered scheduling, flipped on-line discussions can be explored by the teachers for their individual e-course delivery during the pandemic.

Mentoring and Nurturing Students

The university teachers need to be cautious while mentoring and nurturing the students either alone or in groups. The students are adults (18-23 years) and are responsible for their own actions. In fact, the future of the students primarily depends on what they would be doing in their university life. They are quite vulnerable to different distractions. Other than studies in the domain of their interests the students would venture out to satisfy their passions in various fields like drama, music, sports, fine arts and politics and so on. The university students are likely to be most adventurous and rebellious too. The teachers could play significant roles while interacting with them in their co-curricular and extra-curricular activities. The students would look forward to the teachers to be their role models. The teachers therefore have the responsibility of counselling them in the most subtle manner, treating them as co-workers in the teaching-learning process and graduating them in their transition to matured global citizens.

While delivering lectures in a physical classroom the teacher is capable of identifying students passing through difficult time. The students could be academically weak or suffering from some distractions or even depression. It would be possible to counsel the student(s), take special care with regards to the understanding of the subject or even refer to counselling centre. Such students would benefit immensely from face to face interaction with the teacher and the latter could assess the outcome of the counselling on the spot. The impact of mentoring and nurturing remotely under the lockdown situation needs to be examined as the students confined at home are likely to be more restless. The pandemic situation demands that the teachers remain in constant touch with the students discussing both curricular and extra-curricular activities.

It is claimed that the present generation of students who were born amongst gadgets and devices deserve a different kind of treatment. Their training at home and schools are quite different from those of the earlier generations. Perhaps such students could be quite comfortable with online education and remote mentoring. The question is whether the scenario as above is an urban phenomenon. A considerable section of the university students are still from the rural sector who might not have been brought up the same way as their counterparts in the cities. Under the circumstance the teachers would be required not only to be very cautious but also to be accommodating and tactful in online dealing with the students of variable attitude and quality.

Research and Development under COVID-19

One of the core functions of a university is research. COVID-19 has impacted the continuation of research in all university laboratories. The teachers need to plan a phased approach to return to normalcy in research activities and mitigate the impact. It is not possible to continue to do research from home or being completely on-line. The universities provide the infrastructural and intellectual support that is needed for major research activities. The university is the right 'home' for research. There is really no 'on-line' substitution for research.

Some small-scale and individual theoretical research can be carried out at home or in a small dedicated room; but the results need to be analyzed by many, reproduced by others and discussed and possibly modified among peers before being accepted as a major research result. On-line environment does little to help foster such activity.

Multiple universities in the US have taken unique measures to mitigate and prepare to return to work after the initial wave of COVID-19 passes. Researchers who use laboratory spaces in close proximity to one another have been asked by the University to provide a plan of carrying out such research using social distance guidelines and get those approved by the Departmental or university-wide research facilitation committees. Solutions include (i) sharing lab-spaces among topic-related researchers for a limited time during a day or during a week; (ii) coming to work at different times during a day or in different days between different groups; (iii) utilize weekend days to come and work on research in a coordinated fashion; and (iv) spread out research beyond work-hours during a day, i.e., spread out occupancy of lab beyond 9-to-5 hours.

There are other critical research needs that require special restrictions to be in place which require more disciplined and targeted thinking for mitigation and return-to-work. And these restrictions are to be developed by individual investigator or group-based teams and approved by the respective universities.

Examples include restrictions needed for research involving 'human subjects.' One has to be mindful of 'human subject restrictions' while returning back to these kinds of research in the medical, business or other social science fields. A second example is research that requires field work. One needs to develop a 'fieldwork health and safety plan' to return to such field work related research. Additional restrictions are to be put in place for researchers who are involved in the 'in-person fieldwork'. A third example is research involving 'travel' to different places. These kinds of research activities cannot be pursued 'on-line' and could be achieved only in the universities. The only thing that the teachers need is the inclination to think – think different and think out-of-the-box.

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Inbound Student Mobility in Indian Higher Education:
A Concern for Gendered Realities

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The increasing demand of advanced qualification fuelled by an enthusiastic young cohort for better employment opportunities has given a new direction to globalisation and internationalisation of higher education. As a result, fostering 'international knowledge'; 'international technology' and 'international workforce' became the priority of countries, developed and developing. Globalisation and internationalisation are closely related yet, two different phenomena (Altbach & Knight, 2007). Globalisation on one hand is a market mediated process led by economic rationality and commercial interests while, Internationalisation of Higher Education (IoHE) is a response to opportunities and challenges of globalisation. It is thus little wonder that International organizations like the Organization for Economic Cooperation and Development (OECD), the United Nations Educational, Scientific and Cultural Organization (UNESCO), World Bank, the European Union, Regional associations like the Commonwealth, the Association of Southeast Nations (ASEAN), Universities as well as national governments strive to forward internationalization, in a more defined and strategic fashion.

International education has become an industry, a source of revenue and a means for enhanced reputation (Wit, 2020). The whole movement of HE internationalization is being fuelled by increasing individual capacities to self finance international education and institutional requirements to improve their branding, reputation and global ranking. International Student (IS) mobility is an important tool of 'soft power' that refers to country's capacity to influence another country's collective attitude and behaviour as a result of non-coercive and non-threatening factors (Nye Jr., 2004). IS are considered as carriers of international knowledge and competency. Today internationalisation is understood in a much broader framework of "internationalisation abroad" and "Internationalisation at home (IaH)" (Knight, 2008). Internationalization abroad can be predominantly understood as 'preparing to go out', while internationalization at home may best be understood as 'preparing to host' (Khare, 2019) as the former may be measured by people and program mobility while the latter with curricular and pedagogic structures, campus environment and outcomes. Although, developed parts of the world profess and promote shift from former to latter, the basic driving force continues to remain international student recruitment, more particularly income generating international students. As such, student mobility continues to remain its most dominant manifestations as well as national aspirations. Countries across the world are trying to improve inbound international student flows by charging differentiated tuition fee, offering aid, scholarships and loans. Little would then one wonder, if one of the biggest source nation for IHE, India is focusing more on the mobility aspect in its attempt to emerge as a regional education hub (Khare, 2015) and correct its adverse inbound-outbound international student mobility (Khare, 2018).

Inclusive Internationalisation: Mapping Gender Gaps

Today, the modified definition of internationalization (Wit, Howard, & Egron-Polak, 2015) clearly emphasizes that it should be more inclusive and needs to be channeled in such a way that 'it is shouldn't only be of interest to a small elite group of mobile students and scholars but directed to all students and scholars'. Academic mobility is a result of various factors ranging from higher education capacity, personal and professional goals and human capital targets for nations as well as a whole range of socio-cultural and economic factors for households and individuals. In the light of an increasing mode of self- financed IHE (Khare, 2014) and greater focus on recruiting income generating international students, more vulnerable sections like women, ethnic groups, and minorities, economically backward are likely

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to get further marginalised. Some insights into the gender aspect of IHE in India may help guide the recent initiatives of the Government of India (GoI) to promote inward student mobility (Khare, 2018) with a gendered lens.

UNESCO (2006) has identified and defined three important indicators of estimating inbound mobility rate – *(a) absolute numbers hosted* defined as number of mobile students from abroad studying in a given country; *(b) Inbound Mobility Rate* (IMoR) defined as mobile students in a country/ region as a percentage of the total tertiary enrolment in that country/region and; *(c) distribution of mobile students by host country* defined as mobile students studying in a country/region as a percentage of total number of mobile students globally. It is well understood that while analysing equity in participation, gender questions cannot be restricted to estimation of gender differences in number of women and men enrolling in HEIs but have to be extended to the fields of study (UNESCO, 2006). We use three indicators to study the gender dimension of the inbound student mobility: (a) Gender gap in absolute numbers (b) Gender gap in inbound mobility rate and (c) Gender Parity Index. We also map the gender disparities across major countries of origin and programmes of study.

Gender and Inbound Student Mobility: Select Country Trends

The international pool of graduates has evolved in OECD G20 countries and is expected to increase in the coming 15 years with countries that lagged behind in the initial phase to experience faster growth while countries that recorded large gains to experience a slower growth. The OECD estimates that 4.6 million crossed a border to pursue an international education experience in 2015, demonstrating a massive increase from 2.1 million students who went abroad in 2001 (OECD, 2017; Project Atlas, 2017). Gender gaps are distinctly visible in internationally mobile students at the global level. In general, gender gap exists in majority nations in disfavour of female students and its manifestation in widening at the global level. Gender parity (with the share of women being higher than men at bachelor's and master's level and lower in doctoral programmes) is observed in less than one-third of OECD member and partner countries (OECD, 2019). Looking at the top 10 countries from 155 different countries across the globe that constitutes 64 percent of the total foreign students in India, similar observations can be made. These countries are Nepal, Bhutan, Iran, Afghanistan, Malaysia, Sudan, Iraq, Sri Lanka, US and UAE. . Not only the share of women in globally mobile tertiary students from these countries reveals harsh reality of being gender biased but the gender gap as a whole has gone up from 1.9 pp in 2011-12 to 3.0 pp in 2017-18 (Table No. 1). A look at the country figures provides a very sketchy picture. Although, the gender gap has declined over the years in Bhutan, Sudan and Afghanistan it continues to remain much higher than others in these three nations. On the contrary, the countries like US, Sri Lanka and Malaysia not only have low gaps but present a contrasting trend with negative gap indicating higher female share. While there is a sharp increase in gender gap in Nepal there is a decline in Iraq and it remains close to zero

Table 1: Male-female gap in IaH (pp)

Country	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18
Nepal	3.4	3.5	5.6	6.7	8.0	8.8	7.9
Bhutan	15.3	9.3	19.9	12.5	10.4	8.4	6.6
Iran	0.0	0.2	0.0	-0.2	-0.1	-0.3	0.2
Afghanistan	18.2	18.8	11.0	15.9	14.5	11.8	11.5
Malaysia	-0.7	-0.8	-1.0	-0.1	-0.8	-0.7	-0.5
Sudan	16.2	16.8	16.4	15.2	13.2	12.7	14.0
Iraq	9.1	9.1	8.5	4.1	2.8	1.7	1.1
Sri Lanka	-0.9	-0.7	-1.1	-2.0	-1.0	-1.2	-0.7
US	0.0	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1
UAE	1.7	1.3	0.8	-0.9	-1.2	-0.7	0.5
Total	1.9	2.0	2.5	2.6	2.8	2.8	3.0

Source: UIS, UNESCO and AISHE

in the case of Iran and UAE. The gender analysis thus provides a mixed picture as far as countries are concerned and it is difficult to draw any patterns.

Gender and Inbound Student Mobility in India

As in many other parts of the globe, it is internationalization abroad that overweighs internationalization at home currently in India. Efforts to improve inbound mobility and IaH have become government prerogatives at the systemic level, in recent times. India aims to quadruple its foreign student numbers in the next five years, from 46,144 in 2018 to 200,000 by 2023 (Government of India, 2018b). To achieve this, financial support is being provided through full or partial fee-waivers or scholarships under the General Cultural Scholarship Scheme (GCSC). Additional intake capacity is made possible by reserving seats for foreign students and creating additional intake capacity on pro-rata basis. India could account for a large share of OECD G20 pool of tertiary-educated young adults in 2030 based on the expected educational attainment and demographic changes. As per the forecasts, India will become a home to the largest tertiary-aged population (119 million) and will have the highest number of tertiary enrolments (48 million) followed by China (37 million) and the US (22 million). But, currently, the percentage of international students of total enrolments in higher education in India remains as low as 0.1 percent (Project Atlas, 2016).

The export-import student Ratio in the country is as skewed as (11:1) (Khare, 2018). In 2016-2017, 47,575 international students were studying in India, a mere 0.67 per cent of all globally mobile students. The majority (60 per cent) of international students in India come from neighboring South Asian nations (Government of India, 2018). Are these international student flows also skewed across gender? If so, then what are the policy implications of such gender disparity are the main concerns in the following sections. Using the three indicators of gender gap as mentioned in the earlier part of this paper we divide the last decade into two sub-periods to study the shift between 2011-12 to 2014-15 as sub-period I and 2014-15 to 2018-19 as sub-period II.

(a) Gender Gap in Absolute numbers

A trend analysis of absolute inbound students hosted in India shows that since 1986, the numbers have seen ups and downs. In 1986, the number of

international students in India was 10,877 which rose to 13,707 in 1993. After that the numbers started declining and touched an all-time low of 5,323 in 1998. Since then, the numbers have been increasing to touch 47,575 in 2016-17. Also, foreign student representation by way of number of countries increased rapidly. The highest increase in inward mobility can be seen from Asia, 60 per cent of them coming from neighboring South Asian nations. Their numbers have seen a drop from Africa, increase from US and remained almost stagnant from Europe. Among the top ten source nations to India, Nepal continues to occupy the top position with almost 40 per cent share from the beginning of this decade.

Fig. 1: Number of Foreign Students in India Total Year Wise
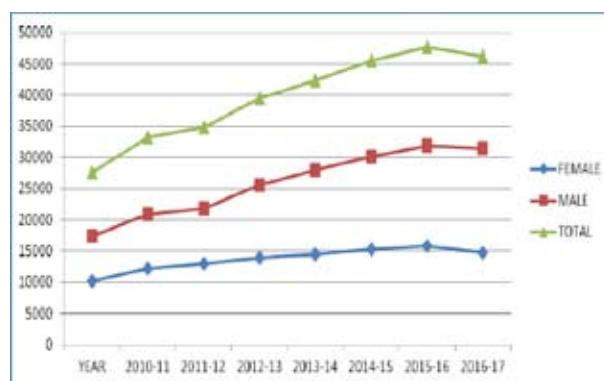
Overall, there is poor representation of foreign women in international student community in India (merely – 32pc). Rather the share of women foreign students has seen a drop from 37 per cent in 2010-11 to 31 per cent in 2017-18. Analyzing the trends in sub-periods, we see that the total number of IS has gone up in absolute figures from 21,359 in 2011-12 to 27,696 in 2018-19, Of these although both male and female students witnessed an increase, the increase in male students has been much faster in the sub-period I while that of the female has remained sluggish (Fig 1). Also, there is a sharper drop in the number of Female inbound students in both the sub-periods II from 38 per cent to 34 per cent and 34 per cent to 29 per cent.

Gender Gap in IS Numbers by Country of Origin

Surprisingly, women representation from developed parts like US, Europe is higher (50 per cent) than from Asia and Africa. We see a sharp

decline in enrolments in the sub-period II as six out of the ten countries recorded a decline except Nepal, Afghanistan, US and UAE (Table No.2). This decline is largely explained by decline in overall women enrollments and a rise in overall enrolments by men. The male-female gap is considerably high in all countries except Malaysia and Sri Lanka, with the highest rise in Nepal. The gap is the highest for Afghanistan which is testimony of the gendered outbound mobility in these countries.

(b) Gender Gap in Inbound Mobility Rate

The IMoR remains higher for men vis-à-vis females for all the courses and for both the sub-periods. The gender gap has also widened in the overall period, much of it explained by the rising gap in sub-period II (Table No.3). Further dissection reveals that women have greater preference for full time long term regular programme (90pc +) with UG courses leading the race. Only 20 per cent of foreign women are enrolled in PG courses while the figure is in single digits for Ph.D and others (Khare, 2019). For every 1200 Indian female students at PG and UG level, there is one foreign female student in HEIs against 480 Indian male students for one foreign male student. The disparity is much higher at Diploma and PG diploma levels where for every 3500 female students; there is one foreign female student as against 380 male Indian students for one male foreign student.

Table 2: Enrolment by Country of Origin

Country	Enrolments (absolute)			Male-female gap (pp)		
	2011-12	2014-15	2018-19	2011-12	2014-15	2018-19
Nepal	6346	8694	12747	16.0	27.5	47.4
Bhutan	2660	2698	1811	13.7	19.0	12.8
Iran	2329	1544	1127	-1.1	-5.6	1.0
Afghanistan	2235	3717	4657	76.0	83.5	75.3
Malaysia	1767	1924	1087	-23.5	-2.9	-28.2
Sudan	1516	2104	1905	83.5	84.1	74.4
Iraq	1514	1263	498	79.0	53.8	58.2
Sri Lanka	1207	1610	1252	-12.8	-20.4	-10.4
US	983	982	1562	1.1	-3.9	-8.3
UAE	802	1284	1050	18.2	-6.5	15.4
Total	21359	25820	27696	23.9	30.5	40.1

Source: computed using AISHE data

Table 3: Inbound Mobility Rate of IS

Course	2011-12		2014-15		2017-18	
	male	female	male	female	male	female
Ph.D	0.85	0.84	0.58	0.38	0.41	0.28
M.Phil	0.21	0.15	0.07	0.04	0.04	0.01
Post Graduate	0.21	0.09	0.20	0.09	0.28	0.09
Undergraduate	0.13	0.10	0.16	0.09	0.16	0.08
PG Diploma	0.03	0.07	0.03	0.06	0.02	0.03
Diploma	0.02	0.05	0.05	0.05	0.14	0.03
Certificate	0.01	0.01	0.09	0.02	0.23	0.07
Integrated	0.37	0.34	0.27	0.37	0.25	0.33
Total	0.13	0.09	0.15	0.09	0.17	0.08

Source: computed using AISHE annual reports data

Another distinctive observation is in terms of Ph.D. programmes. With the IMoR for men and women being almost at par in 2011-12, it has continuously declined for both male and female but the decline is much steeper for female. The rate for male has seen a 0.44 pt drop while for women it is almost 1.3 times more. It reflects a worse scenario in which both the host country (India) and the home countries have failed to induce/improve international mobility of female students.

(c) Gender Parity in Inbound Mobility

The increasing existence of gender bias in inbound mobility of IS in India is further substantiated by a decline in Gender Parity Index (GPI) in IHE. GPI for IS has declined from 0.61 in 2011-12 to 0.43 in 2018-19 (Table No. 4). The sharpest decline is recorded in short term (certificate and diploma) and M.Phil level of education. The gender parity in inbound mobility has been falling continuously through the two sub-periods. However, the decline is marginally higher in the recent years, thus indicating at a worsening situation.

The index is comparatively higher for short duration courses especially PG Diploma. The declining gender parity in IS could possibly due to two reasons , one women from other countries are not keen on taking up higher education in India (demand side) or Indian policies are not able to attract women candidates from abroad (supply side).

Conclusion and Policy Implications

The top agenda of "India becoming a education hub" is profuse in policy discussions. In its desire to emerge as a regional education hub, there is a marked shift in India's approach, which consists of becoming proactive at the systemic level to promote IaH targeting at improved inward mobility. Several programmatic steps led by the government have been taken to make India an attractive destination. Among government's major initiative are Global Initiative of Academic Networks, Scheme for Promotion of Academic and Research Collaboration, Institutions of Eminence have focused on tapping the talent pool of foreign competitive-academics. The draft National Education policy 2019 vis-a-vis the previous policies on education clearly reflects India's strategic intentions that aim to facilitate student and faculty mobility, to build international partnerships for research, cross-border delivery of higher education and ease the enrolling processes for IS.

As nations around the world have emphasised on promoting internationalisation of education for common good of all, ensuring equal access to IHE and provision of equal opportunities can be a milestone in bringing women at par with their counter parts globally. Given the fact that the increased inbound mobility of IS in India is credited to a higher share of male enrolments there is a need of preparative policy deliberations to address convergence of this gap. Unfortunately, over the years the gender gap is worsening instead of improving. This trend is more pronounced in research and higher order programmes of study. Recent years have also seen a widening gap in UG level programmes which is the most prominent segment of IS enrolments. As India envisages to emerge as a 'knowledge superpower' and the 'skill capital of the world' attracting global talent towards research and short term skills training in an inclusive fashion can help India to be identified as a country

Table 4: Gender Parity in IHE

Course	2011-12	2014-15	2018-19
Ph.D	0.66	0.48	0.57
M.Phil	0.84	0.86	0.33
Post Graduate	0.41	0.50	0.41
Undergraduate	0.65	0.54	0.46
PG Diploma	1.21	1.18	1.17
Diploma	1.43	0.42	0.09
Certificate	1.13	0.21	0.35
Integrated	0.53	0.75	0.95
Total	0.61	0.53	0.43

Source: computed using AISHE annual data

of inclusive International HE. Various ways of direct reservation, financial support, women specific campus facilities, women oriented curricular inputs and extra-curricular environment, safety measures need to find an important place in policy formulation and program initiation, which seem to be lacking. There is every possibility of these parity measures getting worsened under the impact of the current pandemic which would have a long term effect of triggering unequal opportunities for women as the world gets ready to bounce back. These may have undesirous far reaching consequences of sowing the seeds of gender fractured societies if proper attention is not given to address the existing gender gaps.

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Online Learning: Debate, Design and Digital Equity

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A few months back, an Israeli mother with four kids in locked-in yelled, 'if coronavirus doesn't kill us, distance learning will.' She recorded a video as a pointer to the difficulties of online learning which later went viral. It is not only the Israeli mom, but teachers' unions in higher education in India also have inconveniences such as to conduct the new modes of instructions or exams. Despite similar concerns and difficulties from different quarters, COVID emergency has been reshaping our education models for the last four months in unprecedented ways. It pushes professors, students, parents, institutional authorities and governments to rethink on new delivery formats and many educators are doing their best to respond to the emergent challenge even under constraints.

The objective of this article is to resolve the three dominant themes on online learning which resurface in the context of emergency caused by Covid-19. The first section briefly relooks the debate on the effectiveness of online learning. The second section argues that effectiveness is a matter of pedagogical design, as a priority. The third section proposes practical solutions to ensure digital equality in learning. The article also proposes a template to assess the baseline situation of online readiness in Universities, with which we expect to realise an internet-equitable University.

Debate: Is Online Learning Effective?

Most debates on online education fall into a false dichotomy. The first extreme is those who view education technology as a panacea to everything where the free reign of corporates permitted without much concerns on data privacy and democratic values. The other extreme, technophobic neo-luddites, see every reform as a part of neo-liberal agenda. Effectiveness of online learning is not an exception to this false compartmentalization.

Let us look at the researches to address the long-standing debate on whether online learning is effective compared to face to face learning. Means et

al (2010), in one of the largest systematic reviews on this topic, identified more than a thousand empirical studies from 1996 through 2008. With screening a corpus of 45 studies it was found that instruction conducted entirely online is as effective as classroom instruction. On average, students in online learning conditions performed modestly better than those receiving face-to-face instruction. Blended learning, on average, had stronger outcomes than face-to-face instruction alone.

Similar findings are repeated in later studies. Academic performance of online students was the same as that of traditional students (Stack, 2015) and students' course evaluations did not reveal any significant difference between the on-campus and online learning versions of the course (Holmes & Reid, 2017).

A recent study compared the academic outcomes of three categories of students. The first category was taught fully online, second by blended learning and third by fully in-person. The authors (Chirikov Igor et. al., 2020) report that online and blended instruction produce similar student learning outcomes as traditional in-person instruction. The study only used basic online course material to match the in-person content. The authors opine that if they have used interactive and social online activities with immediate feedback, that could have produced even larger learning gains. In other words, even without using the full potential of online learning, study outcomes of online and in-person learning can be equated.

In short, there is no substantial evidence in the education literature that proves the advantage of the classroom instruction over its online experience alternative at least in the context of student outcomes. Personal opinions arising from the investment in the status quo and concerns on remote learning cannot substitute empirical evidence. Yet we do not ignore the unique advantages of real socialization and the potential benefits of a physical campus.

There are exemplary successes, mediocrity and failures in face-to-face classroom teaching and learning depending on the quality of the teacher and

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the instruction. Similarly, there are let-downs and triumphs in online learning too. Therefore, more than the mode of instruction, what matters is how we challenge the imagination to meet the learning outcome of our students. This novelty demands a different set of competence than our current educational habituation. This leads to the most significant but less emphasized factors of on-line learning: the learning design.

Design: A Pedagogical Priority

Online teaching has its pedagogical features, some of which are different from the real classrooms. For those who ventured into online teaching first time, by force, it leaves a range of feelings from curiosity to hostility. At first, it is navigation than a transformation across uncertain connectivity, unavailability of computers and unsure student interactions. Quality online learning is not about imitating the real classrooms through videos and quizzes, but about designing a learning experience with an array of student activities.

Despite the potential for design in online learning, most learning material currently available is composed of videos and quizzes that prompts for rote learning. Over-reliance of lecture-based or video-based content may even replicate the daily classroom-boredom into online space, very systematically. Good teaching was never about content and content can neither equate nor ensure learning.

If the lecture converted into video or script, discussions converted into video-conferencing, assignments via email or LMS, it serves only as a convenient starting point. Here is an example of how pedagogical features are different in an online lesson. Asking a definition as in the real classroom makes no sense in an online learning environment. Instead, asking the student to search for news and to paste the link or snip the images matching for a particular concept may work better online. Or an exercise to source examples from different online sites and threading them together towards a definition through a collaborative exercise makes it engaging. Similarly, designing online activities around non-screen methods is another innovative theme for the pedagogy of the future.

To tackle the distractions inherent in remote learning, the materials and strategies used in real classrooms are insufficient. Each teaching component (prompts, questions, video, podcasts, news-clips, statistics, story-line, readings, templates, reading, worksheets, web-based tasks, etc.) needs to undergo a creative online fitting before assembling and presenting for an online student. There are many examples of effective practice-based activity-driven online courses. Most effective online programmes and high rated on-demand courses irrespective of the platform, country or discipline trigger a series of learning tasks from the part of the learner. The educational experience with a variety of teaching components or resources delivered in engaging ways forms the core of such online pedagogy. Therefore, the educational challenge in online learning is more of a pedagogical design than a technological possibility. This has implications on the role of our educators.

Our teachers are hired mainly for the academic credentials and the content they bring, not necessarily as designers of instructions. In a world where content is ubiquitous and 'head in the cloud', there is a longstanding cry to redefine the role of teachers. Best educators during the pandemic season are not creating content to reinvent the wheel, but curating it from multiple sources and packaging it for their institutional context to facilitate learning (Srinivas and Salil, 2020). Generation Z demands compelling content delivered in engaging ways. As teaching no more remains limited to the content, teachers experience first-hand that they become designers of a learning experience: a much-needed change in the role of teachers in the digital era.

The Internet is replete with tools to make interactive on-line education happen, but a tool is only as useful as its user and his creativity. We need to step-up our competence in areas like designing virtual tours, immersion tasks, interaction design and facilitating web-tasks at a distance.

Many misconstrue online education as an extension of face to face learning or as a subset of distance learning. This is an example of a cognitive bias where we recognize standardized situations and respond to them with standardized patterns. This approach limits our capability to create possible alternatives. Instead, we look for precedence and personal experience from the past. We attach the newness with precedence. Such thinking habit has

forced us to see remote teaching and learning as an extension to regular face-to-face learning. In reality, it is a format of education and delivery model in itself. The success or failure of online learning is dependent on the course design toward the learning outcome. Here comes the third theme; whether a well-designed course can be accessed by all students.

Digital Equity: A Democratic Priority

According to the Global Education Monitoring Report (2020), forty percentage of poorer countries are not focusing on at-risk learners during the pandemic. Almost half of the world's population has no access to the internet, as per the World Inequality Database on Education (2020). Unequal access to the Internet aggravates social stratification and limits educational opportunities.

India has close to five hundred million active internet users, out of which two hundred million are in rural areas. The current smart phone and internet penetration rate is around 40 per cent. The last few years have witnessed better internet penetration due to higher bandwidth and economical tariff. But having a device and internet access is not enough for on-line learning. News reports of online education in the last three months also include suicide by a schoolgirl over not having access to a smart phone to attend classes, attempts of students in remote areas having to climb on rooftops to get connectivity and students waiting for the parent to come home for the only phone available to make the learning material. In effect, apart from the three decades' discussion of the digital divide, digital inequality is evident in online learning. An immediate shift to online learning may be a temporary arrangement, but digital inequality has far-reaching implications. It raises the issues of accessibility to digital learning spaces and signals multi-layered inequalities.

Levels of Digital Inequalities

Physical access to digital technologies is the first level of inequality. As computing devices and the connections are to be paid for, income inequality will reinforce digital inequality at this level. Signal problems, power issues and bandwidth capability add to the problem.

The second level is that of skill inequality or the ability to use the technology effectively. The third level of inequality reflects the diversity of internet use and in the disparity of benefits derived from the use. For example, more educated users may get more offline benefits from online usage than less educated. Apart from these, there is overlapped inequalities within-groups. Girl students have lesser digital accessibility in many areas, and they have limited physical space within homes due to pre-existing gender roles. Technology tools may also differ based on the affordability which will be magnified in future. For example, more affluent may prefer educational content embedded with virtual reality, augmented reality, tele presence and other advanced modes of technologies while others may opt for tools demanding lower bandwidth such as audio, images and text. Similarly, there exists a major gap in the availability of educational tools in vernacular content and regional context. A report by Google India and KPMG (2017) states that internet users in India will prefer more interactive content in regional language.

As relational inequalities are at play, students from a low-income background, single-parent families, first-generation learners, and those living in rural areas will be worst affected by the digital divide. The same variables of already existing socio-economic and demographic inequalities will be widened if adequate attention is not given to the details of digital inequity. How in each of the above levels, each state in India fares needs to be studied further for policy decisions.

On the other hand, predictably, the increase in internet penetration and usage of smart phones has triggered rapid growth in the education technology sector in India. Over 4,500 edtech startups were launched in India in the past six years. According to estimates, the Indian online learning market is expected to be worth USD 1.96 billion by 2021. The test prep segment and the school-level apps have the highest capital inflow and the greatest demand in the country. The growth has more related to the obsession with marks and grades than true learning. The COVID-19 emergency, subsequent lockdown and fear of job loss have boosted the demand for online up skilling programmes. It is unwise to see the penetration of new-age education providers as merely as a surge of educational technology and online learning ventures. More importantly, this is a situation that reveals the capabilities and vulnerabilities of our mainstream education system, particularly its inefficiencies and inequalities.

Many national institutions were quick in shifting their instruction entirely to the online mode because of their preparedness like existing LMS and pre-existing privileges such as funding and expertise. Students from an affluent background and premiere institutions have a distinct advantage in learning during the corona crisis too. While technology powers uninterrupted quality learning in some sections of the society, delivering quality remote education to economically and demographically disadvantaged needs strong policy support.

Responses and Solutions

The Supreme Court of India has declared access to the internet a fundamental right. MHRD and University Grants Commission (UGC) has widely made available more than two dozen useful resources in higher education to the academic community even before the pandemic. This is apart from the online platforms like SWAYAM. Top hundred universities of the country have allowed starting online education. A program for multi-mode access to digital education is envisaged under eVidya program through which a bouquet of Television Channels, more e-content, QR coded energized books and special e-content for differently-abled are being made available. However, there are gaps to be plugged at the grassroots of different regions and states where multi-layered inequalities exist. Table 1 represents some of the methods to address different gaps mentioned above.

Regulatory Implications

Many internet giants operating in educational technology have reached a level of controlling the preferences of students, teachers and even media. Raising questions on digital democracy, Levi (2020) refers to such companies that:

Table 1: Efforts to Bridge the Digital Inequalities in Online Learning

	Affordability Focused	Access Focused
Short-term Solutions	• Popularising the existing low-cost devices like Raspberry • New affordable devices • Alternative bouquet approaches (Educational TV Programmes + Podcasts + Physical Study Material) • Zero-rating programs (West, 2015) • Subsidised internet plans or Reimbursement of internet packages • Fee waivers for devices and no-tax connections • Pay-forward loans • Free Community PCs over LAN	• Offline distribution of digital content as in USB drive. • School buses or vehicles repurposed to serve as a wi-fi hotspot • Device Lending Programmes (Rent a laptop) • Use of interactive textbooks and reading devices. • Customise content for low bandwidth areas with selective tools. • Installing the hard drives with the content on local area networks. • Internet-connect solar energy products like Veriown CONNECT
	Support Focused	**System and Policy Focused**
Long-term Solutions	• Community centres as hot-spot or wi-fi centres • Content in multiple formats, models and languages • Hole in the Wall Model: providing unrestricted computer access in an open setting. • Support from local bodies to provide space and access facilities. • Support from corporate initiatives like HP e-inclusion • Digital literacy programmes for all ages through formal and informal means.	• Promotion of free and open-source software tools (FOSS) • Regulations for operators in the internet edtech domain to make their operations more inclusive • Focused empowerment programmes in rural areas • Revamping IT Policies for the informational space in Higher Education • Technology alternatives like new forms of satellite internet connections, airborne connections, cognitive radio solutions etc • Infrastructure enhancements like the backbone of the fibre-optic network in possible areas and digital-smart villages.

'They are so big, that we must trust them ontologically, as they were our mum and dad. What proves that they are mum and dad? They give it for free!'

Regulating them is a generic suggestion. However, regulations in the online learning space are tricky because of three reasons. Firstly, internet-induced online learning and education technology is rapidly changing and therefore the current model of educational regulation will not fit into. Regulations in higher education are already suffering because they do not accommodate the extent and rapidity of the educational change and on the contrary, attempts to support the status quo. Secondly, most of such companies and tool-builders do not have a clear legal presence in India. Thirdly, dealing with informational space in higher education is different from other forms of policymaking in education because it essentially crisscrosses many social domains. Edtech companies and online learning providers have established their presence not because of education regulations, but despite it. In short, the regulatory possibilities in online learning are different from those of the current ones. The priority of the regulation is to ease the unevenness created by them and to guide them to be more inclusive towards the social investment objectives of the Government. Providing multiple models of devices and connectivity, empowering local communities to use online learning effectively and making the content relevant for different types of learners are essentially a social investment. The efforts can be affordability focused, access-focused, support-focused or system-focused as shown in Table 1.

Toward an Internet-equitable University

As we are currently unsure of the containment, potential recurrence and future threats of COVID-19 or any similar pandemic, preparing for instructional disruptions is a priority for all institutions. Digital equality among learners and instructors is a prerequisite for the required response. We suggest a template for strategizing for an Internet-equitable University in concrete terms as follows. The institution may focus on seventeen parameters grouped into five, for each student.

i.   Device (availability, quality, usage, power)

ii. Connectivity (Infrastructure, reliability, power)

iii. Affordability (price, choice)

iv. Relevance (content form, content level, context, language)

v.   Support (educator support, technical support, maintenance load, digital leadership)

The learner information on the five parameters will act as a baseline to develop strategies for digital equity in each institution. Looking for both short-term and long-term solutions supported by the community, the approach can ensure digital trust among teachers and students, which is much beyond regulations. This can also guide to revamp the IT policies, develop transition protocols, and ensure sustained digital leadership in the institution. We need digital policies and priorities in higher education that are not sea-sowing between two extremes of techno-panacea and neo-luddism. Delivery of better educational experience matching with national priorities and individual preferences are possible only if we develop plans and schemes keeping the priorities of educational design and digital equity – in emergency and beyond.

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Spotlight on Central Universities in the Context of National Institutional Ranking Framework 5.0

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Quality higher education has proved to be the major tool for socio-economic transformation. This is particularly true in case of developing nations. Since 20th Century quality assurance in higher education has become increasingly important. The quality of education depends on several intrinsic factors like curriculum, teaching learning, evaluation, infrastructure facilities etc. and innovative approach to cope with the emerging challenges. Similarly the growth and development of higher education depends upon a number of extraneous factors also. In India, quality assessment has taken a concrete shape only in the last decade of the last century, with the establishment of the National Assessment and Accreditation Council (NAAC) in 1994 and a few other quality assessment organizations (Roy, 2011). It has been observed that despite strong foundations HEIs in India could not perform satisfactorily in QS and TIMES global ranking over the years. With an ambition to prepare Indian HEIs to compete globally, MHRD has come up with a noble initiative of National Institutional Ranking Framework (NIRF) using country based parameters for both overall and discipline specific ranking methodology since 2016. The Indian higher education system is on the crossroad for transformation. This is being driven by economic and demographic change: by 2020, India will be the world's third largest economy, with a correspondingly rapid growth in the size of its middle classes. Over 50 per cent of India's population is under 25 years old; by 2020 India will outpace China as the country with the largest tertiary-age population (British Council, 2014).

The main objective of the present study is to analyse the performance of Central Universities in India in the five versions of NIRF reports 2016 to 2020 with disaggregated analysis of different parameters. The study is based on data collected from MHRD, NAAC and websites of concerned Universities. The analysis is based on the use of simple statistical tools like descriptive statistics and graphical presentations. The sample size consisted of 40 Central Universities (CUs) the list of which is available in MHRD website (refer Tables-1 to 3).

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Genesis of Central Universities in India

During the British period the Lord Bentinck's Resolution of the 7th March, 1835 followed by the Policy of Filtration and Wood's Despatch, 1854 paved the way for enactment of three University Acts of 1857 founded Universities at Calcutta, Madras and Bombay. This was followed by the establishment of Benaras Hindu University and University of Mysore in 1916, Patna University in 1917, Osmania University in 1918, Aligarh Muslim University and University of Lucknow in 1920 as a fallout of Government of India Resolution adopted in 1913. As part of policy of establishment of atleast one University in each province Universities of Delhi (1922), Nagpur (1923), Andhra (1926), Agra (1927) and Annamalai (1929) were established. Rabindranath Tagore established Visva Bharati in 1921 in Santiniketan. Jamia Milia Islamia started in 1920 at Aligarh with humble beginning. Thus the Central Universities of Aligarh, Benaras, Delhi, Visva Bharati and Jamia Milia Islamia have the legacy of history of its beginning during British period.

The University Education Commission was constituted in 1948 under the Chairmanship of Dr S Raddhakrishnan and on the basis of its recommendation University Grants Commission (UGC) was established in 1956 as a regulator of academic standards and a provider of finance. The 42nd Constitution Amendment Act in 1976 transferred Education from State list to Concurrent list for assuming greater control on it by the Centre. The Central Government through UGC mainly emphasized on Quality, Access and Expansion of higher education in the country. Up to 1960 there were 5 Central Universities and since 1970 phenomenal expansion took place in respect of establishment of rest of the Central Universities under present study. The categories of Universities in India are broadly four types, viz, Central, State, Private and Deemed. However based on the function, the Universities further categorized as Institution of Eminence, Unitary, Affiliating, Subject and Open. The Central Universities are established by Act of Parliament and the Union Government is responsible for arranging financial resources

NIRF Parameters and 5.0 Outcomes

The NIRF outlines broad methodology to rank institutions across the country. The parameters broadly cover 'Teaching, Learning and Resources', 'Research and Professional Practices', 'Graduation Outcomes', 'Outreach and Inclusivity' and 'Perception' with a general weight relegated to it. Each of the parameter is divided into a set of sub-parameters, based on which the overall parameter score is calculated (refer Table-1).[1]

Though the basic framework remains the same but methodology has been tuned continuously to modify metrics such as in 2017 and 2019 to ensure quality performance over the years. The 5th version of NIRF was declared recently for overall and discipline wise category of institutions. Out of 40 Central Universities, 12 could occupy places among 100 best Universities in the country (refer Table-2)[1]. Another 16 could find places in Rank-Band 101-150 and 151-200 (refer Table-3). A list of 12 Central Universities are outside the rank and rank-band in NIRF 2020 (refer Table-4). While the NIRF is a yearly ranking framework with relative score, NAAC grade refers to five year comprehensive assessment and accreditation. There is absence of strong correlation between NAAC grade and NIRF ranking as highly graded institutions found to be slipped in their yearly performance in NIRF. However since the NAAC grading methodology based on robust and holistic criterion and key indicators, it is expected that an institution with good grading possess some strong points in its teaching, learning, research, physical infrastructure etc. which gives them edge over other institutions relatively in prospective performances.

An analysis of NAAC grade status of the sample 40 Universities found that about 50 per cent of Universities possessed A grade and rest are in B grade with little variations in intra grade categories say, A+, A++, B+, B++ etc. Out of left out 28 Universities outside NIRF ranks 10 Universities i.e 36 per cent obtained A grade followed by B for others.

Table- 1: Parameters and Weights of NIRF

Sl. No	Parameters	Marks	Weightage
1	Teaching and Learning Resources (TLR)	100	0.30
	Student Strength including Doctoral Students	20	
	Faculty-student ratio with emphasis on permanent faculty	30	
	Combined metric for Faculty with PhD (or equivalent) and Experience	20	
	Financial Resources and their Utilisation	30	
2	Research and Professional Practice (RPP)	100	0.30
	Combined metric for Publications	35	
	Combined metric for Quality of Publications	35	
	IPR and Patents: Published and Granted	15	
	Footprint of Projects and Professional Practice	15	
3	Graduation Outcomes (GO)	100	0.20
	Metric for University Examinations(GUE)	60	
	Metric for Number of Ph.D. Students Graduated	40	
4	Outreach and Inclusivity (OI)	100	0.10
	Percentage of Students from Other States/Countries	30	
	Percentage of Women	30	
	Economically and Socially Challenged Students	20	
	Facilities for Physically Challenged Students	20	
5	Perception (PR)	100	0.10
	Peer Perception: Academic Peers and Employers	100	

Table-2 Central Universities within 100th Rank in NIRF, 2020

Sl. No	Name of University	Year of Establishment	NIRF Rank	NAAC Grade
1.	Jawaharlal Nehru University	1969	2	A++
2.	Banaras Hindu University	1916	3	A*
3.	University of Hyderabad	1974	6	A
4.	Jamia Millia Islamia	1920 (1988)	10	A*
5.	University of Delhi	1922	11	A+
6.	Aligarh Muslim University	1920	17	A*
7.	Tezpur University	1994	39	A
8.	North Eastern Hill University	1973	49	A
9.	Visva Bharati	1921 (1951)	50	B
10.	Pondicherry University	1995	58	A
11.	Mizoram University	2001	67	A
12.	Central University of Punjab	2009	87	A

*validity period over, the grade mentioned indicates immediate previous status as on 11/03/2020.

Figure in the parentheses refers to conversion to central University status.

Source: MHRD, NAAC and websites of concerned Universities

Table-3 Central Universities within Rank- Band 101-150 and 151-200 in NIRF, 2020

Sl. No	Name of University	Year of Establishment	NIRF Band	NAAC Grade
1.	Assam University	1994	101-150	B*
2.	Central University of Kerala	2009	101-150	B++
3.	Central University of Rajasthan	2009	101-150	A
4.	Central University of Tamil Nadu	2009	101-150	B++
5.	The English and Foreign Languages University	1958 (2006)	101-150	A
6.	Manipur University	1980 (2005)	101-150	A
7.	Nagaland University	1994	101-150	B
8.	Rajiv Gandhi University	1985 (2007)	101-150	B
9.	Sikkim University	2007	101-150	B
10.	Central University of Gujarat	2009	151-200	B++
11.	Central University of Kashmir	2009	151-200	B++
12.	Central University of South Bihar	2009	151-200	A
13.	Dr. Harisingh Gaur Vishwa Vidyalaya	1946(2009)	151-200	A
14.	Maulana Azad National Urdu University	1998	151-200	A
15.	Indira Gandhi National Tribal University	2009	151-200	B
16.	Tripura University	1987(2007)	151-200	B

*validity period over, the grade mentioned indicates immediate previous status as on 11/03/2020.

Figure in the parentheses refers to conversion to central University status.

Source: MHRD, NAAC and websites of concerned Universities

A detailed account of NAAC grade status of 40 Universities is shown in Chart-1 and Chart-2 depicted the status of 28 Universities outside rank and rank-band of NIRF.

Variations in Parameterwise Performance of CUs

Out of 12 Universities which could obtain ranks in NIRF 5th version 2020, 11 of these consistently performed in terms of obtaining ranks in all the 5 versions. Of these, 10 Universities obtained A grades (for some of CUs the validity period is over) and one possessed grade B. It has been observed that the score obtained in NIRF by these Universities over the years is more heterogeneous across parameters indicating wide possibility of improvement by others in respect of benchmark Universities like JNU, BHU etc. The

Chart 1: NAAC Grade of 40 CUs

Legend:
- A++
- A+
- A
- B++
- B+
- B
- Not Accredited

(3%, 2%, 2%, 20%, 5%, 48%, 20%)
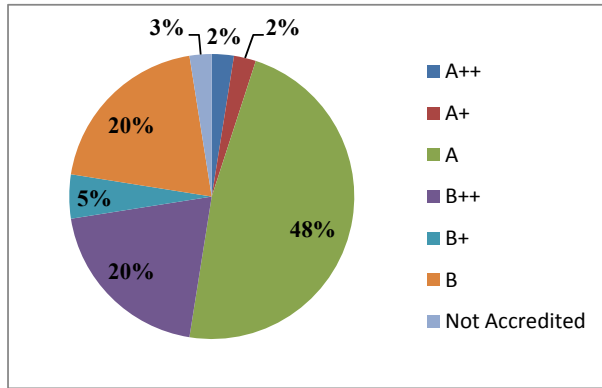
Chart 2: NAAC Grade status of Universities outside 100th Rank of NIRF

Legend:
- A
- B++
- B+
- B
- Not Accredtd

(3%, 25%, 7%, 36%, 29%)
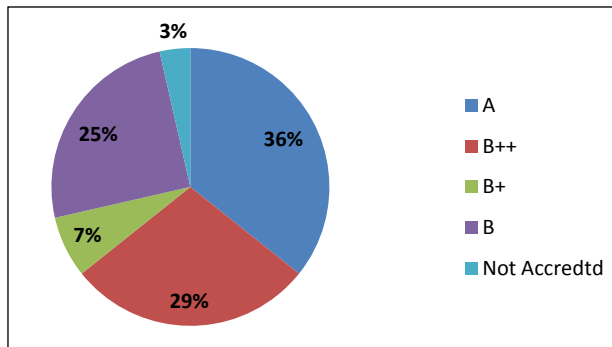
estimated variance of NIRF score as depicted in chart 03 indicates that there is a sharp convergence in score

obtained by CUs from 2016 to 2017, but it showed divergent in the next year. However, the variable again started converging afterwards. The parameter wise analysis has given a clear pattern of performance among the Universities.

Chart 3: Estimated Varinace of Performance in Score
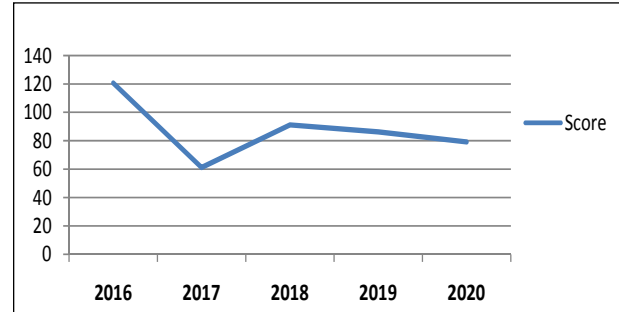
The estimated variance of different parameters for all the 11 Universities across all the versions of NIRF shows that there is sharp convergence in TLR from 2016 to 2017 but remained stable after wards across the period. The values representing RPC remained almost stable over the period. Interestingly there is divergence in GO over the years indicating room for intervention in respect of this metric representing examination results and Ph.D outcomes to be improved in forthcoming years which has weightage of 0.30 in calculating the score. The details for TLR, RPC and GO are depicted in chart-4.

Table-4 Central Universities outside Rank and Band in NIRF, 2020

Sl. No	Name of University	Year of Establishment	NAAC Grade
1.	Babasaheb Bhimrao Ambedkar University, Lucknow	1996	A
2.	Central University of Haryana	2009	A
3.	Central University of Himachal Pradesh	2010	B++
4.	Central University of Jammu	2011	B++
5.	Central University of Jharkhand	2009	B
6.	Central University of Karnataka	2009	B++
7.	Central University of Orissa	2009	B+
8.	Guru Ghasidas Vishwavidyalaya	1983 (2009)	B+
9.	Hemvati Nandan Bahuguna Garhwal University	1973(2009)	A
10.	Mahatma Gandhi Antarrashtriya Hindi Vishwavidyalaya	1997	A
11.	Mahatma Gandhi Central University, Bihar	2014	NA
12.	University of Allahabad	1887(2005)	B++

*validity period over, the grade mentioned indicates immediate previous status as on 11/03/2020.
 Figure in the parentheses refers to conversion to central University status.
Source: MHRD, NAAC and websites of concerned Universities

Chart 4: Estimated variance of performance in parameters TLR, RPC and GO
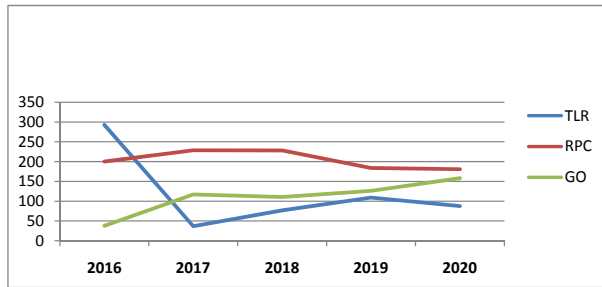
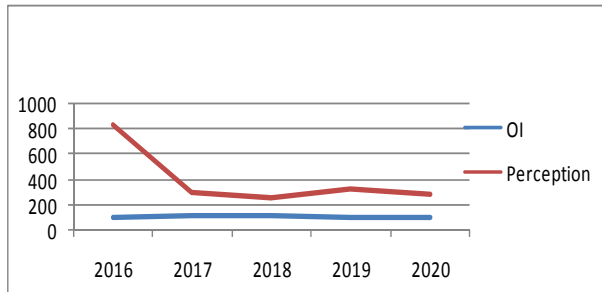The parameters OI having weightage of 0.10 in the calculation of score shows almost stagnant over the period. The value of Perception shows sharp convergence during 2016 to 2018 and remained stable afterwards (for details refer chart-5).

Chart 5: Estimated variance of Performance in parameters OI and Perception

Satisfactory Achiever Universities

From the disaggregated analysis of data in Table-2 it has been observed that 16 Universities got their places in two rank-bands (101-50 and 151-200) which indicates their relative performances. From data in Table-3, 16 Universities are found to be included in Rank-Band in NIRF 5th version 2020, 9 of them could occupy ranks in earlier versions of NIRF atleast by one occasion. The inclusion of these Universities in Rank- Band in NIRF 2020 is considered to be satisfactory in terms of relative performance (for details refer Table-5). From further analysis of NIRF of all the five versions it has been observed that 3 Universities could perform relatively better than others in respect of occupying ranks. In this category the performance of Assam University, Central University of Punjab and Rajiv Gandhi University are found to be noteworthy. In the following section an attempt has been made for disaggregated parameterwise analysis of these three Universities.

Assam University

The Assam University was established in 1994 in Silchar, Assam along with Tezpur University. The establishment of this University fulfills the long cherished demand of the people of south Assam. Though in the last two cycles of NAAC assessment

Table-5 Status of Universities included in Rank-Band in NIRF 5.0

Universities	2016	2017	2018	2019	2020
	Within 100 indicated by shaded mark				
Assam University	▓	▓	▓	▓	
Central University of Punjab	▓			▓	▓
Rajiv Gandhi University		▓		▓	
Central University of Kerala					
Central University of Rajasthan	▓				
Central University of Tamil Nadu	▓				
English and Foreign Languages university					
Manipur University					
Nagaland University			▓		
Sikkim University	▓				
Central University of Gujarat	▓				
Central University of Kashmir					
Central University of South Bihar	▓				
Dr. Harisingh Gaur Vishwavidyalaya	▓				
Maulana Azad National Urdu University					
Indira Gandhi National Tribal University					
Tripura University	▓				

Source: NIRF, MHRD

its grading remains B with little increase in CGPA in second cycle, it consistently performed better in occupying ranks in 4 versions of the NIRF out of 5. The slipping of its rank in NIRF 5.0 raised apprehensions about total quality management in the University. Since the score of 2020 for the University is not available due to its exclusion in rank list, it is decided to use the benchmark score for 2020 at 100th rank institution to find the relative shortfall in performance of respective parameter.

**Chart 6: Parameter wise Performance of Assam University**
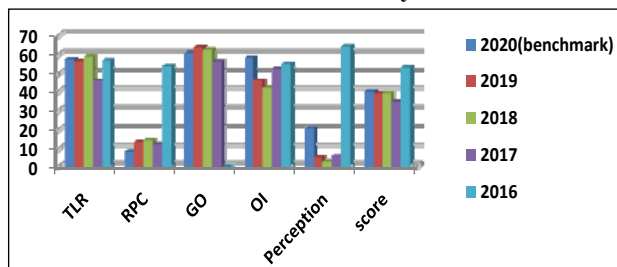
From the analysis of Chart-6 the performance of the University in the parameters TLR, OI and perception in 2020 is relatively not encouraging compared to the benchmark institution at 100th rank. Further the performance of the parameters TLR and RPC in 2019 compared to 2018 was comparatively less. Thus there is wide opportunity to improve the performance relatively to the benchmark institutions in coming years.

Central University of Punjab

The Central University of Punjab was established as per the Act of 2009 in Bhatinda as part of the policy under XII plan of the Government of India for expansion of Central Universities across all the states in the country. The University could find its place within 100 ranks in 3 occasions out of 5 versions of NIRF. The parameter wise disaggregated analysis is shown in Chart -7.

**Chart 7: Parameterwise performance of Central University of Punjab**
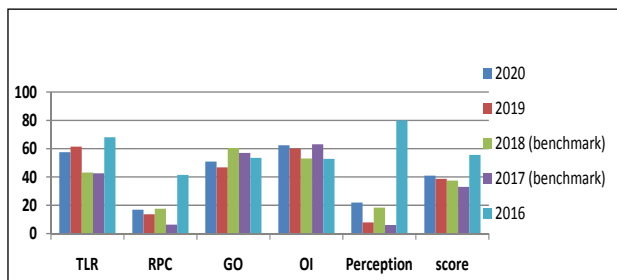
It is observed that during the period 2019 and 2020 the performance of all the parameters except TLR have been relatively improved. Compared to 2016 the University could not perform better in parameters TLR and RPC relatively with benchmark institution for 2017 and 2018 and its own score in other years. However the consistent performance on two consecutive occasions in NIRF is considered to be very promising.

Rajiv Gandhi University

Originally established as state University in Arunachal Pradesh the Arunachal University was renamed as Rajiv Gandhi University and converted into Central University in 2007. It is committed for the development of indigenous people located in one of the largest state in the Himalayan region. The University could occupy its rank on two occasions in 5 versions of NIRF. The disaggregated parameter wise analysis is shown in Chart-8.

Chart 8: Pameterwise Performance of Rajiv Gandhi University
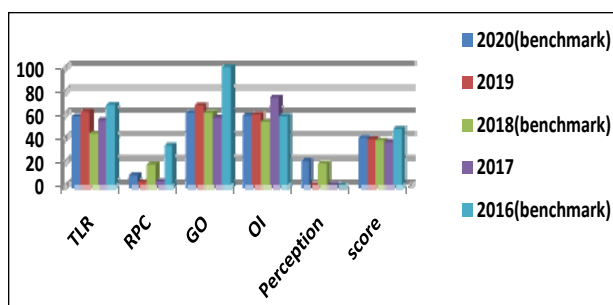
The analysis of parameters across 5 versions in NIRF indicated that in respect of TLR and RPC the relative performance of the University in 2020 with benchmark institution as compared to 2019 is not satisfactory. Again in 2019 compared to 2017 the performance in TLR and GO was better compared to RPC and OI. There is a wide variation in the achievements in different parameters which indicates scope for further improvement relatively to others.

Conclusions

It has been observed that 11 CUs out of 40 performed consistently in the 5 versions of NIRF. This category consisted of some Universities like BHU, Aligarh, University of Delhi, Visva Bharati and Jamia Milia Islamia having legacy of history of establishment prior to independence and some are quite old like JNU, Hyderabad and NEHU.

Interestingly some young Universities which were established during 1990s and later like Pondicherry, Tezpur and Mizoram also figured in this category. Their achievement becomes a benchmark for other younger Universities established across the country.

For sustaining quality improvement and assurance in HEIs top management plays a very important role (Deming, 1986; Juran, 1989). It is the responsibility of the management to analyse SWOC (Strength, Weakness, Opportunities and Challenges) and act accordingly for perspective planning in respect of programme and curriculum design. It has been observed that though some Universities awarded with very good NAAC grade but fails to be accommodated even in the Rank-Bands over the years in 5 versions of NIRF relative to others. These facts raised doubt about the quality assurance and sustenance mechanism in these HEIs comparatively to other performers.

The Central Universities has the mandate of quality assurance, access and equity backed by financial allocations by the Union government. They need to focus on strengthening the culture of consortium mode and strive for more linkages among themselves in terms of students and faculty exchange, academic enrichment programme, dual degree and more academic collaborations for mutual benefits. The uniform pattern of governance structure among these Universities gives more scope for better academic co-ordination and co-operation. With the objective to achieve HEIs competencies and capacity to face global competition in international ranking framework a mission mode approach may be adhered to for achieving the goal. As quality is only a journey and not a destination, the HEIs should focus on total quality management approach with the involvement of all stakeholders with strong leadership at the front in this journey towards excellence.

Note

1   Available at MHRD website https://nirfcdn.azureedge.net/2019/framework/Overall.pdf

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Weekly E- Essay Series of Scholarly Articles on Reimagining Indian Universities

A 'Weekly E-Essay Series of Scholarly Articles on 'Reimagining Indian Universities' was launched on AIU Website on 15th May, 2020 as a part of the change which AIU seeks to bring about in the academics in this day and age of COVID-19. The essays scheduled for release in this series are in a broad range of fields covering a variety of topics pertinent to 'Reimagining Indian Universities' received from distinguished experts and authorities in the area of Indian higher education included in the Book 'Reimagining Indian Universities' edited by Dr. Ms.Pankaj Mittal and Dr Sistla Rama Devi Pani. In the series, every week one scholarly article written by an erudite scholar of Indian academia is being released on the AIU Website. The series was initiated with the essay of Prof Bhushan Patwardhan, Vice Chairman, University Grants Commission, India on 15th May, 2020.

The essays are unique, enlightening and inspirational. Those who are interested in reading these essays may browse AIU Website: www.aiu. ac.in.   ❑

Technology: A Sublime Combination of Wisdom and Innovation

K Radhakrishnan, Chairman, Board of Governors, IIT Kanpur and Former Chairman, Indian Space Research Organisation (ISRO), Bengaluru delivered the Convocation Address at the 7th Convocation of Indian Institute of Information Technology, Design and Manufacturing, Kancheepuram, Chennai on 13th July, 2019. He said, "My dear young friends, this is your day and importantly, a day of your life to express gratitude to your parents for their sacrifices to support your pursuits and to bow in reverence to the teachers for shaping you. A new world of opportunities and challenges will unfurl in front of you now. I believe that 'Knowing' and 'Doing' are important for professional success; but 'Being' what you are, your character and conscience will elevate you as emulable ones. Each one of us could live up to leave a legacy and make a difference for the society around us, our nation and the humanity at large." Excerpts

With great delight, I stand before this promising audience today, on the momentous occasion of the 7th Convocation, to greet the graduates of the year; to congratulate them for this coveted academic distinction and to wish them all a very bright and prosperous tomorrow.

Friends, I admire IIITDM, Kancheepuram for its yeomen contribution in the very first decade towards building national competency for design and manufacturing in a variety of technology domains. I am delighted to see the emphasis placed by your institute for education in smart manufacturing and the inter-disciplinary pursuits in research. I believe your efforts will contribute to channelize the immense inventive power of our youth to imbibe and transform scientific and technical knowledge to cost-effective and reliable processes, products and services with utility, reliability and competitiveness in the domestic and global market place. This is the need of the hour for India.

Technology Advances Exponentially

Several of us present here, belong to a generation that witnessed induction of integrated circuits and microprocessors; emerging global value chains of silicon semiconductor devices; advances in information theory, digital communications and broadcasting systems.

Technology leaders around us are familiar with Moore's Law on doubling of processing powers every two years and similar ones on capacity of storage devices; network bandwidth; information transmittable over a given amount of radio spectrum

We saw significant spread of internet and mobile telephony and the advent of digital economy.

Multitudes of applications that the World Wide Web continues to instigate our everyday life with a world full of possibilities but with aggravated challenges on privacy, security, control of standards, inter-operability, etc.

Wireless mobile communication phone technologies have grown rapidly to the fourth generation (4G) technology of LTE and Wi-Fi, with capability for mobile multimedia, 'anytime/anywhere' service, global mobile support, integrated wireless solutions and customised personal service. World is engrossed in the process of transition to 5G technologies and their add-on with mobile cloud computing and mobile edge computing. A further step to the superfast 6G technology with satellite networks of telecommunication, remote sensing and navigation; and possibly space roaming with 7G are in the horizon.

Advances in material science, artificial intelligence, automation, robotics, optics and mechatronics lead to seismic shifts in manufacturing technologies.

Convergence of neuroscience and the physical sciences of engineering, information technology and robotics in a creative alliance, is one of the most exciting developments of the recent times. New domains such as computational neuroscience, cognitive neuroscience, neuro-informatics, and neural transplantation are cases in point. The scenario of living neurons communicating with silicon devices has path-breaking implications, thereby enabling future computers that could harness the non-linear information processing dynamics of neurons and thereby becoming truly intelligent. World is rapidly

moving towards brain-inspired intelligent robots with visual cognition, computing and motion control.

It is heartening that several academic institutions and R&D Agencies in India have made commendable foray into these frontline technologies, besides the fact that many Indians abroad are driving some of these innovations and technological disruptions.

Design and Manufacturing form the Bedrock of India's Space Endeavour

It is well recognised globally that the hallmark of India in Space is the focus on its helpfulness for humankind through Earth-oriented Satellites and an effective institutional tie up with all stakeholders to evolve and sustain national systems. Exploring outer space continue to excite and enrich us.

In this pursuit, self-reliance has been our obsession, not just an objective. That is evident from Indian strides in satellite technology and launcher technology. Let me elaborate:

i) Aryabhata satellite, built in 1975 at the industrial sheds of Peenya, was a bold step by India into a frontline domain attempted by very few industrialised nations then. Creditably since then, India made a strong imprint globally with more than 100 contemporary satellites built for communication, navigation, remote sensing, meteorology, climate studies, astronomy as well as exploration of Moon and Mars.

ii) The first Indian rocket RH-75, that took off as a projectile, from Thumba in 1967 weighed 32 kg. That is history. Fast forwarding to the present, India owns the globally acclaimed PSLV, a GSLV that is reliable now and a superior launcher GSLV Mk3. Our GSLV Mk3, weighing 640 tons, lifted off in November, 2018 and precisely orbited an advanced communication satellite GSAT-29 of nearly 3420 kg mass.

iii) The highlight is that India has mastered the complex technologies and achieved self-reliance in access to outer space. All Indian satellites, except a few heavy communication satellites, are lofted by the Indian launchers. Also, we launched close to 300 satellites for 33 countries on commercial basis.

These accomplishments give credence to Indian capability for (i) rocket propulsion including cryogenics technology, (ii) polymers and chemicals; (iii) space materials, structures and mechanisms; (iv) navigation, guidance, control; (v) power and thermal control systems; (vi) telemetry, tele-command, tracking systems; (vii) optical and inertial sensors; (viii) communication and navigation transponders, imaging radars, optical imaging systems; and more importantly in (a) systems design, system engineering and system management; (b) mission design, modelling and simulation; (c) integration, check-out and launch operations and (d) safe operations of satellites in space environment, all thru its long life of 10-15 years.

These accomplishments signify (i) India's capabilities to conceive, design, manufacture and deploy complex and large high technology systems on an end-to-end basis and (ii) confluence of ISRO and Indian space industry for enhancing capability and capacity. It is noteworthy that the Indian space industry, evolved from mid1970's, is quite vibrant with nearly 150 firms now- large medium, small and micro in both public and private sectors- partnering with ISRO to build launchers and satellites. Indian Space-industry has been growing in its value chain from jobbing to delivery of systems. Our frequency of launch is growing exponentially, thanks to the capacity built in the industry. Innovative industrial processes and techniques (e.g. additive manufacturing) are being adapted into space manufacturing.

India is on the threshold of human spaceflight and complex interplanetary exploration which will open up enormous a challenge and host of opportunities to the new generation.

Information Technology Pervades All Phases of Our Space Endeavour

Software is as important as the hardware, quite decisive for the success of any space mission. The software that we use on-board a space vehicle or on ground, synthesises the integrated and comprehensive knowhow of the complete mission, supported by understanding of diverse disciplines including mathematics, physics, chemistry, engineering and computer science. The plethora of data captured by our space exploration missions and remote sensing satellites are analysed to extract knowledge products and services using signal processing techniques, AI and machine learning.

When we launch a satellite on-board a launch vehicle, the position and velocity information are processed by sophisticated algorithms running on

frugal hardware that navigate and guide the launch vehicle. The mathematical foundation for describing navigation systems and their integration include the use of coordinate transformations and several statistical techniques which are to be interpreted into the guidance software for finally issuing the control commands.

Once the satellite is injected into the specified orbit around Earth, precise determination of its orbit and attitude is essential for all further operations of tracking systems and commanding to keep the satellite in the specified orbit and attitude. This is just classical mathematics.

For Chandrayaan-1 mission, for the first time, we took a spacecraft beyond Earth's Orbit. We made it traverse to a distance of almost 400,000 km to orbit another celestial object. We placed it very precisely in a circular orbit of 100 km around Moon.

In the case of Mars Orbiter Mission (aka Mangalyaan), there was a tough target of navigating the spacecraft to be at 500 km on arrival at Mars (take or leave 50 km for inaccuracy band); that too after a traverse of 660 Million kilometres and this had to be predicted precisely 300 days ahead! It was executed with commendable precision. The handle rested in the safe hands of mathematicians and specialists in flight dynamics.

Chandrayaan-1 and Mars Orbiter Mission tested our ability for precise navigation into deep space and for the tricky capture of the orbit of these celestial bodies. Some of the technological innovations dictated by our space exploration missions have been beneficially deployed for the operation of Earth-oriented application satellites.

Chandrayaan-2, with an Indian Lander-Rover combine, is India's first step in Robotic Space Exploration and the mission is on the anvil. Obviously, this mission is more intricate. The Lunar lander orbiting Moon at a speed of around 6000 kmph, must have autonomous capability to brake its speed and steer itself for a soft and safe landing in an unchartered terrain of Moon, that too precisely at a designated site. Moreover, all these operations would happen within 16 minutes and the landing site also has to be ascertained by itself while on its descent. The entire nation is looking towards it.

What drives the Team ISRO for such quantum leaps? It is belief in ourselves; it is team excellence; it is the learning from the past missions both failures and successes; it is the sublime combination of the wisdom of elders and innovative power of younger generation; it is preparedness for all imaginable scenarios; it is transformational leadership at all levels.

Let me wrap up. My dear young friends, this is your day and importantly, a day of your life to express gratitude to your parents for their sacrifices to support your pursuits and to bow in reverence to the teachers for shaping you. A new world of opportunities and challenges will unfurl in front of you now. I believe that 'Knowing' and 'Doing' are important for professional success; but 'Being' what you are, your character and conscience will elevate you as emulable ones. Each one of us could live up to leave a legacy and make a difference for the society around us, our nation and the humanity at large.

Let me wish you all the very best in your future endeavours. ❏

CAMPUS NEWS

National Conference on Emerging Perspectives of Open and Distance Learning

A two-day Online IDEA National Conference on 'Emerging Perspectives of Open and Distance Learning' was organized by the Institute of Distance and Open Learning (IDOL), University of Mumbai to celebrate the 50th year of IDOL in association with Indian Distance and Education Association (IDEA) Commonwealth Educational Media Centre for Asia (CEMCA) on July 17-18, 2020. The aim of the online event was to bring together different institutions and individuals engaged in various activities relating to ODL within the country to share their ideas, information and experience on 'Quality Assurance in Open and Distance Education. There was in-depth discussions and communications on 15 major topics related to Emerging Perspectives of Open and Distance Learning. About 1000 participants registered for the event and over 90 papers received from different stakeholders expressing their ideas and viewpoints on ODL and 64 paper presenters participating in the online conference.

The conference was inaugurated in the presence of Professor. Nageshwar Rao, Vice Chancellor of Indira Gandhi National Open University, New Delhi and Dr. Avichal Kapur, Joint Secretary, University Grants Commission, Distant Education Bureau(DEB),New Delhi who in their address discussed the role of ODL in the post-pandemic era and the work of Distance Education Bureau in policy formulation for the country respectively. Dr Madhu Parhar, Director, CEMCA spoke about the activities of his organisation. The presidential remarks were given by Professor Suhas Pednekar, Vice Chancellor, University of Mumbai who explained the role of ODL teachers in these trying times and the correct approach that needs to be implemented in the present situation. An edited volume with 31 papers presented in the conference in celebration of 50th year of ODL entitled 'Understanding of ODL in Dual Mode Universities of India' was also released. The IDEA Annual Conference has the practice of organising two Memorial Lectures in the name of Prof G Ram Reddy and Prof Bakhshish Singh. This year's Prof G Ram Reddy memorial lecture was delivered by Dr Satish Rastogi formerly with Yashwantrao Chavan

Maharashtra Open University, Nashik on 'Quality Assurances in ODL' while Prof Bakshish Singh Memorial lecture was delivered by Dr Ravi Mahajan of USOL,Punjab University on 'SWAYAM as a Revolution'.

The technical sessions, panel discussion and memorial lectures were chaired and conducted by the eminent personalities of the field of ODL like Prof. Seetharam Rao, former Vice Chancellor, Dr. B.R. Ambedkar Open University, Dr. E Vayunandan, Vice Chancellor, Yashwantrao Chavan Maharashtra Open University, Nashik, Dr. Madhulika Kaushik, Pro Vice Chancellor, Usha Martin University, Ranchi, Prof V N Rajasekharan Pillai, Vice Chancellor, Somaiya Vidyavihar University, Dr G Laxma Reddy, Registrar, Dr. B.R. Ambedkar Open University, Hyderabad, Dr S Jeelani, Director, Center for Digital and Virtual Learning, University of Hyderabad, Dr. R Satyanarayan, Director STRIDE, IGNOU, Dr Mushtaq Patel, Registrar, Central University of Karnataka, Kalaburagi.

In the Valedictory Session, Chief Guest was Prof. Dr. Ebba Ossiannilsson, Member, Executive Committee of International Council for Open and Distance Education (ICDE), Chair, ICDE OER Advocacy Committee and Swedish Association for Distance Education who not only expressed her passion for ODL but also shared her priceless knowledge. She spoke about the International Council for Open and Distance Education and Open Educational Resources. She also greeted the University of Mumbai on its 164th Foundation Day on 18th July and IDOL on its march towards 50th anniversary.

Dr. Pankaj Mittal, Secretary General, Association of Indian Universities, New Delhi graced the occasion as the Guest of Honour for the Valedictory Ceremony. Dr. Pankaj Mittal shared her profound knowledge about the emergence of e-PG *Pathshala* project of UGC and subsequently the Massive Open Online Courses through SWAYAM portal and her speech was full of zeal and valuable information for the teachers as she spoke about the techniques of facing the camera while recording video lectures.

The special merit awards were presented to the academicians who, during their lifetimes, have made contributions of outstanding significance in the field of Open and Distance Learning. The Lifetime Achievement Award in the field of ODL was awarded to Organising Secretary, Dr. Dhaneswar Harichandan of IDOL. The Award for Achievements as Open and Distance Learning Administrator was awarded to Dr. Ami Upadhyay. The Ideal Distance Education Adult Learner (IDEAL) award by IDEA was awarded to a senior distance learner Shri Binay Kumar, PhD scholar of STRIDE, IGNOU who has crossed the age of 80 years and yet continues to motivate all of us through the dictum 'learning continues throughout the life'. The Best Paper Presentation Award was awarded to three selected paper presenters: Shri Prakash Ignatius Almeida, for his paper on 'The Imperative of Cognitive Shift for making Students effective Autonomous Self Learners for DE', Ms. Pooja Kulkarni on 'A Study Conducted on Awareness of the term Spiritual Intelligence and Usage of AI', and Dr V V Kanak Durga on 'A Survey of Counsellors Attitudes on Motivating Open and Distance Learners'.

The Pro Vice Chancellor of University of Mumbai, Professor Ravindra Kulkarni shared his valuable insights while delivering the presidential remarks. The conference proceedings entitled 'Emerging Perspectives of ODL' Volume-1 was also released during the event. The deliberations focused on analysing the general situation and existing problems of Open and Distance Learning but also introduced advanced experiences from home and abroad, exchanged ideas on cutting-edge theories and major practices of ODL, and proposed many constructive ideas and suggestions on more efficient, more balanced and more sustainable development in the field of e-learning. These discussions made the high-level conference on Emerging Perspectives of Open and Distance Learning a brilliant dialogue, a clash of wisdom and a feast of thoughts. The vote of thanks was proposed by the Secretary General of IDEA, Dr Romesh Verma and Dr K Murali Manohar, President of India appreciated the efforts of University of Mumbai IDOL in organising the first ever Online Conference of IDEA.

E-Conference on Education and Development

One-day E-Conference on 'Education and Development: Post Covid-19' is being organized by the Department of Education, Lovely Professional University, Phagwara, Punjab on August 22, 2020. The vision of the e-conference is to provide a discussion forum for the academicians, researchers and policy makers across different disciplines and levels for deliberation and dissemination of contemporary research on a wide range of issues associated with the main theme. The management and policy makers would be benefitted in framing and implementing strategies to achieve the goals of Education during and after COVID-19. The Subthemes of the event are:

- Governmental Interventions Associated with Teaching and Learning: Need and Challenges.
- Psychological Wellbeing of Students and Teachers.
- Technical and Vocational Education: Issues and Opportunities.
- Digital Education: Opportunities and Threats.
- Research in the Era of Social Distancing: Ways and Means.
- Role of Various Stakeholders in Education Post COVID-19.
- Educational Entrepreneurship: Opportunities and Challenges.

For further details, contact, Organising Secretary, Dr. Vijay Kumar Chechi, Professor and Head, Department of Education, Lovely Professional University, Jalandhar- Delhi G.T. Road, Phagwara, Punjab- 144411, Mobile : + 91 9888300138, E-mail: *vijay.chechi@lpu.co.in*/ *edpc@lpu.co.in*. For updates, log on to: *www.lpu.in*.

Faculty Development Programme at IIT Guwahati

One-week Faculty Development Programme, an Initiative of Ministry of Electronics and Information Technology (MEITY), Government of India on 'Imparting Online Teaching-learning Methodology during COVID-19 Pandemic' is being organized by the Electronics & ICT Academy IIT Guwahati, Assam in association with IQAC, B.H. College, Howly during August 17-24, 2020. The Faculty and PhD Research Scholars may participate in the programme.

Due to COVID 19, teachers are faced with a daunting task to conduct classes. There are several ways teachers can utilise the technology and resources already available to support online learning and ensure

students still receive a quality education. To design the class interesting and to unleash the advantages of educational technology – may it be a complete online or blended, the programme may take you on a journey of 'New Era Teaching'.

For further details, contact Project Manager, Electronics and ICT Academy, IIT Guwahati-781039 Assam, E-mail: *eictacad@iitg.ac.in, eictacad@gmail.com eictinfo.iitg@gmail.com.* For updates, log on to: *http://eict.iitg.ac.in*

AIU NEWS

South Zone Vice Chancellors' Meet --2019-20
on
Promoting Research, Innovation and Excellence in Indian Universities

The South Zone Vice Chancellors' Meet (2019-20) of the Association of Indian Universities (AIU) was hosted by Noorul Islam Center for Higher Education (NICHE), Kumarcoil, Kanyakumari on 5th - 6th January, 2020. The Inaugural Session was graced by Dr. Kiran Bedi, Hon'ble Lt Governor of Puducherry as Chief Guest through Skype. Prof. Anil D. Sahasrabudhe, Chairman, AICTE was the Guest of Honour and Prof. M M Salunkhe, President, AIU presided over the Meet. Mr. A P Majeed Khan, Chancellor, NICHE; Prof. Perumalsamy, Pro Chancellor, Academic; NICHE and Mr. Faisal Khan, Pro-Chancellor, NICHE; Ms. Shabnam Khan, Member Executive Board and Dr. Manickam, Vice Chancellor, NICHE were also present during the function. The Inaugural Function was attended by more than a hundred Vice Chancellors of South Zone; Officers from MHRD, AICTE, NAAC; faculty members of the University. Dr Alok Mishra, Joint Secretary, AIU was the Nodal Officer of the Meet and Mr Vijendra Kumar took care of logistics and coordination of the Meet. Dr S Rama Devi Pani, Editor, University News was the Nodal Officer for Academics. Prof Thirumalavalavan, Registrar, NICHE was the Nodal Officer at the host university. Main theme of the Meet was '***Promoting Research, Innovation and Excellence in Indian Universities'.*** Under the main theme, following three technical sessions were conducted in the Meet: '*Current Challenges in Research and Innovation'*, '*Creating Research and Innovation Ecosystem in Indian Universities*'; '*Commercialization and Social Relevance of Research in Indian Universities*: *Suggested Pathways'.* In addition to Inaugural, Valedictory and three technical sessions, the Meet had newly induced Session on Interface with Apex Bodies.

Dr. Kiran Bedi conveyed a valuable message and significant takeaways through pictures and slides. While comparing hard work with salt in the food, she spelt out chief ingredients of success like patience, intelligence, knowledge, and experience. She summarized her speech by saying that we all have attributes of a mother, father, and teacher and it is important for the Vice Chancellors to exercise all the ego-states to nurture the students on the campus. Once a Vice Chancellor does this, the faculty will naturally follow.

Prof. Sahahsrabudhe, in his special address, stressed the urgent need for promoting the culture of research in Indian Universities observed that the academic community has to be sensitive towards society and its needs while undertaking research and innovation. There is a need to understand the needs for innovations and risks involved in the process, which is the need of the hour to bring forward a change in mindset among faculty and students towards innovative ideas. He also highlighted that the youth of India needs space to explore their creativity which is inherent in them. He concluded that there cannot be any better place than the schools, colleges and universities to nurture the research and innovation ecosystem of the country.

In his presidential address Prof. Salunkhe focused upon excellence in research and said that excellence is primarily the result of strong intentions among other factors. He hoped that the deliberations during this meet will go a long way in redefining operational strategies to promote research and innovations in higher education. He also said that the role of university will not be knowledge dissemination in future but will be knowledge creation through research and innovation and application of that knowledge for the welfare of the society.

Dr. Mittal outlined AIU's accomplishments in providing value-added services to the member universities, apart from bringing visibility to AIU by creating a Twitter handle. The digitization of the AIU Library, creation of portals for admissions and jobs for the students and facilitating collaborations with overseas universities to encourage a global partnership are some of the recent initiatives. Speaking about the theme of the Meet, Dr Mittal highlighted that the universities of the present times are completely different from those in past and the universities of future will be all the more different therefore, the present universities are expected to play a vital role in initiating, implementing research and innovations to propel momentum of the knowledge society towards future. She said that a great need has been felt that we design and develop our higher education system in such a way that it responds to the current requirements as well as prepare for the future so the main theme of this year's Vice Chancellors' Meets is decided as 'Reimagining Indian Universities' and the theme of the South Zone Meet has decided after a lot of thought process.

Technical Session on Current Challenges in Research and Innovation

1. The first technical session was on the theme 'Current Challenges in Research and Innovation.' The session was chaired by Prof. Sabu Thomas, Vice Chancellor, Mahatma Gandhi University, Kottayam. The speakers of the session were Prof. K Surappa, Vice Chancellor, Anna University, Chennai, and Dr. Ananth G, Cyber-security expert. Some of the major recommendations of the session are:

2. Syllabi should be revised on annual basis. Every course should have in-built research and skill development constituents. All programmes must introduce internship and project work components. The focus should shift from education and employment to employability and competency.

3. Competency should be redefined as domain-specific, application-oriented knowledge (K), positive mental attitude requisite-skill mix (S), constructive habits of continuous learning and development (H), and progressive, result-oriented values(V).

4. Greater use of adjunct faculty, visiting professors, and experience sharing sessions by distinguished alumni must be encouraged to provide better exposure to students in all the universities.

5. Research funding to state universities should be increased. Researchers in the state universities publishing good papers in high impact factor journals and having patents must be encouraged and financial support be provided.

6. Uniform policies for Research must be adopted for all the universities-- state, centre, private, public with out disparity.

7. Universities should collaborate with industries for better exposure and to understand industry-specific needs. The motto should be minimum 'One Industry-One University'.

8. Basic minimum scientific infrastructure for Research and Innovation must be created in all state universities in order to have good research ecosystem .

9. More research fellowships are to be allocated specifically for the students of state universities.

10. The exercise of creating UGC's approved journal's list has not been meticulous. It has created a chaotic situation for many universities and there are no journals in the CARE list for many subjects, for example Clinical Psychology. Therefore, either the list of approved journals be abolished or create a list in which every subject has an approved journal.

11. Applied research should be promoted by engaging adjunct professors and providing financial support to them.

12. For publication in reputed journals, Indian Universities must enhance collaboration with foreign institutes and universities. Joint papers have more scope of publication.

13. Resources and instruments should be pooled and shared among recognized and qualified institutions and universities.

14. Quality of research is to be seriously reviewed on the basis of quality of papers mandated for research studies at M.Phil & Ph.D levels and their publication in good journals.

15. Multi-disciplinary research activities should be increased in universities by taking up joint research projects by different departments together or collaborating with other universities.

16. Indian universities should enter into more International collaborations for undertaking good quality research work.

17. Eighty percent of our faculty members are in affiliated colleges of the Universities. Most of these colleges don't have DST/DSIR/ICMR funding for research. AIU should pursue with these organizations to extend their grants to the colleges.

18. Most of the faculties are deficient in the knowledge of research methodology. AIU should offer zone-wise Research Methodology courses in all disciplines.

19. Our teaching institutes face problems like lack of qualified faculty, both in terms of quantity and quality, non-availability of dedicated time for research, absence of dedicated research scholars/ associates etc. needs to be addressed for better research promotion.

20. Research funding to State Universities should be at par with IITs, IIMs, and other national institutes. Then only desired research in quality as well as quantity can be expected. AIU should pursue with Government to ensure this.

21. There should be good linkage and interaction among all institutes; from top rated to a lower rung. Former can handhold the latter.

22. Journal subscription should not only be in physical form (hard copy) but also be available in electronic form for better citation of the research papers.

Session on Creating Research and Innovation Ecosystem in Indian Universities

The second technical session was on 'Creating Research and Innovation Ecosystem in Indian Universities'. It was chaired by Prof. K P Issac, Vice Chancellor, Hindustan Institute of Technology, Chennai. The panelists of the session were Mr. Abhay Jere, Chief Innovation Officer, MHRD and Prof. Subhashchandra Parija, Vice Chancellor, Sree Balaji Vidyapeeth, Pondicherry. Some of the major recommendations of the session are:

1. There is a need to create innovative and ideation cells in all universities and also sensitize the university faculty about the structure and functions of these cells.

2. It should be made mandatory for the Universities and institutes should publish their research policies on the website.

3. The concept of undergraduate research in groups should be introduced in Indian universities and colleges.

4. Universities, colleges, and Institutions should sponsor the cost of patent filing of the researchers.

5. There is an acute shortage of physical infrastructure in the newly established universities, particularly, state universities. Unless they are provided with some financial assistance by UGC, MHRD, and other funding agencies, these universities are out of the ambit of the R & D ecosystem in India.

6. Students can effectively innovate if they are allowed to use university infrastructure, supported and encouraged by the faculty members. University should facilitate patent registration for the students.

7. Faculty should be incentivized for good quality research and patents, in the promotion and career advancements.

8. Faculty-friendly governance policies and financial freedom will go a long way in creating research ambience.

9. Innovation Centres in universities should act as an interface between problem space and solution space. These centres should identify problems of the industry, government, society, and academia. Identified areas must be shared with the faculty for providing solutions through research and/ or consultancy and must extensively involve students.

10. Universities should define graduate attributes, innovations in research ecosystem and work done towards achieving these defined objectives.

Session on Commercialization and Social Relevance of Research in Indian Universities: Suggested Pathways

The third technical session was on 'Commercialization and Social Relevance of Research in Indian Universities: Suggested Pathways'. It was chaired by Prof. S Parasuraman, former Director, Tata Institute of Social Sciences (TISS). Speakers of the session were Prof. Anand Samuel, Vice Chancellor,

VIT, Prof. Ajaya Ghosh, Director, National Institute of Interdisciplinary Science and Technology, Trivandrum, and Dr. C N Shashidhara, Dy. Controller of Patents and Design Chennai. Some of the major recommendations of the session are:

1. Funding for university research should increase substantially and be provided to all universities timely to avoid discontinuation of Research Projects.

2. Research fellowships are also to be increased and allotted timely to the institutes that are actively involved in the research.

3. To ensure quality research, dedicated staff with research aptitude and avidly involved in research needs to be appointed.

4. The creation of cyber-security awareness is very important among all researchers. AIU may conduct cyber-security workshops for all universities.

5. Research Scholars should be imparted training in entrepreneurship development so that they can utilize their research findings to start an enterprise.

6. Universities and institutes should address the societal concerns of local communities by effectively engaging and collaborating with them.

7. STEM-science, technology, engineering, and mathematics should be linked to humanity and arts subjects as well and make it STEHAM. This will enable students to holistically understand the societal problems and offer their solutions.

Session on Interface with Apex Bodies

The Interface with officers from apex bodies was chaired by Prof. M M Salunkhe, President AIU and Vice Chancellor Bharati Vidyapeeth, Pune. It was co-chaired by Prof. Anil Sahasrabudhe, Chairman, AICTE. The speakers of the session were Mr. Palanichamy Muthumaran from FSSAI, Dr. G Srinivas, Joint Secretary, UGC, and Dr. Sujata Shanbagh from NAAC. Major recommendations of the session are:

1. Frequent interaction needs to be organized among UGC/AITCE/MCI/DCI/IET/EEIM to promote academic/industrial/multidisciplinary research in Universities. AIU should provide a platform for such interactions.

2. AIU should organize frequent awareness workshops on food safety in Universities.

3. Budget allocation for research and development needs to be enhanced and the total allocated amount should be released within the specified time frame.

4. Commercialization of research published by various publishers needs to be controlled by the University Grants Commission or/and MHRD to uphold the quality of research.

5. With twenty percent of central funding, State Universities are producing eighty percent of graduates, who are employed; mostly in schools, colleges, and Universities. Therefore, the share of the central fund should be increased for State Universities.

6. Some of the budding Universities in the rural and backward areas need to be leniently assessed by NAAC and MHRD should also take a compassionate view while considering their weightages for funding.

7. The ranking should be based on a comparison among a similarly placed cluster/group of institutes.

8. More PDF positions are to be created in Universities and research funds be made available to the faculty for PDFs.

9. Universities must have programmes in varied disciplines viz Arts, Science, Humanities, Management, Engineering, Medical, etc. so that innovative research in cross-disciplinary and multidisciplinary areas may be carried out.

10. Many outstanding researchers and innovators are in State Universities but they neither get proper recognition nor funding. The government must ensure proper research funding to the State Universities as that of IISC, IIT & IIMs.

11. Leadership Training in the latest and best practices is to be offered to Indian Vice Chancellors on the lines of UK – India leadership programme.

12. UGC should give the required attention to Health Universities and provide sufficient funds to them.

13. In the RUSA program, the categorization must be modified as per the modified NAAC criteria. Earlier, A+ grade was given to CGPA 3.51 and above. Now, it has been reduced to 3.26 and the evaluation is much more rigorous. Hence, RUSA should amend its criteria and allot adequate funds for research.

14. The categorization of Universities is based on their **institutional Cumulative Grade Point Average (CGPA)** without considering specific components of grading. This must be amended, and research must be motivated.

15. Universities promoting Indian languages and traditions like Dravidian University should be treated as a Special Universities and be provided more funding as they work towards the promotion of Indian culture, languages, and literature. It must be realized that these Universities are working towards the Indianization of higher education and preserving Indian traditional roots and value systems.

16. UGC and MHRD should regularly provide orientation and training to the faculty of Human Resource Development Centres to keep them abreast of new initiatives of the UGC and MHRD.

17. MOOC courses are much sought after, but admissions are lower due to high fees. The fee reduction will ensure enrolment of more beneficiaries in MOOCs courses.

18. Eat Right campaign is a novel and noble initiative. UGC should make efforts to promote it among Universities to boost the campaign. In this regard, UGC can frame Guidelines and Recommendations for universities and colleges.

19. More stringent norms and policies are formulated to check plagiarism and curb the menace of paid journals to improve the quality of research. Some penal measures may also be introduced.

20. Funding with complete dependence on the NAAC score places the State Rural Universities in a very disadvantageous position and creates hurdles in their progress. There should be leniency in funding to these Universities.

21. Research facilities should be extended to retired researchers who are active, and they should be permitted to engage Ph.D. students for research.

22. Pre-service Teachers Training should be initiated for University and college teachers. They should be allowed to enter the profession only after due training.

23. Short term in-service training programs be made compulsory for teachers in colleges and universities.

24. Mentor-Mentee programme among universities and colleges is appreciated, thus it may be introduced in all programmes in all universities.

25. The number of teaching hours for University teachers should be restricted to fifty percent only and the remaining fifty percent should be dedicated to research. As of now, teaching hours are the same for college and university teachers. University teachers are expected to involve more in research and innovations. The outcomes of R&I should be incorporated in curricula, innovative teaching and this knowledge should be transferred to colleges. Many a times, heavy workload restricts the faculty's involvement in research. Hence, the workload of teachers needs to be reduced to compensate for research. Few Exclusive Research Universities need to be established.

26. Many State Governments do not permit Universities to fill the vacancies. In some Universities, seventy percent of teaching positions are vacant. Since UGC cannot compel the State Governments; it should appoint teachers and allocate to different State Universities or a central appointment system for teachers should be created by the Government.

27. At present, newly established State Universities are not eligible for central assistance, especially from UGC. These universities may be considered for an annual grant-in-aid of Rs 5-10 crores besides catch-up grant by UGC in the initial years of establishment. Such funding assistance will help in building a minimum required physical infrastructure.

28. Common accreditation systems may be established by MHRD instead of multiple accreditation agencies such as NBA, NIRF, NAAC, and comparing their grades.

29. The criteria of 'students/faculty ratio' may be replaced with 'outcome/performance metrics' for assessment of a course or an institution as facilities like MOOCs enable enrolment and learning of a large number of students.

30. UGC considers the NAAC score of 3.26 score and above for introducing distance education programme at University. Universities at their nascent stage cannot accomplish NAAC grading of 3.26 or above in their first or second cycle of

accreditation. For Special universities like sports universities, a lower level score of 3+ may be considered by NAAC for accreditation with A+.

31. NAAC should have different criteria of assessment for Universities operating in a niche field such as physical education and sports, languages and linguistics, etc. Keeping such Universities in the same cluster and assessing them on identical parameters is not fair. Such universities should be evaluated on different key indicators.

32. The policy of encouraging narrow specialization like AI, ML, Data Analytics, etc. seems to be against broad outcome and understanding expected out of engineering graduates. The requirement of graduates in specialized areas changes from year to year. Some time back, there was a demand for construction engineers and a few Universities started B. Tech in Construction Engineering and today, such courses have no demand. The same fate may happen to AI, ML, etc. Disruption in technology is happening at a fast pace and aforesaid courses may not be required after a few years. To address this issue, courses may be allowed in all programs with a strong foundational framework and broad base including AI, ML, etc. Students may be advised to select specialization of his/her choice and the degree can be B. Tech with specialization in the chosen area.

33. The entire curriculum of Higher Education needs to be outcome-based. Evaluation system should be fully automated.

34. Desired Graduate attributes should be displayed on the website of all the Universities.

35. Active academia-industry collaboration is to be ensured by all the Universities

36. Active international collaboration is the need of the hour for all HEIs.

37. Tenure based faculty positions are to be created in all Universities.

38. Patent cells and incubation centres should be established on the campuses.

39. The idea of 'Idea Competition' will inspire more students to go for research. Universities should conduct competitions in the area of research.

40. Application-based researches should be initiated towards the promotion of industry-institute interactions.

41. AICTE should engage with premier industries in all engineering streams to come up with a standard curriculum for emerging technologies.

42. Interdisciplinary education can be promoted only by pooling courses without having stream-wise boundaries.

43. The expert committee should be appointed by the Universities to assess the quality of research papers published by the faculty. The research profile of any faculty member should not be adjudged only based on the number of research papers published rather focus should be on the quality of research.

44. Emphasis should be laid on research collaborations, academic reputation, and citation impact.

45. Higher Education Curriculum, courses and examinations should modify to ensure that students accomplish higher-order skills of bloom's taxonomy instead of getting fixed at rote memorization.

46. Students should not be deprived of choices in the CBCS System for the dearth of faculty. Platforms like SWAYAM and SWAYAM PRABHA should be effectively used for CBCS.

47. Research in higher education should be qualitative and as per the demand of society and nation. The focus must be on plagiarism free research.

48. Region-wise, mutually exclusive Research-based Instruments are to be pooled for the sharing of resources.

49. Quality of Research is to be viewed by considering good quality papers mandated for research courses such as M.Phil and Ph.D.

50. Academic credit exchange should be systematized, and seamlessly aligned internationally to develop a uniform standard of credit transfer. Research areas should be prioritized for international collaborations following international trends of academic research.

51. World-class infrastructure should be developed in Indian HEIs to provide an amenable environment for enabling good research facilities.

52. Policies should be developed to support the collaboration of institutions to develop the research ecosystem comprehensively.

Valedictory Session

Prof. S F Patil, former President AIU and former Vice Chancellor, Bharti Vidyapeeth, Pune was the

Chief Guest of the Valedictory Session. The session was chaired by Prof. M M Salunkhe, President AIU. Mr. A P Majeed Khan, Chancellor, NICHE; Prof. Perumalsamy, Pro Chancellor, Academic, NICHE; Mr. Faisal Khan, Pro Chancellor, NICHE; Ms. Shabnam Khan, Member xecutive Board, NICHE; Dr. Manickam, Vice Chancellor, NICHE, Dr. Thirumalavalavan, Registrar, NICHE; Dr Alok Mishra, Joint Secretary, AIU graced the Dais in the Valedictory Programme. Dr S Rama Devi Pani, Editor, University News presented the Report of the Meet. Thereafter, Guests and AIU Officers were felicitated. Prof. S F Patil, Chief Guest in his valedictory address, spoke about the pivotal role played by the AIU and the contributions made by AIU to the field of Indian Higher Education in all these years. He appreciated the theme chosen for the event and hoped that the discussions will pave way and would fruitfully culminate into making higher education more research oriented. Dr. Pankaj Mittal reassured that all the resultant decisions and reflections drawn from the Meet would be taken into account for further discussions and actions. She implied that a university should go beyond teaching and proactively cast a keen eye on research and innovation.

In his Presidential Remarks, Prof M M Salunkhe, President AIU emphasized on making research more vibrant in the universities and the innovative reforms in universities should be made considering the future generations in mind. He also emphasized on the need of the change in the higher education system along with the change in technology. Meeting concluded with vote of thanks. ❑

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Applications stating full name, address, age with date of birth, educational qualifications (from S.S.C. onwards) with marks and percentages secured and experience are invited from Indian Nationals for the following posts of **ASSISTANT PROFESSORS** for the academic year **2020-2021**:

SELF-FINANCED COURSES

A) M. Com.

1. ASSISTANT PROFESSOR - 1 (Contract basis)
2. ASSISTANT PROFESSOR - 1 (Lecture basis)

B) M.Sc. (Pharmaceutical Chemistry) and M.Sc. (Organic Chemistry)

1. ASSISTANT PROFESSOR (Organic Chemistry) - 1 (Contract basis)

2. ASSISTANT PROFESSOR (Inorganic Chemistry) - 1 (Contract Basis)

For details pertaining to posts, qualifications, pay scale and other service conditions, please visit the college website www.dmscollege.ac.in.

Date: 27.07.2020

Sd/-
Principal

THESES OF THE MONTH

HUMANITIES

A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of May-June, 2020)

Geography

1. Barma, Hiraxmi Deb. **Land degradation in Haora Drainage Basin of Tripura**. (Dr. Subrata Purkayastha), Department of Geography, North Eastern Hill University, Shillong.

History

1. Gupta, Subodh Kumar. **Purve Madhya kaal mein Bodh kala evam sthapatye kala: Samajik evam dharmik sandarbh mein ek adhyayan (700 isvi se 1200 isvi)**. (Dr. Amar Kant Singh), Department of History, T M Bhagalpur University, Bhagalpur.

2. Hynniewta, Eric. **Role of ecology and environment in social and cultural formations in Khasi Hills**. (Prof. A K Thakur), Department of History, North Eastern Hill University, Shillong.

3. Patar, Raktim. **The Tiwa: An Ethnohistory**. (Prof. Cecile A Mawlong), Department of History, North Eastern Hill University, Shillong.

Languages & Literature

English

1. Ahirwar, Kunj Bihari. **Dalit autobiographies as counterculture narratives**. (Prof. Nivedita Maitra), Department of English and Other European Languages, Dr Harisingh Gour Vishwavidyalaya, Sagar.

2. Das, Satyajit. **Critiquing the politics of identity in the plays of George Ryga: A study**. (Prof S D Baral), Department of English, Mizoram University, Aizawl.

3. Deepa Kumari. **Kamla Markandeya and her contexts of feminism**. (Dr. Sunil Chandra Mishra), Department of English, Bhupendra Narayan Mandal University, Madhepura.

4. Pariyani, Rupa Arjunkumar. **Selected plays of Giris Karnad: A reading in the light of Bharat's Natyashashtra**. (Dr. Darshana Bhatt), Department of English, Gujarat University, Ahmedabad.

5. Saiyed, Asadulla Mohammedali. **A study of meaning and Ambiguity in the plays of Harold Pinter**. (Dr. Rucha Brahmbhatt), Department of English, Gujarat University, Ahmedabad.

Hindi

1. Barad, Prakash Bhikhabhai. **Rajendra yadav ke katha-sahitya mein madhyamvargiye samaj Jeevan: Ek anusheelan**. (Dr. Manhar K Goswami), Department of Hindi, Saurashtra University, Rajkot.

Kannada

1. Kalayani Y. **Kannnada language teaching and learning in English medium school: A linguistic study (With reference to Ballary City)**. (Dr Ashok Kumar Ranjere), Department of Kannada Language Studies, Kannada University, Hampi, District Bellary.

2. Krushnamurthy, H. **Dalit characters and language in Kannada expression**. (Dr D Panduranga Babu), Department of Kannada Language Studies, Kannada University, Hampi, District Bellary.

3. Mrunalini, R. **Dr Besagarahalli Ramanna Mattu Kum Veerabhadrappa avara Kathegalalli Mowlyaprajne**. (Dr. A R Madankumar), Department of Kannada, Kannada University, Hampi, District Bellary.

4. Narasappa, Hanumanth. **Language of Christian religious literature and culture in Kannada (Satyaveda and other selected works and with special focus on culture in Raichur District)**. (Dr. D Panduranga Babu), Department of Kannada Language Studies, Kannada University, Hampi, District Bellary.

5. Navinkumar, D. **Sociolingustic study of Language Islands in Karnataka with special reference to Tamil speakers**. (Dr. D Panduranga Babu), Department of Kannada Language Studies, Kannada University, Hampi, District Bellary.

6. Raveendra. **Historical development of Kannada lexicon**. (Dr Sambamurthy), Department of Kannada Language Studies, Kannada University, Hampi, District Bellary.

7. Shivanna. **The structure of Malavalli Kannada language: A study of regional and social dialect**. (Dr P Mahadevaiah), Department of Kannada Language Studies, Kannada University, Hampi, District Bellary.

8. Shwetha, H B. **The contribution of M M Kalburgi to the Vachana literature: Study**. (Dr. K Ravindranatha), Department of Manuscriptology, Kannada University, Hampi, District Bellary.

9. Suma, S. **The construction and the structure of Kannada texts formed by Missionaries**. (Dr. P Mahadevaiah), Department of Kannada Language Studies, Kannada University, Hampi, District Bellary.

10. Vidyakumari, K. **Governance in Kanadda: The State and the people**. (Dr Ashok Kumar Ranjere), Department

of Kannada Language Studies, Kannada University, Hampi, District Bellary.

Sanskrit

1. Baghel, Babpusingh. **Mahabharat mein Yudh Vigyan**. (Dr Mithila Prasad Tripathi), Department of Sanskrit Sahitya evam Darshan Vibhag, Maharshi Panini Sanskrit evam Vedic Vishwavidyalaya, Ujjain.

2. Barik, Ratan. **Aadhyatamikbudheyh: Sandarbhe shikshakanamatamsamarthey-Niyantaransansthiteshchey vishleshnatamakmadhyayanam**. (Prof. Amita Pandey Bhardwaj), Department of Sanskrit, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi.

3. Bhandari, Suryamani. **Paniniyasvarprakriyayah pratishakhyoktswarprakriyaya seh tulnatamakmadhyayanam**. (Prof Jaikant Singh Sharma), Department of Sanskrit, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi.

4. Bhatt, Pradip Prasad. **Dehli-Uttarakhandyoh adhyayanratanam kishorenam vyavsayikrucheyh, adhyaynpraverteyh Suchanasanchaaranprodhigikya abhigyatashchadhyayanam**. (Prof.Rajni Joshi Choudhary), Department of Sanskrit, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi.

5. Chachiya, Rakeshbhai Dalpatbhai. **Human right in the classical Sanskrit plays of Gujarat**. (Dr. M B Bhatt), Department of Sanskrit, Saurashtra University, Rajkot.

6. Geeta Kumari. **Mahakavikalidassey kaveshu naristhan vivechnam**. (Dr. Mamta Pandey), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

7. Luvar, Kishor Govindbhai. **An innovative study of described life values in the Panchatantra and the hitopdesha**. (Dr. R N Kathad), Department of Sanskrit, Saurashtra University, Rajkot.

8. Jha, Rajiv Nayan. **Prachvidhayah sanrakshane Shree Ram Prakash Sanskrit Mahavidyalaya, Patepur avdanam**. (Dr. Pawan Kumar Mishra), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

9. Jha, Satyanand. **Jyotishastranusaren neechastadiv krocheygrehfal vimarsh**. (Dr. Shivlochan Jha), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

10. Jyoti Kumari. **Yajurvediye Upnishedoan ka adhyatamik swarup**. (Dr. Punam Pandey), Department of Sanskrit, T M Bhagalpur University, Bhagalpur.

11. Kostubh Kumar. **Shabadbraha parbraha chintanparamparayam Shri Brihathari Vedantdeshikyoankhadanam**. (Dr. Suresh Pandey), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

12. Mishra, Manoj Kumar. **Mahakavi-Hastimall-kritayah: Subhdranatikayah: Samikshnatamakamadhyyan-**

am. (Dr. Vishwambhar Mishra Vagish), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

13. Mishra, Rajesh Kumar. **Mahabhartasey shantiparvni arthshastre sambandhisidhantanam samikshanam**. (Prof. Ichcha Ram Dwivedi), Department of Sanskrit, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi.

14. Navneet Kumar. **Satotrasahitayey bhaktirassey samikshnam**. (Dr. Dayanath Thakur), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

15. Sah, Mayanand. **Sanskritasey sanrakshaney vikasey cha Gandoli gramasey yogdanam**. (Dr. Pawan Kumar Mishra), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

16. Sati, Krishnanand. **Abhirajrajendramishrasey ikshugandha-radanda chitrepaniti kathagranthanam sahitiyak samikshanam**. (Prof.Shukdev Bhoi), Department of Sanskrit, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi.

17. Shshishekhar. **Meghmalayah vishishtadhyayanam**. (Dr. Ganganath Jha), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

18. Shukla, Pragya. **Shri Govindswamikriteytreybrahamanbhasheysey sampadanm parisheelanch**. (Prof.Gopal Prasad Sharma), Department of Sanskrit, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi.

19. Sumedha. **Bhavbhuteh Kritishu narivimarsh**. (Prof. Rashim Mishra), Department of Sanskrit, Shri Lal Bahadur Shastri Rashtriya Sanskrit Vidyapeetha, New Delhi.

20. Surbhi. **Kalidaskaleen shiksha vyavsthayah: Ekam vishleshnatamakmadhyayanam**. (Dr.Ashwini Kumar Sharma), Department of Sanskrit, Kameshwara Singh Darbhanga Sanskrit University, Darbhanga.

Urdu

1. Sheikh, Fayaz Ahmed. **Urdu novel Nigari ke Irteqa mein taraqqi pasand khawateen ka hissa 1936-2000 AD**. (Prof. Fida-ul Mustafa), Department of Urdu & Persian, Dr Harisingh Gour Vishwavidyalaya, Sagar.

Performing Arts

Visual Art

1. Raghavendhara. **Ancient illustrated manuscript treaties: A narrative study**. (Dr. Laxmansingh R Rathod), Department of Visual Arts, Kannada University, Hampi, District Bellary.

Religion

Buddhism

1. Ariyavamsa. **A comparative study of some Buddhist Abhidhamma terms used in Myanmar daily life**. (Prof. M V Ramkumar Ratnam), Centre for Mahayana Buddhist Studies, Acharya Nagarjuna University, Nagarjuna Nagar. ❑

Rajagiri College of Social Sciences (Autonomous)
Kalamassery,Rajagiri P.O., Pin 683 104, Kerala
Phone: 0484- 2911111, 2911507

Wanted-Assistant Professors

Applications are invited for the following Four (4) posts of **Assistant Professors** in Rajagiri College of Social Sciences, Kalamassery. Age and Qualifications will be as per rules and regulations of the UGC/Government of Kerala/Mahathma Gandhi University, Kottayam. Application forms can be downloaded from the college website **www.rajagiri.edu** and completed application forms should reach the Principal at the above address **within 30 days** from the date of this notification, along with DD for Rs. 1,000/- payable at Ernakulam drawn in favour of 'The Principal, Rajagiri College of Social Sciences'. The appointment and approval will be subject to the directions of the Honourable High Court of Kerala.

SI. No.	Subject	Open Merit	Community Quota
1	Social Work	1	Nil
2	Personnel Management	Nil	1
3	Business Administration	1	1

Sd/-
Manager

27.06.2020

Dnyanprassarak Mandal's
College and Research Centre
Assagao, Bardez - Goa 403 507
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Accredited by NAAC with 'A' Grade (3rd cycle)

Applications stating full name, address, age with date of birth, educational qualifications (from S.S.C. onwards) with marks and percentages secured, Caste Certificate, Residence Certificate and experience certificates are invited from Indian Nationals for the following posts of **ASSISTANT PROFESSORS** for the academic year **2020-2021**:

(A) ASSISTANT PROFESSOR - FULL TIME, REGULAR:	
1. ASSISTANT PROFESSOR (ECONOMICS)	1 Post (ST)
2. ASSISTANT PROFESSOR (MATHEMATICS AND STATISTICS)	1 Post (EWS)
3. ASSISTANT PROFESSOR (ORGANIC CHEMISTRY)	1 Post (PwD) (Blindness and Low Vision/Deaf and Hard of Hearing)
(B) ASSISTANT PROFESSOR (CONTRACT BASIS) :	
1. ASSISTANT PROFESSOR (ORGANIC CHEMISTRY)	1 Post (GENERAL)
2. ASSISTANT PROFESSOR (PHYSICAL CHEMISTRY)	1 Post (OBC)
3. ASSISTANT PROFESSOR (MATHEMATICS & STATISTICS)	1 Post (ST)
4. ASSISTANT PROFESSOR (COMMERCE)	1 Post (GENERAL)
5. ASSISTANT PROFESSOR (PHYSICS)	1 Post (PwD) (Blindness and Low Vision/Deaf and Hard of Hearing)
(C) ASSISTANT PROFESSOR (LECTURE BASIS) :	
1. ASSISTANT PROFESSOR (COMMERCE)	1 Post
2. ASSISTANT PROFESSOR (MATHEMATICS & STATISTICS)	1 Post
3. ASSISTANT PROFESSOR (PHYSICS)	1 Post
4. ASSISTANT PROFESSOR (ELECTRONICS)	1 Post
5. ASSISTANT PROFESSOR (INORGANIC CHEMISTRY)	1 Post
6. ASSISTANT PROFESSOR (ECONOMICS)	1 Post

For details pertaining to posts, qualifications, pay scale and other service conditions, please visit the college website www: dmscollege. ac.in.

Date : **27.07.2020**

Sd/-
Principal

SRI RAMACHANDRA
INSTITUTE OF HIGHER EDUCATION AND RESEARCH

(Category – I – Deemed to be University)
Porur, Chennai – 600 116, Tamil Nadu

Applications called for the post of:

DIRECTOR (Sri Ramachandra Centre for ODL/On-line Education): One

Essential Qualifications:

(i)   Ph.D. in Health Sciences/Computer Sciences/Information Technology/Educational Technologies.

(ii) 10 years of Teaching/Research/ODL & online education experience of which 5 years in Institute/ Department of Distance Education/SWAYAM/NPTEL/CEC/IGNOU or Industry based ODL-Online centres with track record of developing e-resources for higher education and skill development.

(iii) Additional qualifications/Diploma in Online education technologies from national/international institutions – desirable.

(iv) Upper age – limit : 50 years.

PROFESSOR – RESEARCH

In Specialities of General Medicine/Paediatrics/Obstetrics & Gynaecology/Cardiology/Endocrinology/ Nephrology /Neurology/Oncology/Radiology or any other Interdisciplinary Branches Like Clinical Research.

Essential Qualifications:

(i)   MBBS/MD in the respective discipline, with a minimum of 8 years of Teaching and Research in a Medical/ Medical Research Institution at the level Associate Professor or equivalent.

(ii)   Superspeciality qualification like D.M etc/Ph.D. in that discipline will be preferable.

(iii) Post-doctoral research experience in an International University/Research Organisation is desirable.

(iv)   Should have conducted sponsored research projects/clinical trials funded by national and international agencies/industries.

(v)   Should have published at least 10 original research articles excluding Case reports/Letter to the editor in journals indexed in SCOPUS/WEB OF SCIENCE/PUBMED.

(vi)   Should have the publication "h" index of minimum 10.

(vii) Willingness to work as fulltime clinical researcher without any private practice.

Desirable Qualifications:

i)   Registered or awarded patents.
ii)   Track-record of industry-academia projects and technology transfer.
iii) Diploma in Clinical Research.

Scale of Pay: As per UGC scale of pay with SRIHER special pay and allowances commensurate with qualifications and credentials.

Duration: Permanent after initial probation; Extendable after every five years assessment.

Application guidelines: Candidates fulfilling the above are requested to submit their updated Curriculum Vitae with Education, Employment, Experience, Expertise and Achievements copies with Date of Birth, Communication details through email to **gmhr@sriramachandra.edu.in on or before 15/08/2020.** Short-listed candidates will be interviewed through Google / Skype/ Zoom Meet after prior time arrangements.

V. M. SALGAOCAR COLLEGE OF LAW,

P. O. Caranzalem, Miramar, Panaji, Goa, 403 002.

Ph. No. 0832-2462225

Website: www.vmslaw.edu.in

Applications with Full Bio-Data are invited from Indian Citizens for the POST OF **PRINCIPAL** (Unreserved Category) to be filled in Government Aided College from the Academic Year 2020-2021 onwards:

The required minimum qualifications for the post of Principal are as follows:

A) Eligibility

i)   Ph.D. degree

ii) Professor/Associate Professor with a total service/experience of at least fifteen years of teaching/ research in Universities, Colleges and other institutions of higher education.

iii) A minimum of 10 research publications in peer reviewed journals as approved by Goa University from time to time OR UGC-listed journals out of which at least two should be in Scopus / Web of Science Journal.

iv) A minimum of 110 Research Score as per Appendix II, Table 2.

B) Tenure

A College Principal shall be appointed for a period of five years, extendable for another term of five years on the basis of performance assessment by a Committee appointed by the University, constituted as per these Statutes.

Essential Requirements:

a)   Knowledge of Konkani Language, b) 15 years of residence certificate in Goa

Desirable Requirement: Knowledge of Marathi Language.

Scale of Pay: As prescribed by UGC, Goa University, Directorate of Higher Education, Govt. of Goa from time to time.

Service Conditions: As prescribed by the UGC, Goa University, Directorate of Higher Education, Govt. of Goa and other competent authorities.

Application completed in all respects along with self-certified photocopies of statements of marks of all public examinations from SSC onwards, API Score sheet and other certificates should reach the President, Devi Sharvani Education Society's V. M. Salgaocar College of Law, P. O. Caranzalem, Miramar, Panaji, Goa, 403 002, **within 20 days** from the date of publication of this advertisement by superscribing on the envelop **"Application for the post of Principal"**. No TA/DA will be paid for attending the interview. Persons who are already employed shall send in their applications through proper channel.

Date : 23/05/2020   (President)

Place : Panaji – Goa   Devi Sharvani Education Society