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**Muddu Vinay, Amit Joshi and Preeti Bhaskar**

Indian Higher Education and National Education Policy—2020:  
A Discussion

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- Convocation Address



## ASSOCIATION OF INDIAN UNIVERSITIES

### INVITES

#### VIEWS AND SUGGESTIONS ON IMPLEMENTATION OF NATIONAL EDUCATION POLICY-2020

Association of Indian Universities constituted a Committee of Vice Chancellors on '**Implementation of National Education Policy-2020**' to examine the issues pertaining to the difficulties encountered in the implementation of NEP--2020 and to suggest pragmatic solutions for fast-tracking its implementation.

The purpose of the Committee is to look into the major recommendations of National Policy of Education-2020, take stock of its implementation and suggest measures and strategic implementation plan to the Governments at the Centre/ States and the HEIs, keeping in view the difficulties faced by HEIs in implementation of NEP-2020. The Committee shall (i) look into the subtle aspects of the recommendations of NEP-2020, identify the challenges and difficulties and suggest a workable implementation strategy with time line (ii) find possible and plausible solutions to address the difficulties faced by the institutions (iii) present the status report of implementation of NEP-2020 to be prepared within three months to the Honorable Union Minister of Education, Government of India.

***The Committee will come out with a structured roadmap with timelines for implementation of NEP-2020 which shall help the Government and other regulatory and apex bodies and Institutions of Higher Educational to assume their respective roles in its expedient implementation.***

In this process of preparing the Roadmap, AIU intends to seek feedback from as many stakeholders and practitioners as possible to make it a comprehensive and influential document.

At present, the Committee is in the process of seeking opinions from experts in the field of Higher Education on different aspects through a Feedback Form, '**Feedback Survey on Operationalization of NEP-2020 by HEIs**' which is available on AIU Website: [www.aiu.ac.in](http://www.aiu.ac.in).

Readers of the University News are also invited to provide feedback through the Feedback Survey form on or before **31 October, 2021** through Google form via link: <http://meet.google.com/wry-ypyt-qeo>. To have a comprehensive view of the Feedback Form, the PDF is available on AIU Website: [www.aiu.ac.in](http://www.aiu.ac.in).

**For further details please email to [sgoffice@aiu.ac.in](mailto:sgoffice@aiu.ac.in)**

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#Let'sBeatCoronaTogether

# Indian Higher Education and National Education Policy—2020: A Discussion

Muddu Vinay\*, Amit Joshi\*\* and Preeti Bhaskar\*\*\*

The two 'E's, economy and education hold the key to development and growth of any country. Education plays an important role to enhance the state's economy (Idris, et al., 2012). India, after China, has the third-largest higher education system in the world. The Indian education system consists of three levels beginning from Primary followed by Secondary and then Higher Education. After completing the twelfth standard i.e. secondary education, students enroll in Higher Education. It includes three years of graduation, two years of Postgraduation and four years of Doctoral studies. The type of institutions that provide higher education include central universities, state universities, deemed universities, institutes of national importance, private universities, and colleges affiliated to the University. Education is basic to exploit human potential, and create an equitable society. Time to time education policies are framed to give direction to the system as per the requirement of present and future. India had three National Education Policies in 1968, 1986 and 2020 respectively. The latest one is the National Education Policy—2020.

The National Education Policy—2020 proposes the revision and revamping of all aspects of the education including its regulation and governance. It focuses on the development of the creative potential of each individual (Ministry of Education, 2020). The present environment is dynamic, it involves frequent technological adaptation as per the growing needs. Though the number of students' enrollment in colleges/universities has increased, its access and quality are still a matter of concern. Universities are focusing to enhance access and equity. At the same time, they have to ensure high standards of quality and excellence. The new education policy 2020 proposes to implement numerous strategic changes in the area of education like research, innovation, infrastructure, multidisciplinary approach, etc. to enhance the development of India.

### Literature Review on Status of Indian Higher Education

Since 1976 education features as a concurrent item in Indian constitution (Hill and Chalaux, 2011). Over the passage of time, India has developed to become the second-fastest growing economy

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in the world, but the education sector still remains underdeveloped. As per the software and service industrial analysis, only 10 to 15% of business graduates and approximately one-quarter of engineering graduates can be called as employable (NASSCOM, 2009). Only 23 applicants were found to be suitable while appearing in a specialized position in economics and statistics (Kapur, 2010). Higher education, in India, has expanded particularly in those domains where the cost is relatively low, returns to graduates are high and the supply response from the public sector is not very good (Levy, 2008). Private unaided institutions do not receive financial support and rely only on tuition fees. The fees to pursue higher education are high which discourages the students to pursue it (Carnoy and Dossani, 2013). Private self-financed institutions have expanded to offer degrees in higher education (Kijima, 2006). These institutions charge an exorbitant fee and are beyond the reach of common individuals (Herd, et. al., 2011c). The Indian government initiated many policies to make higher education accessible but the objective of the government to make the education accessible to all, promote new technology, promote research and innovation, and encouraging self-directed learning remained a dream so far (Little, 2006). Hiring also has been a problem in India as a result of which productive and independent academic culture is not created (Altbach, 2009). The 1986 National Education Policy on Education, India aimed at using information technology to restructuring teacher education, early childhood care, women's empowerment, and adult literacy (Lele and Patwardhan, 2020). The new education policy aims to complete revision and revamping of the education structure which includes regulation and governance (Ministry of Human Resource Development, 2020). It is therefore imperative, in view of the recommendations regarding in the NEP-2020, that the Indian government is able to put in place the right regulatory and governance framework that will facilitate the entry and operation (Deb, 2020). It is important to restructure the Indian education system to face the growing challenges specially unemployment (Dixit, 2020). Looking at the technology trends, it seems that technologies of the future will be at the intersection of disciplines (Arunachalam, 2010).

### **National Education Policy—2020**

On 29<sup>th</sup> July the Union Cabinet approved the National Education Policy. This is a much-awaited

policy to transform India into a path of growth trajectory. The fundamental objective of National Education Policy, 2020 is to provide quality education to all by making it affordable and equitable. It focuses on holistic development of individuals and in turn, put India on the growth trajectory. The NEP-2020 focuses on providing quality higher education without any discrimination on basis of caste, culture, gender, creed, or religion. It proposes a 'gender-inclusion fund' to involve girls and transgender students and provide them quality education. The policy envisions to provide good infrastructure, a better learning environment, technological enhancement, and improved co-curricular and extracurricular activities (Hoque and Mahanta, 2020). By increasing the percentage of GDP on education from 4% to 6% the policy claims to enhance the infrastructure and increase the level of education (Saroha and Anand, 2020). Most of the eligible students in India are unable to have access to the best of the institutions as they are unable to afford the fee. The policy suggests a cap on the fee charged by private institutions in the higher education space (Almeida, 2020). Some of the features of the Policy are:

- **Pursuit of Research:** For a developing nation like India research and innovation contribute to a great extent, the foundation of which is laid in the higher education institutes. To motivate quality research a trend was required for long. Until now research by the majority of teachers is considered as a compulsion to sustain in a job thereby compromising the quality. The NEP—2020 emphasises on developing the education system which is based on research. In order to enhance the quality of research, NEP-2020 aims to promote faculty members in HEI on the basis of research, publications, and patents (Aithal and Aithal, 2020). The policy also introduces a multidisciplinary approach in schools as well as higher education institutes and thus explore the possibilities of introducing research with greater magnitude even at school level. M Phil is being discontinued and three years of graduation has been redesigned to four years, the fourth year is made research-centric and motivating the students to pursue Ph.D. Experimental learning and research-based internship is the objective of higher education section of NEP-2020. The government will set up a National Research Foundation (NRF) with the aim of catalyzing and energizing research and innovation across all

academic disciplines, particularly at the university and college levels (Roy, 2020). Four directional mechanism is proposed by the policy to remove the system of affiliations and by 2030 convert existing institutions to either teaching universities or research universities.

- **Creative Individuals:** To create higher education institutions as centers for the all-round progress of students and enhance creativity, the STEAM model takes over the STEM model in which NEP-2020 which provides Art & Design options to the students of science, technology, engineering, and mathematics stream. The policy aims at making all HEIs multidisciplinary, non-affiliating universities by 2040 (Balagurusamy, 2020). The policy recommends a student-centric approach in which students will have the right to opt subjects of interest (Aithal and Aithal, 2020). NEP-2020 also aims to invite the top 100 education institutions of the world to set their campuses in India. This will enhance the quality of education (Almeida, 2020). NEP-2020 envisages a flexible curriculum with, multi-disciplinary approach. The inclusion of vocational education in higher education along with multiple entries and exit options will enhance holistic learning among the students and motivate them to be creative (Aiyappa, 2020). All in all, one can trace that a clear student-centric approach is inscribed in the entire system and appears to make room for critical thinking, holistic approach, inquiry-based, discovery-based, discussion-based, and analysis-based learning (Ferrao, 2020).
- **Autonomy:** Education is a process of continuous involvement of all stakeholders. It cannot be isolated to only academic institutions. The primary stakeholders of education also include industry, society, and government. Till now, delivery is based on predefined course content to a given set of students irrespective of their interest. The new education policy introduces a new realm of affairs in which the student directs his or her education as per their interest. The students will have choices of the subjects they wish to study. The new policy provides the 'Academic Bank of Credit' in which the students will be keeping the record of their qualifications based on the amount of time and subjects they have studied. The National Education Policy (NEP)-2020 proposes autonomy to colleges according to the

eligibility. It also proposes to change the status of some deserving autonomous colleges into universities and affiliating universities may allow the colleges they have affiliated to merge with them. These steps will transform the education structure making institutions more accountable. (Balagurusamy, 2020). The transformation will allow the education institutes to develop a productive trend with innovation. (Aithal and Aithal, 2020).

- **Infrastructure and State Support:** There is a three-tier structure of higher education in India. Tier 1 is center funded government institutions. They are well taken care of and the salary structure and benefits to the employees are the best among the public institutions. In tier two lies the state government-funded institutions, which cater to the needs of the regional population. They do not get much support in comparison to central universities. The third tier consists of private self-funded institutions. Most of the promoters of private institutions are businessmen who see education as a lucrative business to investment (Kumar, et al., 2020). Most of the Indians living in rural areas still do not have access to laptops or desktops, they access the internet through their mobile. The condition is not very promising in urban areas also. Around five per cent only have computers in urban areas. Internet facility is weak and of limited accessibility in rural areas. More than 40% of the people in rural areas are yet to get connected under Bharat Net program. In the present situation, education is completely technology-driven, lack of infrastructure may create a hindrance in executing NEP-2020 (Kumar, et. al., 2020).
- **Training and Development of Teachers:** The NEP-2020 proposes teaching with the multimodal and multitasking approach. To implement the policy effectively teachers are the key. This requires in-depth training for teachers. The performance of higher education institutions rely on their ability to recruit and retain efficient and sincere teachers. The research performance of the teachers in HEIs is not up to the desired standards and the second issue faced by the institutions is the availability of teachers (Chadha, et. al., 2008 and Vinay, et. al., 2020). On top of that, existing teachers are entrusted with more work which results in lack of quality research (Basant and

Mukhopadhyay, 2009). With lack of motivation among the teachers, the success of the policy falls under doubt. In private institutions teachers are underpaid and have the primary job of taking classes rather than innovations. (Kumar, et. al., 2020 and Hassan, 2020). The shortage of teachers compel the institutions to hire part-time teachers or contractual teachers (Gupta and Parekh, 2009) which creates temporariness in the system. Most of the permanent teachers in higher education have an average age of 50 years. Very few younger population is interested to pursue teaching as their career. This restricts the acceptance of transformation in faculty. To train the existing teachers government will be required to channelize the resources, scheduling and motivation (Singh and Yadav, 2020). The NEP does not address regular funding for teachers' training. Proper funding and infrastructure must be provided in order to make the NEP worthy (Singh, 2020).

- **Lacks Industrial Connect:** The NEP-2020 focuses on educating the individuals but lacks an approach on how to make that individual employable. The primary objective of any student entering into higher education is getting employed. The basic need for getting a job is to have proficiency in skills. Getting a certificate without getting prepared for a specific job will not fulfill the purpose of the education policy (Kumar, et. al., 2020). Implementing choice-based system without proper guidance, may create further confusion among the students and they may end up choosing the wrong combination which will not make them employable. The growth of Artificial Intelligence has already made the industry very dynamic and with the inclusion of Machine Learning and Big Data Analytics a strong education industry connection is required (Ferrao, 2020).
- **National Testing Agency:** NEP-2020 proposes to set up a national testing agency to conduct entrance examinations after 12<sup>th</sup> for students to achieve seat in higher educational institutions. This will entrap the students in the vicious circle of coaching centers and competitions.
- **Transformation:** NEP-2020 provides the opportunity of transforming public and government colleges to multi-disciplinary autonomous col-

leges and expand their capacity to admit 3,000 or more students annually. The small colleges with fewer resources can convert themselves into a constituent college of an affiliating university. They will be able to use the resources of the university and enhance the quality of education. Private colleges who are following the line of universities with which they are affiliated will have an option to become autonomous degree-awarding colleges provided they follow the predefined criteria. This will provide an opportunity for them to increase the quality of education. (Aithal and Aithal, 2020). Many public and private colleges are regulated and controlled by the university through affiliation. Universities frame the curriculum that colleges have to follow. The need for institutional autonomy was felt for a long time (Aghion, et. al., 2010). UGC and AICTE regularly issues academic norms for the HEI to follow (Agarwal, 2009). The norms direct the institutions to follow certain standards for selection, promotion, instruction, etc. The curriculum is often outdated and difficult to update (Indiresan, 2009). NEP proposes the transformation of the existing education system of colleges and universities and provides an opportunity for the institutions to become self-reliant and decisive to innovate courses and incorporate different methods to deliver education.

- **Survival of the Fittest:** The policy is inviting institutions of eminence to complement education but that is also a challenge for the current setup of the country. An international educational institution with a multicourse delivery and top of the line appeal will make Indian students interested to take admissions in these institutions. The international institutes with state of art infrastructure and updated curriculum will impose stiff competition on the Indian institutes. This will impose a development spiral and the existing institutes will be forced to upgrade their technique and pedagogy.
- **Free-ship:** NEP-2020 provides an opportunity for the eligible and deserving students to study in the college of their choice free of cost. 20% free-ship and 30% scholarship is being proposed in the education policy, it will benefit the intelligent students who are unable to continue their education due to financial constraints. (Aithal and Aithal, 2020).

- **Lack of Specialization:** The new education policy projects 5 + 3 + 3 + 4 scheme of education pattern with regular interchanging subjects. Multi-entry and exit options to the students will have a laid-back approach to education. The education system in India is more of a compulsion rather than an interest. It is compulsory for the students to complete postgraduation in order to have a good job. For students following medicine, engineering, and allied areas where education takes long time to create specialists, the education policy may create confusion.
- **Privatization:** NEP–2020 promotes private sector players to finance public education. The whole process will lead to the privatization of the education system in India. In the past, India has witnessed that the private sector seeks education as an opportunity to invest and earn. The dominance of the private sector will defy the objective of the policy and the education sector of India may become an Industry to generate profit rather than welfare (Jha and Parvati, 2020).
- **Lobbying:** National Education Policy–2020 aims at transforming the Indian education system into a sophisticated and progressive system for economic and social growth. But politics, corruption, and favoritism may not let the quality of higher education improve (Kapur and Mehta, 2008). Teachers and staff are the driving force in any educational institute. The government under various forms of reservations appoints persons for teaching, research, and administrative positions even though they don't have the essential credentials. NEP-2020 fails to address this issue and its objective of merit-based appointment and promotion is under threat. Lack of quality teachers, red-tapism, and favoritism may result in wrong appointments and promotions. Unqualified and efficient teachers will create distrust in the whole system and will result in a lack of motivation. In that situation maintaining quality and accountability will impose a strong threat on the execution of the policy.

## Conclusion

The need for NEP–2020 was felt in India for a long time. The policy focuses on identifying the gaps and bridge them with autonomy, research, multidiscipline, and quality. The policy looks promising but

its success will be dependent on its implementation. The teacher will be a crucial player in policy implementation so their effectiveness is required to be enhanced by building up accountability and incentives. The quality of education and research can meet new height as the policy aims by proper and continuous training and development of teachers. A lighter regulatory touch is proposed by the NEP-2020 thereby providing universities and colleges more autonomy. The autonomy will usher a better education system with better linkages with industry and ensure quality improvements and relevance. Foreign educational institutions will develop the structure and bring in the new curriculum and pedagogical tools for others to follow. Further, reform in recruitment arrangements in higher education and strict compliance with rules and regulations will restrict the lobbying. In addition to focusing on the scholastic performance of the students, the institutes have to focus on their emotional needs. The inclusion of happiness in the curriculum will strengthen the education system of the country (Oman Observer, 2020). The government needs to focus on an adequate academic workforce. The government should focus on removing the threats, strengthening the weaknesses, and converting opportunities in favor of NEP–2020.

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# Pandemic-driven Online Teaching and Learning of Higher Education in India

Arvind M Nawale\*

It seems that teachers as well as students who were/are teaching or learning through traditional mode till date are afraid of the sudden shift to online education and increased demands to maintain excellence in e-learning environments. In this regard, it is a need to minimize the confusion by differentiating between 'regular online mode teaching-learning' which is being imparted through open/distance mode universities like IGNOU with proper infrastructure and 'emergency based remote teaching-learning' which is being adapted by us to cope up with Corona pandemic. The regular online mode teaching is being imparted through well-equipped studios and labs by equally trained teachers and students voluntarily opt it. We have to emphasis here on an emergency based remote teaching-learning through PCs, laptops, tabs and android mobile phones that we are practicing in this lockdown under 'Work from Home' which is not voluntarily opted by students or teachers either but is imposed by corona outbreak and where we have no option to it in present situation. We have to look at it and accept "as the panacea for the crisis" (Dhawan, 2020).

The problems of 'such emergency based remote teaching' which is caused due to the COVID-19 outbreak stand at core concern as it is not possible for either of us to conduct or attend classes in traditional mode. The educational institutions were forced to close, causing an unparalleled impact on students as well as teachers. Teachers are instructed to use online learning tools to teach during the lockout. As per one report:

"In the field of education, this emergency has led to the massive closure of face-to-face activities of educational institutions in more than 190 countries in order to prevent the spread of the virus and mitigate its impact. According to data from the United Nations Educational, Scientific and Cultural Organization (UNESCO), by mid-May 2020, more than 1.2 billion students at all levels of education worldwide had stopped having face-to-face classes" (Regional Bureau for Education in Latin America and the Caribbean, 2020).

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As per World Economic Forum, "A total of 320 million learners in India have been adversely affected by the COVID-19 pandemic and have transitioned to e-learning" (The World Economic Forum, 2020).

We are in utter tension of second wave, third wave of this pandemic and hence when the normalcy will restore is not certain! The restrictions like lockdown and social distancing are adding to our tension and not allowing us to go colleges and universities that is reality. It "has severely affected the total educational system of India as well as the globe" (Jena, 2020, p. 78). We all are in mental dilemmas; we don't know about what is happening? And what the next will happen? Until now, it is clear that we have to build up strategies to cope with this virus. We have to enter in a new online world and apply new measures. Despite the fact that these measures have caused some hardship, they have also encouraged fresh examples of educational innovation employing digital interventions. As stated by Muthuprasad et al., "This is a silver lining on a dark cloud considering the sluggish pace of reforms in academic institutions, which continues with millennia-old lecture-based approaches in teaching, ingrained institutional biases and obsolete classrooms" (Muthuprasad, et al., 2021, p. xx). Here, adaptation is the key to succeed. The old proverb "survival of the fittest" will shift to "survival of the quickest" because whoever will quickly adapt to new systems would only exist.

## Aims and Objectives

The following objectives are the focus of this research:

- To draw attention to COVID-19's influence on the higher education sector.
- To distinguish between 'regular online mode teaching-learning' and 'emergency based remote teaching-learning,'
- To determine the current state of online teaching and learning in the COVID-19 pandemic
- To enlighten various emerging online methods of higher education in India.
- To compile a list of post-COVID-19 HEI trends.

- To offer some suggestions to deal with pandemic-driven online teaching in rural areas.

## Background and Review of Related Literature

At the end of 2020, the novel coronavirus disease first arose in Wuhan, China. Its rapid global spread caused the World Health Organization (WHO) to label it as a “pandemic” (WHO, 2020) on March 11, 2020. In India, “the first COVID-19 positive case was announced in Kerala” on 30<sup>th</sup> January 2020 (WHO, 2020), with a student who came from Wuhan University, China to India. India is currently experiencing explosive surge in COVID-19 cases. As per statistics of World Corona Meter of Sept 01, 2021, India had recorded 32,810,892 COVID-19 infections across the country, resulting in 439,054 deaths, compared to 218,558,342 confirmed cases and 4,533,978 deaths globally (Worldometer, 2021). Almost all governments around the world have set a unified goal of preventing the spread of this extremely contagious disease by imposing lockdown, social/physical distancing, using face masks and avoiding face-to-face teaching-learning.

As per All India Survey on Higher Education (AISHE), “India has 1043 universities, 42343 colleges, 11779 stand-alone institutions with 3.85 crore students and 15.03 lakh students on roll” (AISHE, 2021). This coronavirus pandemic has transformed the way of interaction between teachers and students in higher education institutions, causing shifts in the teaching-learning process. As a result, universities and colleges were forced to conduct all of their activities with students through online mode. Many governments made steps to prevent the virus from spreading and to preserve the educational process’s continuity, and higher education institutions all around the world adopted online learning. Previous research has shown that E-learning has numerous advantages for students, including student-centeredness, flexibility, and the capacity to improve interaction sustainability with students through the use of asynchronous and synchronous resources. Some research, on the other hand, look into some of the components that can be regarded roadblocks in students’ online learning processes.

Warner et al. (1998) proposed the concept of online learning readiness in the Australian vocational education and training sector in their book, *Readiness of VET clients for flexible delivery including on-line learning*. They primarily defined online learning

preparedness as students’ preference for mode of delivery, electronic communication for educational purposes, which includes proficiency and confidence in using the Internet and computer-based systems communication, and the ability to study independently. Chizmar, J. F., & Walbert, M. S. (1999) in their paper, ‘Web-based Learning Environments Guided by Principles of Good Teaching Practice’ emphasis on offering the flexibility of online learning.

Abidah, A et.al. (2020) found that digital learning is not a new concept. It had acquired traction even before to the Corona crisis in order to stay up with the rate of industrialization and community development. However, COVID-19 has a huge impact on the global educational landscape in which traditional learning has been replaced by online learning. Though, Corona, on the other hand, is wreaking havoc on the entire world, but it is a good thing that it has brilliantly pushed digital learning. Saminanaz, Zahidaparveen and Alzoubi, R.M. (2016) have acknowledged that online education is crucial to the advancement of the learning process. Trautwein et al. (2006) and Wagner et al. points out competencies required to use the technology and need of well-prepared instructors whereas Hara and Kling (1999) and Nguyen (2015) opine that there is no substantial difference between online learning and face-to-face classes in terms of student satisfaction and academic performance. If properly planned, an online class can be as effective as a regular session. Chang et al., (2017) looked on how e-learning technologies can improve the quality of learning and teaching, as well as how users, particularly students, react to them.

The above studies explore that students and faculty compared their opinions of online teaching-learning experiences to traditional classroom experiences in the various ways. The related literature reviewed here gives the necessary information, a basic framework for understanding the various attitudes of online education within teacher-student communities. Taking into account the aforementioned factors, we believe that switching to exclusively E-learning will have a significant impact on the educational process and students’ perceptions of the usage of the online environment in the teaching and learning process. However, it appears that researchers have not differentiated between ‘regular online mode teaching-learning’ which is being imparted through open/distance mode with proper infrastructure and ‘emergency based remote teaching-learning’ which we have adapted under ‘Work from Home’ due to

Corona pandemic. It also seems that no research on English teachers and students from rural backgrounds has been conducted in this line till date. The present paper attempts to fill this gap.

## Data and Research Methodology

### Participants

This is an online survey of 618 undergraduate and postgraduate students and teachers from various Indian higher education institutions. The participants include 207 teaching faculties (33.15%) and 411 students (66.5%). Out of these 618 respondents 352 (57.0%) belong to rural background whereas 266 (43.0%) belong to urban locations. Student and teacher from 20 states of India- Andhra Pradesh, Assam, Bihar, Chhattisgarh, Delhi, Goa, Gujarat, Haryana, Karnataka, Kerala, Maharashtra, Madhya Pradesh, Manipur, Odisha, Rajasthan, Tamil Nadu, Telangana, Uttar Pradesh, Uttarakhand and West Bengal took participation representing their locality. Demographic details of these 618 participants/respondents are shown in Chart-1.

### Data Collection and Procedure

With the help of a literature survey and informal interactions with teachers and students who are currently engaging/attending online classes, a structured exploratory questionnaire was created in Google Form. Selected participants were emailed a link of the Google form via WhatsApp and emails. After submitting their results, they used snowball sampling to distribute the questionnaire to other university and college students and teachers. In this way, responses

from 618 students/teachers from various Indian colleges and universities were received, and they provided detailed information about the survey. This online survey was conducted from 23 June to 27 June 2021 to collect the information and the link is disabled after 05 days of circulating the Google forms.

The Google form consists of one open end and 20 objective type questions including demographic details. The questions were framed with two or more specific options to select the answer for the respondent. In last open end question, sufficient space has been provided to suggest or recommend their individual opinion/suggestion.

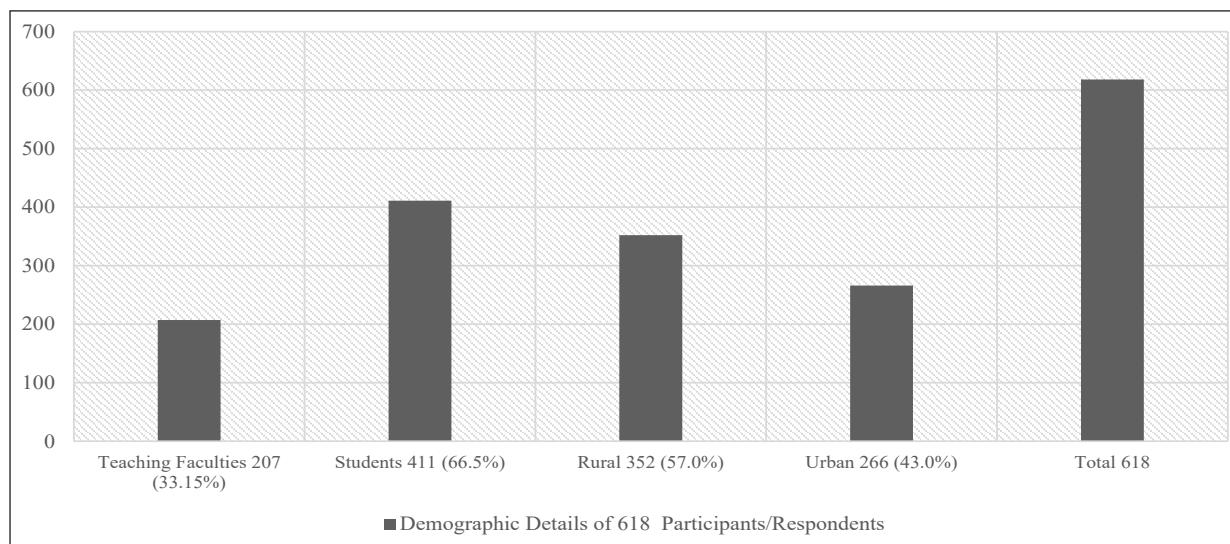
### Data Analysis

Demographic information was collected first, followed by participant's preferences, perceptions, and suggestions. To avoid participant's bias, the statements were compiled after a thorough assessment of the literature review and consultation with experts. To assess the learning status, manner of learning, and viewpoint on online education and its challenges in rural areas, a simple percentage distribution was estimated. Frequency and percentage were calculated for most of the questions to summarize the data. SPSS, Ms-excel, and similar tools were used to conduct all of the analyses. Aside from computing the percentage and graphing it, some charts are provided for clarity and ease of comprehension.

### Results

The findings of the analysis of the data collected from 618 teacher-students of higher education of 20 states of India in this study are as following:

**Chart-1: Demographic Details of Participants/Respondents**



Out of 618 participants, 582 i.e. 94.2% are agreed to differentiate between ‘regular online/distance mode teaching-learning’ and ‘emergency based remote teaching-learning’ which is being adapted by us as a part of ‘Work from Home’ to cope up with Corona pandemic. 542 i.e. 87.7% participants are of opinion that there is no option to online teaching-learning in Covid-19 pandemic due to restrictions like lockdown and social distancing and 548 i.e. 88.7% participants felt a need to be well equipped, well versed in different online tools, techniques and resources as there is no alternative in such pandemic time. The chart-2 illustrates this data clearly.

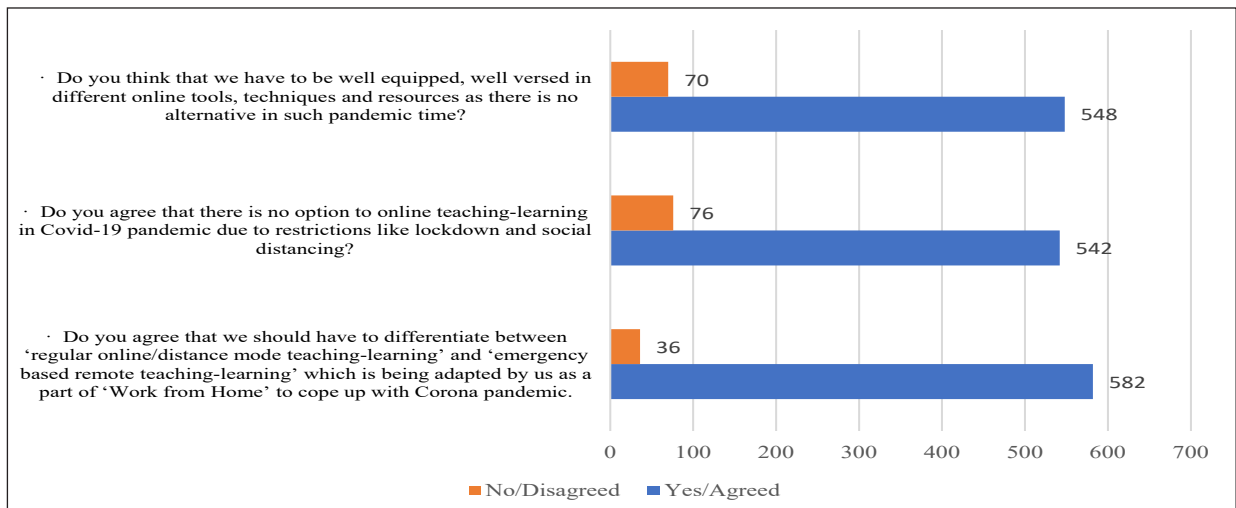
The chart-3 indicates that 90.5% respondents think that technology can assist us in addressing issues of education in this global pandemic and 87.2% agreed that an effective teacher with technical understanding

can serve as a vehicle for student transformation and 87.5% think that we can change this chaotic situation into an opportunity however, 91.7% participants are of opinion that a regular evaluation and feedback of students should be supplemented to it.

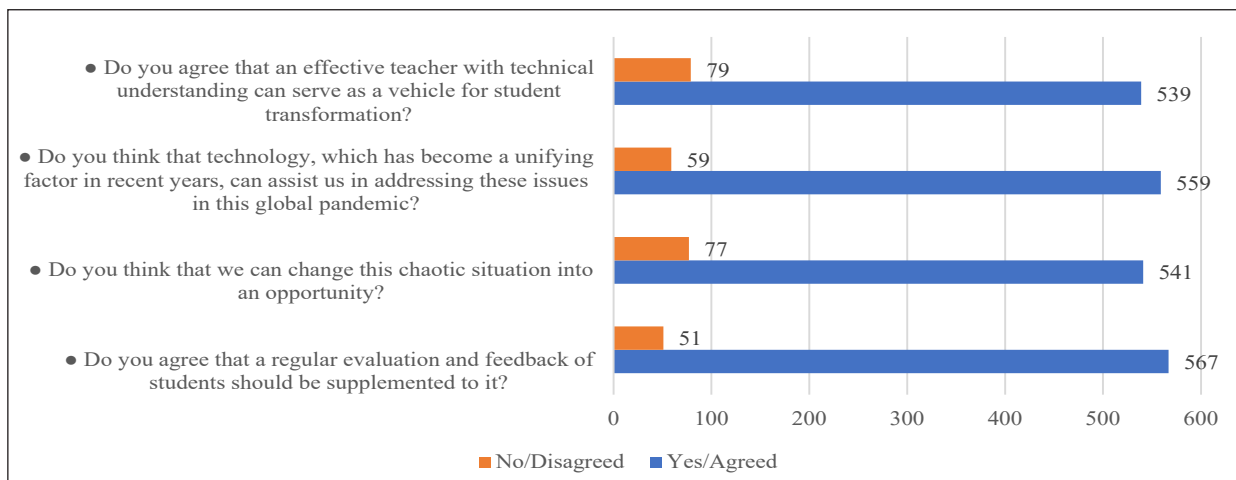
The chart 4 explores that 76.7% participants think that even a smart mobile phones can facilitate online teaching-learning in rural areas in such time of crises and 76.9% agree that we can reach to our desired goals through this and with help of other technical aids as we have no other options in this period of crisis.

The pie charts 5 & 6 indicate that 55.2% participants consider that online teaching-learning is relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning. However

**Chart-2: Opinion of Participants/Respondents on Online Mode of Teaching-learning**



**Chart-3: Opinion of Participants/Respondents on Online Mode of Teaching-learning**



83.7% participants expressed that the Government too should develop and provide educational tabs, affordable internet plans to economically weaker and socially backward class students.

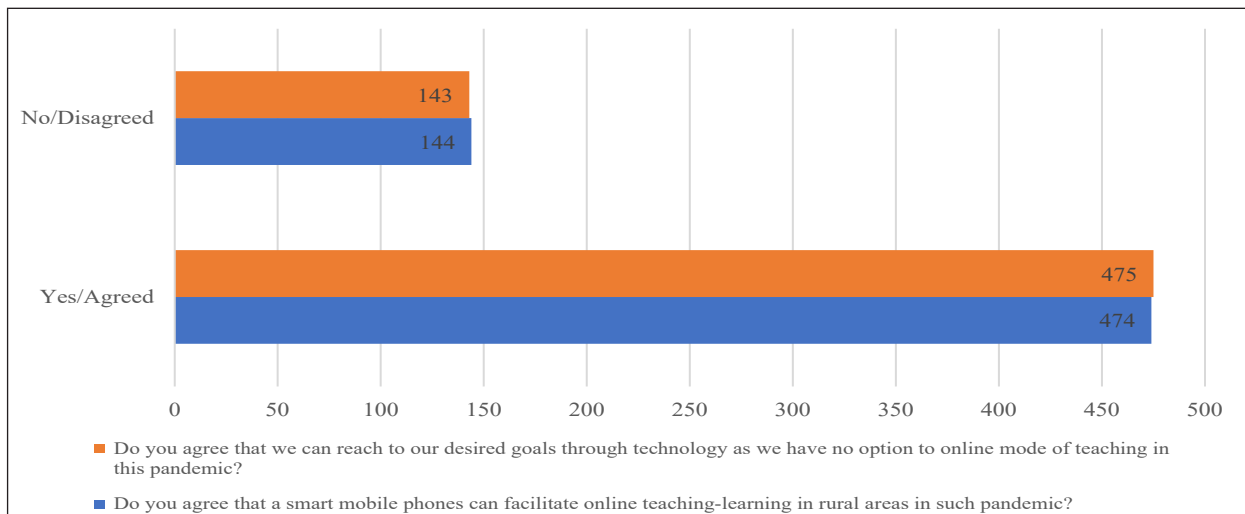
The chart 7 explores that 87.1% participants consider that online education is a practicable alternative during the COVID-19 pandemic. Even 84.3% accept that teachers have improved their online teaching skills in his pandemic and 69.7 agree that even sufficient study materials are available online in different forms.

Regarding what are the most crucial issues with online education of English language and literature in particular or any subject in general in remote locations, chart-8 illustrates that 13.1% participants

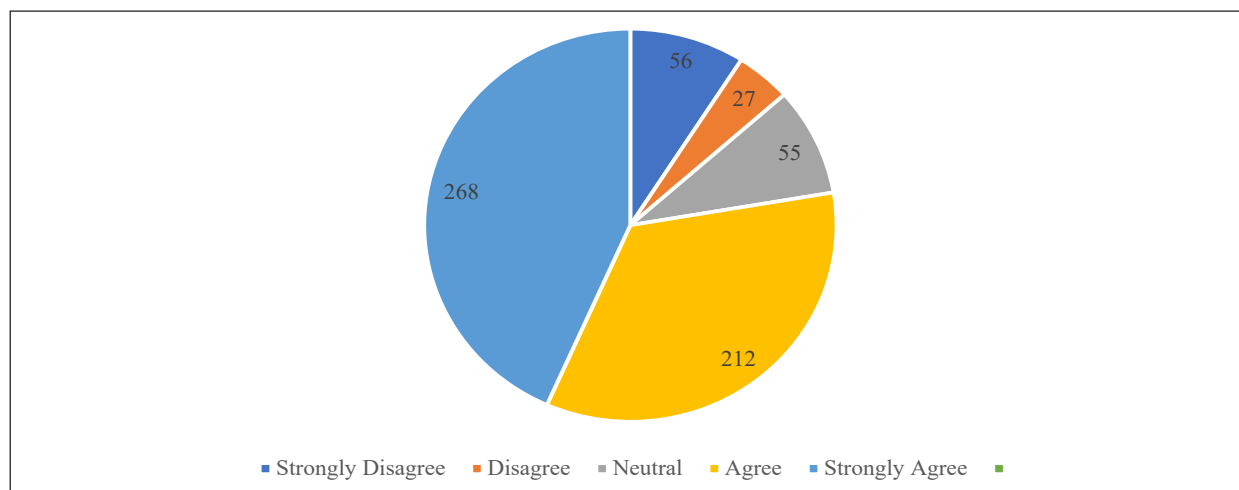
consider lack of good infrastructure, 12.6% think insufficient teaching staff with technical efficiency, 19.3% consider limited resources, 7.1% think unaffordability, whereas only 14.6% are of opinion that none of these issues are hampering to online instruction. However, 33.3% participants opines that these all issues are very crucial by this or that way in online education of English or any subject.

Chart 9a and 9b illustrate the statistics of major problems that students are facing in digital learning. 12.8% participants found digital learning is not user friendly, 19.1% felt it difficult to understand, 4.36% found having no smartphone or laptop of their own whereas 5.66% had no good access to internet whereas 21.5% are facing all of these glitches in their

**Chart-4: Opinion of Participants/Respondents on Online Mode of Teaching-learning with Technical Aids**



**Chart-5: Online Teaching-learning-Relatively Cheaper Mode of Education**



digital learning. However, 36.6% participants are found having none of these problem in their online learning. Moreover, it is also found that internet data package is not affordable to 15.6% participants, 12.2% participants are facing problem of irregular power supply and 7.44% are not having the knowledge of use of digital learning. However, 24.4% are found facing all of these issues whereas 38.3 are free of any such problem.

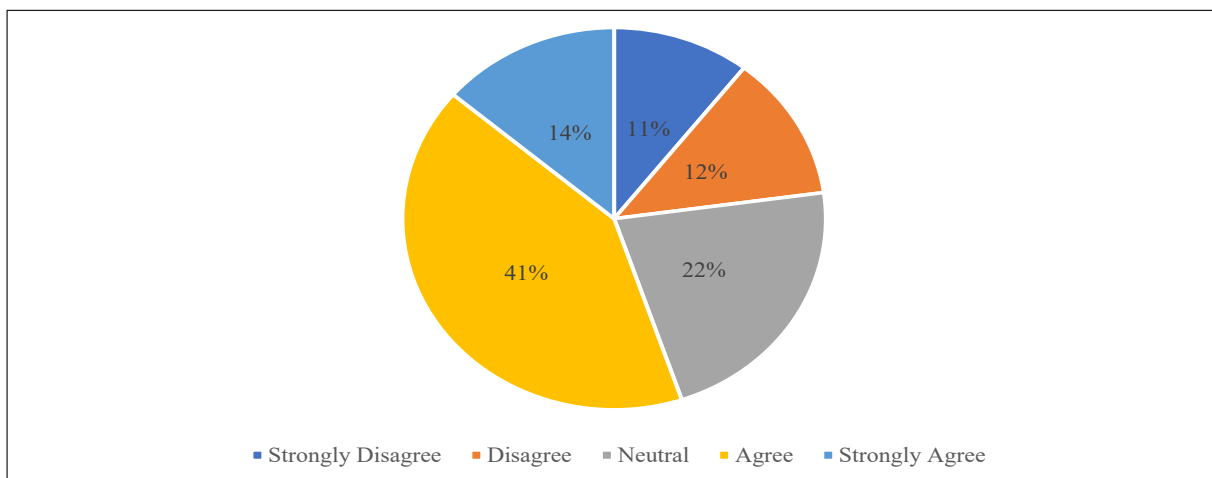
In open-end question, 398 participants responded and most of them opines that online teaching is just an alternative created in order to facilitate the process of teaching and learning during lockdown and suggested to update ourselves to the new techniques as well as with new education system. They also urged that Government/universities/colleges should provide electronic gadgets and free

internet connectivity to the students of rural area, so that they can study effectively as most students from rural areas are willing to learn and adapt to these changes via online learning but the problem most times is the affordability of the cost.

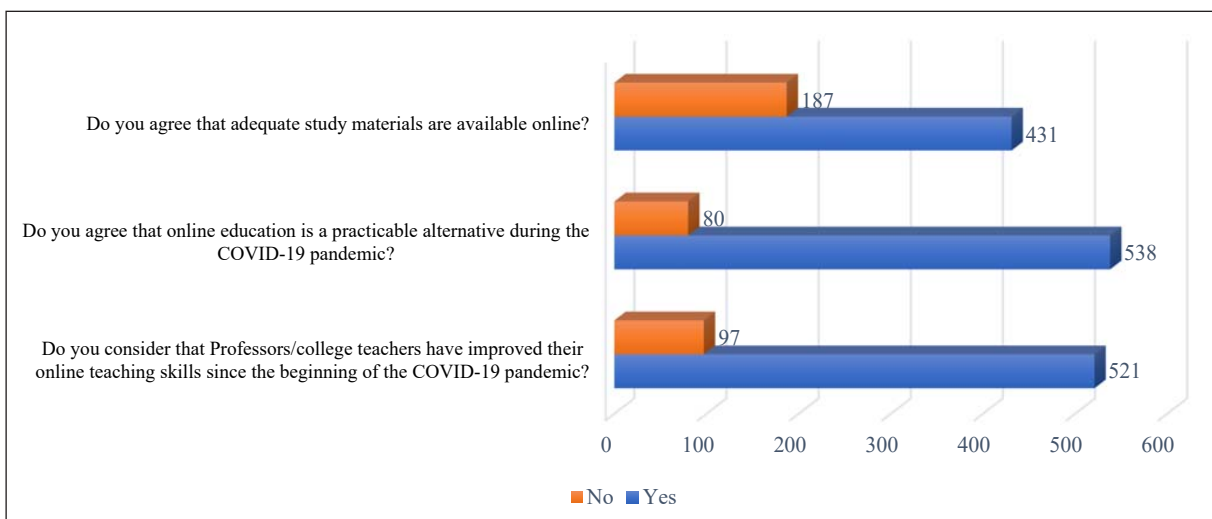
### Discussions

The above results and findings state that all of us are suddenly pushed into an unfamiliar mode of teaching by this global pandemic and 88.7% participants are agreed that we should have to adopt new educational technologies to meet the desired goals of teaching-learning in this situation of crises. As this pandemic has imposed on us the need to redefine our lifestyle, it also has imposed on us to redefine our resources and modes of our educational deliveries. Now onward, even though we are not

**Chart-6: Government Aid to Economically Weaker and Socially Backward Class Students**



**Chart-7: Online Education --- Practicable Alternative During the COVID-19 Pandemic**



interested, we have not only need to think about online teaching -learning but also have to be well equipped, well versed in different online tools, techniques and resources as there is no alternative. 87.5% participant felt that we have to change this chaotic situation into an opportunity. It is rightly stated by Akour et al., “E-learning was previously a complementary methodology or a luxury but the COVID-19 outbreak has made e-learning mandatory. It is the only way to continue schools and universities educational programs” (Akour, et al., 2021).

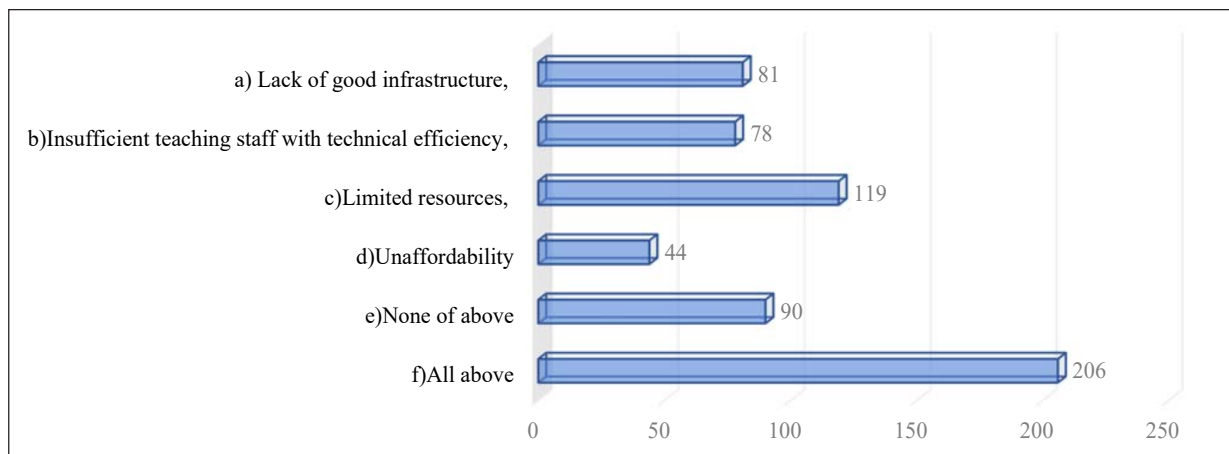
We live in a global world where our existence depends now on our knowledge of using English as well as technology. Thus, getting well versed in English along with technology is need of the present time and it seems this corona virus made it mandatory. Although this does not pose a problem in urban areas, people living in rural areas would face some problems

as there is still a major portion of civilization which are devoid of the developments in terms of language, technology and innovations.

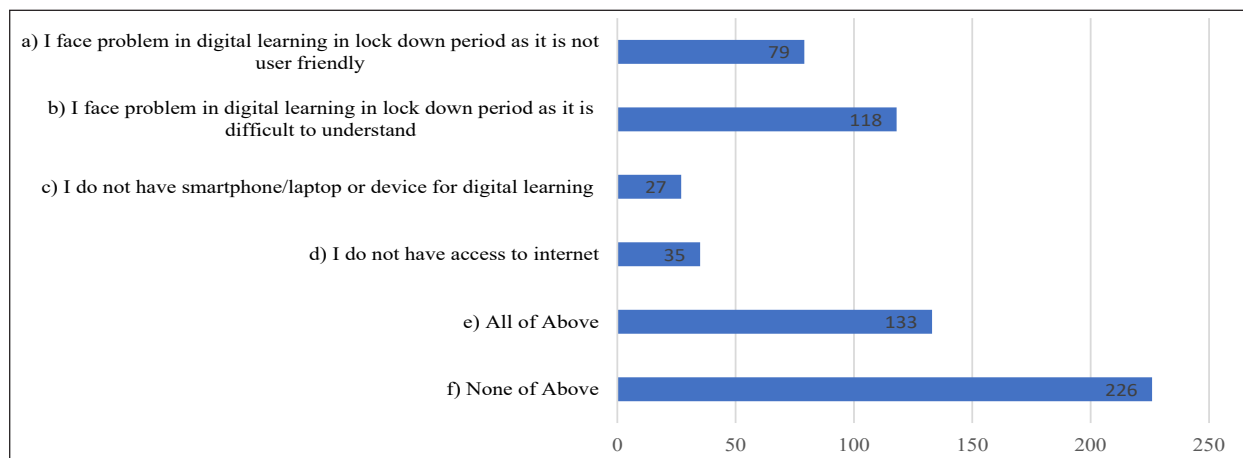
90.5% participants expressed that we have to use different online teaching aids and have to discover ways of how our pedagogical styles along with techniques may work wonders in our teaching in this times. Leave the bygone days, leave the terms “Sage on stage’ and “Chalk n talk”. These are outdated now. With the advancements and demands of the world today, things have changed. Even in remote locations, we now require well equipped teachers in all subjects.

This is because of the increased level of competition as well as the anxiety to survive and sustain in a fast-changing world. Teacher’s roles are not narrowed now to be as a hard task master but they

**Chart-8: Opinion on Online Education of English Language and Literature in Particular or Any Subject in General in Remote Areas**



**Chart-9 a : Statistics of Major Problems Faced by Students in Digital Learning**



are anticipated to be facilitator, instructor, counselor, supervisor and the guide. Teachers in remote locations frequently encounter a lack of technical support and a relevant environment in which they are expected to teach it effectively. In actuality, the reasons for this depressing environment are that rural communities lack the necessary ambience and affordability to meet changing requirements and expectations. As per India's 2011 census, "68.84 % population resides in rural area whereas 31.16 % population lives in urban area" (Registrar General & Census Commissioner, India, n.d.). It indicates that majority of teachers and learners are at stake in this situation. The most of the rural population is dependent on agriculture and has limited money, making it impossible for them to afford quality education.

Both parents and students emphasize simply on passing examinations just to climb the ladder of a higher class. As a result, students continue to carry the lapses throughout their lives. It is at this point that the involvement of innovative teachers becomes critical. An effective teacher with technical understanding can serve as a vehicle for student transformation.

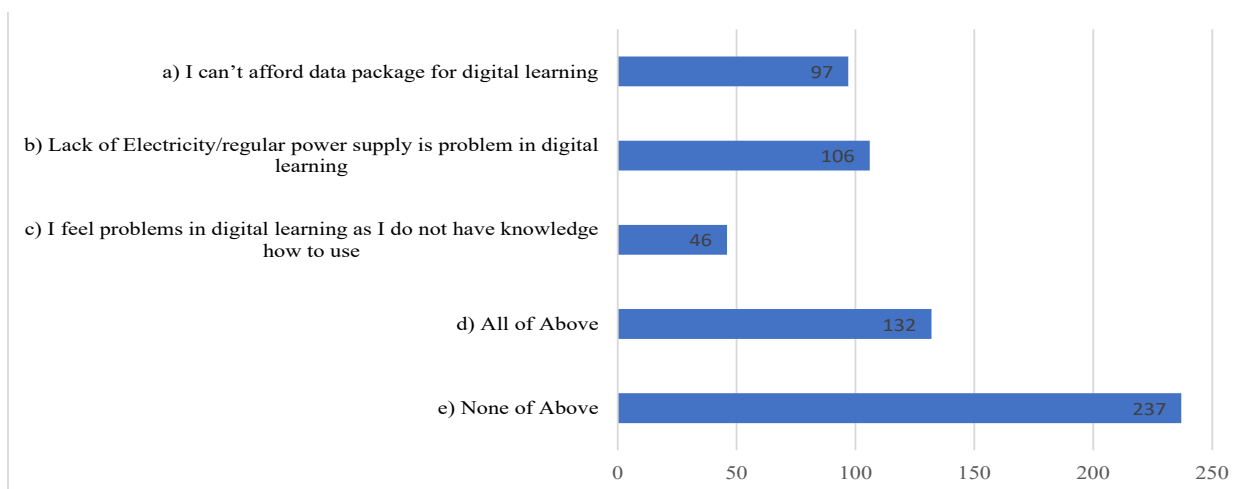
Teachers and students from rural locations do not have access to the proper environment and infrastructure required for online teaching and learning. Some of the issues with online education in remote locations include a lack of good infrastructure, insufficient teaching staff with technical efficiency, limited resources, and unaffordability. In average, 24.4 to 33.3% participants are found facing any of these problems. Furthermore, online courses necessitate solid time management abilities.

We become more reliant on tools and technologies as a result of taking online courses. However, we must find solutions to the issues of teaching to rural pupils during this pandemic and lengthy lockdown. Technology, which has become a unifying factor in recent years, can assist in meeting these issues. These problems must be turned into realities. In this study, 87.1% participants agreed with it. 84.3% participants have accepted that teachers have improved their online teaching skills in his pandemic and even 69.7 agreed that even sufficient study materials are available online in different forms

If remedies are implemented in the appropriate manner the obstacles in the online teaching learning will be removed. The university and college authorities should provide infrastructure needed for online teaching to all teachers. The Government too should develop and provide educational tabs, affordable internet plans to economically weaker and socially backward class students. In this study, 83.7% participants are agreed with it. It will not only help but inspire the rural students to learn effectively. The teaching and learning process will become a matter of enjoyment and happiness for both teachers and learners.

The spreading hands of technology in student's everyday lives have enabled them to compete with others. The National Education Policy 2020 of India accepts that "technology itself will play an important role in the improvement of educational processes and outcomes" (Ministry of Education Government of India, 2020, p. 56). The computers, tabs, android cell phones and innumerable gadgets have made them more

**Chart-9 b : Statistics of Major Problems Faced by Students in Digital Learning**





enthusiastic. We can see them using it comfortably. There are some very good online platform which are either free or affordable even for rural students and teachers. For example... Skype which is a video conferencing software which lets you speak face-to-face with your peers. Dropbox: which is used to share documents with your group and keep work in one place using the file hosting service. Google classroom, Zoom, Google Meet, Webex, Jio Meet are some of the easily available, affordable and user friendly technological platforms, resources that we can use for online teaching. They allow you to create your virtual class with your students whereas Whatsapp, Telegram groups help you connect with your students. Where a computer or laptop is not affordable, a smart mobile phone can facilitate online teaching-learning in rural areas. One cannot guarantee a hundred percent success of online teaching through technology, yet we can reach to our desired goals through technology as we have no option to online mode of teaching in this pandemic. 76.9% participants agreed with it. However, the efficiency of these devices depends upon the creativity of teachers.

A technically savvy teacher can also encourage his students to learn with more enthusiasm through such online modes. The lessons/modules selected for these purposes should be interesting as well as interactive like group discussion, group assignments and use of related audio-video clips along with our presentations or talks. A regular evaluation and feedback of students should be supplemented to it. 91.7% participants agreed with it. Such exercises, can give you wonderful results.

Though, we are not accustomed to online teaching learning, we have to make the best of it in this 'work from home' situations. Such endeavors of teachers can make teaching-learning enjoyable and the teacher will feel a sense of achievement. The YouTube, social networking and other websites are no more remained a romantic illusion even to rural areas. In one sense, online teaching is more affordable than traditional one. Mobile phones which have become common even in rural areas can work as a remedy to many challenges of online teaching. In present study 76.7% participants are of opinion that even a smart mobile phones can facilitate online teaching-learning in rural areas. It is difficult to believe that a teacher can't afford laptop and that students or parents can't afford android cell phones. Only 4.36% participants are found having no smartphone or laptop of their own in this study.

Furthermore, there are some advantages to online learning. It is adaptable. Students are not confined to a set schedule. All lectures and required materials are delivered via online platforms, allowing you to work with your convenience. You won't have to pay for public transportation to get to campus and you won't have to get dressed for class early. You can teach-learn at any time and from any location. The list of benefits could go on and on. It is also accepted that "online mode of learning is easily accessible and can even reach to rural and remote areas. It is considered to be a relatively cheaper mode of education in terms of the lower cost of transportation, accommodation, and the overall cost of institution-based learning" (Dhawan, 2020). In this study, 55.2% participants agreed that online learning is a relatively cheaper mode of education.

To sum up, though rural students have more challenges than urban students in online learning, we should provide students with orientation to cope up with it and accept online instruction as a need of the time as well as future. It is clearly stated by World Economic Forum:

"The scope of e-learning is enormous and can help realize the potential of each student. There lie both opportunities and challenges for the government and the private sector. The aim should be to ensure equal and adequate access to such platforms as the country continues to globalize and catch up with advanced economies. If the Indian education system aims to transit to online learning in the future, it must emphasize policies that bridge the digital divide and move the country closer to achieving the Sustainable Development Goals" (Modi & Postaria, 2020).

## **Conclusion**

In terms of student population, India has the world's third largest higher education system, trailing only China and the United States. Since independence, India's Higher Education sector has seen a phenomenal expansion in the number of universities and colleges. The COVID-19 pandemic has had a significant impact on India's economic and educational health.

The shift from traditional face-to-face education to online education creates technical issues that impact the efficacy of the teaching-learning process. As a result, rural students should be taught how to use digital media. Furthermore, there is no significant correlation found between students' perceptions of

digital learning problems in rural and urban areas during the lock down time. Overall, it can be argued that rural students have more challenges while adopting digital media as a learning tool than urban students. As a result, efforts should be made to improve the value online instruction by providing students with hands-on experience. Above all, it is a dire need to accept and embrace online instruction by differentiating between 'regular online/distance mode teaching-learning' and 'emergency based remote teaching-learning' which is being adapted by us as a part of 'Work from Home' to cope up with Corona pandemic and 94.2% participants agreed it.

I will never claim that online teaching is more effective than face-to-face instruction. Rather, I'll argue that all technological devices or tools are merely alternatives for face-to-face instruction. However, if used correctly, the substitutions can make instruction more relaxing than severe, friendlier than scary, and more creative and goal-oriented than unorganized as we have "no option but to shift entirely to online teaching-learning" (Dhawan, 2020). We have to convert this crises, this challenge into an opportunity and make teaching-learning more fruitful and efficient. For it, "all that was required was an app and a headset" (Nguyen, 2021) Hans Taparia rightly said that "online education, previously considered a "hobby," could be the silver bullet that rescues higher education from the financial ravages of the coronavirus pandemic" (Taparia, 2020).

### Limitations and Scope

Although the content analysis is conducted using an open-ended question in order to widen students' and teachers' perceptions of online education and factors influencing performance in the current study, it does have some limitations. The responses in the study described above are contingent on how the questions are phrased. Only statements with recorded responses can be used to derive conclusions. Because the data was collected using a Google Form, the study could only include students and teachers who had smart phones and internet access. Another disadvantage is that the sample was non-probabilistic, and the research was limited to teachers and students of higher education institutes affiliated to only 20 states and there are variation in state-wise responses. As a result, the findings cannot be applied to India's entire higher education system.

Furthermore, there is scope to conduct a longitudinal research to assess how colleges have adapted to teaching and learning completely online, as well as how students' attitudes about online learning have improved. It would be beneficial to expand the sample to other Indian institutions in order to generalize results and to make comparisons of outcome of online teaching-learning.

However, this study investigates the usefulness of digital learning as a form of learning during the Corona pandemic, which will draw the attention of educational agencies, faculty members and policymakers to the challenges encountered by students and teachers in digital teaching-learning. As a result, the study's conclusions will be beneficial to students, faculty members, educational institutions, and the government. As India is about to enter the lockdown phase of the third wave of COVID-19, researchers may explore the perceptions of additional stakeholders like as faculty members, management, parents, and government, among others, in the future to add value to the existing literature in this area.

### Acknowledgement

I whole-heartedly acknowledge all the respondents for spending their valuable time on filling my questionnaire. I would like to thank my friends who circulated the questionnaire to their co-teachers and students and the teachers and students, who took the time to fill it in online.

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# A Case for Indian Content in Management Education<sup>#</sup>

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The Indian context is different from the western context in many dimensions. Ancient Indian wisdom can offer many interesting frameworks, philosophies and tools for present day managers. Despite that, only a few Indian Institutes of Management (IIMs) offer courses based on the Mahabharata, Panchatantra and ancient Indian wisdom which have rich content in managerial theory and practice. In the recent past some Indian case studies have come into the classrooms, however the focus is entirely large corporates, whereas 90% of employment and 50% of GDP is contributed by the SME sector. As the setting is Indian, all such cases address the context to a great extent, albeit restricted to large corporates. The philosophy, context, or business models are a few examples of uniqueness and there must be many other components that make a particular case study uniquely Indian. A large number of Indian business books have been published, however as they are not in a text book format, they have not found place in the MBA program. The interesting paradox is that while plenty of Indian content is available it has not been able to move into the management classrooms. The article exhorts the need for Indian content, both from ancient wisdom and contemporary cases to make the MBA program more relevant and interesting. Independent courses such as ethics and values from ancient Indian wisdom, or Indian Consumer Behaviour, or Indian society have been suggested including an 'India track' across the MBA programme. The need for Indian content in all three tiers of management schools in India is well understood, however the important challenge is curation of a humongous amount of content that has been created at different periods of time and generally not intended to fit university curriculum or classroom teaching.

The MBA program in India started with a US based curriculum 60 years ago and yet, the structure and content remains based on US business schools. How important is it to indianise the program? Is it necessary? Is it possible? What are next steps? These are some questions this article tries to address based

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on literature survey and understanding gained by the author as a professor of management for over two decades.

## Literature Survey

Culture and curriculum need to be linked for better understanding, relevance and creating world views. Even if the following extract is from an article about school curriculum design in the US, the authors exhort some important aspects of the relationship between culture and curriculum. "A culturally appropriate curriculum is the building block to achieving a challenging, relevant, thought provoking, and most importantly responsive education for native children in American schools. According to Oliver and Gershman, every individual's culture functions as a perceptual lens, shaping a unique worldview. Culture cannot be separated from everyday experiences through processes; it influences social, political, and intellectual activities. According to Bruner, "it is culture that provides the tools for organizing and understanding our worlds in communicable ways, (Yazzie, 1999).

One passage from the declaration arrived at the world conference on higher Education was, "To achieve these goals, it may be necessary to recast curricula, using new and appropriate methods, so as to go beyond cognitive mastery of disciplines. New pedagogical and didactical approaches should be accessible and promoted in order to facilitate the acquisition of skills, competences and abilities for communication, creative and critical analysis, independent thinking and team work in multicultural contexts, where creativity also involves combining traditional or local knowledge and know-how with advanced science and technology. These recast curricula should take into account the gender dimension and the specific cultural, historic and economic context of each country (United Nations, Office of Commissioner Human Rights, 1998). The emphasis is from the original document.

Indigenous content in curriculum is one aspect, however it appears there is also a need to build indigenous competence among graduates. One article abstract includes this dimension. "In the Australian

higher education environment, often preoccupied with internationalisation of education and associated issues around intercultural competencies, there is an uncomfortable awareness of the commensurate lack of attention on 'Indigenisation of the curriculum' and the interconnected 'Indigenous cultural competencies' (Veronica Goerke, 2013)". Most schools or undergraduate colleges do not teach about India's glorious ancient history, or wisdom works that have created the culture nor do students learn about Indian society in a practical way. This means developing indigenous competencies might need to be done at the MBA level.

One Professor argues that Americanization of Brazilian Management is a type of colonization, more specifically "epistemic coloniality" which aimed at legitimizing the superiority of the local elite (Rafael Alcadiyani Miguel P. Caldas, 2012). It will not be wrong to suggest that the earlier Indian Institutes of Management's might have contributed to something similar. Even today after 70 years of the British rule having ended, those fluent in English are considered superior to those who do not have fluency in this foreign language, this is true in the corporate environment as well as social milieu.

China's experiences with the MBA programme offers some relevant learning for India. One author who looked at a China based HRD course with Chinese characteristics opined about teaching materials thus, "There will inevitably be a greater production of teaching materials, such as course books and cases, which reflect Chinese business realities. This will be in response to criticisms of the irrelevance of some of the North American syllabus as well as to growing confidence in Chinese business methods. Chinese business practices will be studied in more detail and managerial 'heros' will emerge, such as Zhang Ruimin, the CEO at the now globalizing, former state firm, Haier, an emerging domestic appliance giant. CEIBS is actively involved in developing Chinese cases (Keith Goodalla, 2004). Another important journal article from China which reviewed case studies found that Chinese cases were being written using the western model of only 'rational' components leaving out the human aspects so critical in Chinese culture(Lin, 2008.). 'The transfer of management knowledge to China: building learning communities rather than translating Western textbooks (Newell, 1999); Western leadership development and Chinese managers:

Exploring the need for contextualization (Jinsong Gao, March 2011); Indigenization of Management Education in China (Baalén, 2007.); Effectiveness of Western MBA programs for Chinese managers (Kai-Cheung Yan, 2010) are some journal article titles which gives us an idea about the concerns of not keeping the local context in mind.

### **The Indian Context and Content**

The Indian context is different from the western context in many dimensions. Culture which includes beliefs and values, more of living are unique. Similarly geographic, demographic, economic characteristics are different. The market and consumer behaviour is different and so are labour laws and business practices. Apart from context, there are other differences as well, for example "*Serva Loka Hitam*" philosophy of doing business which means welfare for all stakeholders, or trusteeship business management taken from Mahatma Gandhi can be found only in India. The practices of the business communities like *Marwari*, *Vysya* etc. which are part of the large SME sector are unique.

Most Indian Management students will live and work in India. Most do not come from a background in Business. It is imperative that they have a good understanding of the people they will lead, customers they will sell to, financial and economic conditions, etc. which calls for a good grounding of the ethos, philosophy, common heritage, customer behaviour, psyche and many other such dimensions from spiritual practices, business organization to impulse purchase behaviour, most of which are unique to India.

All this calls for an indigenous curriculum developed to suit the context. It appears from going through the curriculum for the MBA program in different institutions, that there is a need for more of the curriculum to be based on Indian context, culture and business practices.

Ancient Indian wisdom can offer many interesting frameworks, philosophy, or even tools for present day managers. Only a few IIM's offer courses based on the Mahabharata, Panchatantra and ancient Indian wisdom. A vast majority of institutions do not have such courses even if it is culturally relevant and provides a philosophical base. Similarly the business practices of various business communities like the *Marwari*, *Chattier*, and *Vysya* are unique and have proven to work in India, however, they are not taught.

In the recent past some Indian case studies have come into the classroom, however the focus is entirely large corporates, whereas 90% of employment and 50% of GDP is contributed by the SME sector. There is little content available on this Indian business reality save some books like IndiaUnic by Prof Vaidyanathan.

A large number of Indian business books have been published, however as they are not in a text book format, they have not found place in the MBA program. For example here are some subjects and Indian authors who have not made it into mainstream MBA curriculum.

*Indian Business History* – A book set by Sri Gurucharan Das (Das, 2020)

*History of Economics* by Shankar Jaganathan

*Indian Economics* by Bimal Jalan, YV Reddy, Rachna Singh, Vivek. D and Rupa Subramania, Arvind Subramanian

*Indian Psyche for Managers* by Sudhir Kakkar, Pavan Verma

*Indian Consumers – Where To Find Them and What They Want* by Rama Bijapurkar, Santhosh Desai

*Advertising and Branding* – Ambi Parmeshwaram, Piyush Pande

*From discovering the India opportunity to offering the Dharma prerequisite to the world of business* by Gurucharan Das

*Indian Demography- Indian Market Demographics: The Consumer Classes* by S.L. Rao

*Indian Society* by M.N. Srinivas, C.N. Shankar, Ahuja Ram, Vivek Vaidya, Krishan Khanna, Atanu Dey

*Being a Professional Manager* by R. Gopalakrishnan, Subroto Bagchi, Prakash Iyer

This is at best a small indicative list and does not cover books on ancient Indian wisdom for Managers, books based on contemporary cases or even important areas like entrepreneurship where number of books abound. A large number of cases for class use have originated in India and have published as independent cases or as part of text books. As the setting is Indian, all such cases address the context to a great extent, albeit restricted to large corporates. To cover other dimensions it is important to curate cases that are unique to India and have an origin in India.

The Arvind eye hospital case (The Aravind Eye Hospital, Madurai, India: In Service for Sight,

April 1993. (Revised May 2009.)) is about having a doctor's cabin with two doors, one for the rich and the other for the poor. It's also a case of efficiency and other managerial aspects. The business model of serving rich and poor with common resources, is unlikely to be found in western countries and hence it is unique to India. It's unique from a business model perspective. The Mumbai Dabba Walla case (Sinha, 2010) is not a general case about zero defects. The context of carrying hot lunch and efficiency of a completely human system makes it uniquely Indian in terms of the context. Jammalal Bajaj was called the 5th son of Mahatma Gandhi. He believed and practiced the trusteeship concept advocated by Gandhi in his business enterprise. This is an example of a business having a uniquely Indian philosophy of business (Joseph, 2020).

The philosophy, context, or business models are a few examples of uniqueness, however, there must be many other components that make a particular case study uniquely Indian. Sri R. Gopalakrishnan (Gopalakrishnan, 2020) for many decades has been offering a course called 'Learning what nobody teaches' at some premier business schools. His books, curriculum, pre-reading list is all available in the public domain, and yet only he offers this course and no one thought of using him to run an intensive faculty development program so this can be a practical course offered in many institutions. This is just an example of how the experiences of senior successful business leaders with a flair for writing and teaching is not used to create better managers all around India.

The interesting paradox is that while plenty of Indian content is available it has not been able to move into the management classrooms. This is an interesting and challenging area for Business Schools – to bring more culturally and contextually relevant content into the classroom.

### **India Track in the MBA program**

MBA programs consist both of independent courses and course tracks that have a capstone at the end of the track. For example Business Economics may be an independent course, which has prerequisites in the undergraduate degree and there may not be another course in this domain within the program. On the other hand, Accountancy, Financial Management, Corporate finance, and Strategic finance may be a track which the course in the earlier semester becomes a prerequisite for the subsequent course. This is

especially useful for core knowledge and skills to be transferred that needs time.

Courses with entirely Indian content can form the full program, however, in that case the MBA might look very different structurally from the Western MBA and create issues of equivalence. Independent courses such as ethics and values from ancient Indian wisdom, or Indian Consumer Behaviour, or Indian society can be considered. Ideally, to ensure substantial and incremental immersion in the local culture and practices an India track could provide students both pride in their country, heritage and culture as well as easy comprehension, while building their confidence to face the real world.

The need for Indian content in all three tiers of management schools in India is well understood, however the important challenge is curation of a humongous amount of content that has been created at different periods of time and generally not intended to fit university curriculum or classroom teaching. There are other challenges too, like teacher training, college management and University accepting change, and students' interest in Indian Management, which like many things does not elicit either pride or curiosity yet! Young students would be happy to flaunt having read the case studies of brands like 'Zara' or 'Starbucks' than read the case studies of 'Wagh Bakri' or 'Kavincare' and management schools in need of students and to create an elitist pander. It is tough shift, that will help India and the students in the long run. *Any Business school listening?*

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# Reviews on Impact of COVID–19 Pandemic on Higher Education

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The present review is an attempt to concise the research work done so far on the impact of COVID-19 pandemic on Higher education worldwide. The sources of the review are the survey findings of national and international media agencies and developmental organizations including the individual expert views. The review included all those thoughts, facts and findings of research available in different web portals. The reviews categorized the impact of COVID-19 on the three broad themes such as Institutional Preparation, Learner Characteristics and Teaching Learning. The review also included strategic actions suggested by the sources for the Government, Policy makers and Higher Education Institutions to undertake.

The COVID-19 pandemic has disrupted the higher education system worldwide. The sudden closer of face to face teaching and learning, lab activities and other related academic activities in the campus has disturbed the academic planning and motivation of students and teachers. Some of the affected activities are non-completion of the terminal exams, incomplete syllabus, delayed starting of the new academic session and loss of jobs on the part of teachers and students as well. The COVID-19 pandemic compels the educational institutions and stakeholders for remote learning. The intellectuals and the researchers across the world studied on the situation and also forecasted the future of the Higher Education.

The present research is a documentary analysis of the thoughts, facts and findings of research works published in different national and international magazines, journals and web portals in the form of research articles, conference proceedings and recommendations of the commissions. The study established its credibility through a systematic documentation of the 'inquiry process' and established a clear chain of evidence (Creswell and Miller 2000, p. 128; Silverman 2015). The study was

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undertaken in two directions. One is the perceived or factual information about the loss in different aspects of higher education and the other direction is strategic actions suggested for higher education. The objectives of the study are:

- To review the impact of COVID-19 pandemic on higher education as viewed by intellectuals and researchers
- To review the strategic actions suggested by intellectuals and researchers for Post Pandemic Higher Education
- The researchers searched the contents with keyword 'Impact of COVID-19 Pandemic on Higher Education' Then verified the credibility of the agencies and objectivity of the content on two criteria.
  - a) Is the agency a national or international reputed institution or portal?
  - b) Is the content relates to survey or conference or facts of any national or international scenario

The researchers have done the documentary analysis of the published contents and noted down the facts and findings of the articles and reports. Then they tried to arrange the contents as per the objectives stated.

The impact of COVID-19 pandemic on higher education has been surveyed by media agencies, international developmental agencies like UNESCO, Worldbank and also experts of varied field, they tried to capture the status through surveys and facts collected from different institutions. Thus, the review delimits to all those findings and the facts of local to global on the varied aspects affected negatively due to COVID-19 pandemic. The other direction of the study is to revisit the thought, facts and strategic actions proposed by the sources. The reviews are delimited from January, 2020 to May, 2021.

The review of the facts and findings of the objective No.1 is categorized under three broad areas such as, Institutional Preparation, Learner Characteristics and Teaching Learning.



## **Institutional Preparation**

As an immediate alternative the learning tools and platforms have been opted by the institutions but have resulted a great number of inconveniences on the part of the teacher and students (Mishra and Mohanty, 2020). It has exposed the shortcomings of higher education system to impart learning through digital platforms. Many are struggling to navigate this crisis while maintaining consistent course delivery, ensuring strong student recruitment numbers, and providing clear communication to staff and students (Quacquarelli Symonds, 2020). The higher education institutions need to plan the post-pandemic education and research strategies to ensure student learning outcomes and standards of educational quality (Rasid & Yadav 2020). The teachers have to adapt themselves to the new digital tools. Simply digital literacy will not serve the purpose, the teachers have to assimilate technology in their online teaching and create their own digital teaching materials and modules in order to survive in the post-pandemic world. The teachers, educationists and the education policy makers have to accept the challenge of the changing education system by adapting themselves to the digital tools and applying them in their new-fangled teaching strategies in Post-COVID-19 education system (Gangpuley, 2020; CoL, 2020). The deficient computer skills and the perception of a higher workload prevented them from perceiving their own improved performance in the new teaching environment. The type of impact is diverse and varies from institution to institution, but everywhere it has been negative. Apart from that scientific research projects are at risk in higher education institutions (IAU, 2020). Societies are, then, confronted with a massive challenge of youth disengagement and deprived of the graduate professionals needed to keep countries on track for social cohesion and growth. (World Bank Group, Education, 2020) Tertiary education provides unique opportunities for individual development and equality of opportunities as well as promotes shared prosperity. There is a significant possibility of corporate houses, technology firms and educational institutions working much more closely together to commercialize education (Galloway, 2020).

## **Learners Characteristics**

Students were mainly concerned about issues to do with their future professional career and studies, and experienced boredom, anxiety, and frustration. Multiple stressors were identified that contributed to the increased levels of stress, anxiety, and depressive

thoughts among students. (Son, Hedge, Smith, Wnag, Sasangghora, 2020; Kakoty, 2014; Devedi, Deivedi and Zabukovsek, 2019). Studies show that online classes lose social learning opportunities. Both teachers and students need orientation on online technologies to make online classes a platform for social learning (Mishra and Mohanty 2020). COVID-19 delays or obstacles to program completion, employment and/or immigration (Kanwar, Asha Carr, Alexis, 2020; Dishritristi, 2020) The pandemic has led to the adoption of particular hygienic behaviors (e.g., use of masks, washing hands) and discouraged certain daily practices (Aristovnik, Kerži, Ravšelj, Tomažev, and Umek, 2020) There are three categories of students. One group who have understood the benefits of online classes but their number is very few, second group who understood some of the benefits and the third group who are large in number but far away from the understanding of benefits of online classes. Students should be guided about the potential benefits of the online classes. Their problems need to be addressed through individual or small group approach (Mishra and Mohanty, 2020) The International Association of Universities (IAU, 2020) survey also indicates that the Covid-19 has had an impact on international student mobility and admission in new academic year of Higher education institutions. The digital divide has been created the exclusion of students from poor and marginalized backgrounds from digital learning but also pushed many underprivileged students towards depression and death. (Dishritristi, 2020)

## **Teaching and Learning**

As per Silaban, Suharianto, and Ruslan (2020), ...the world of education has begun to shift the paradigm of 21<sup>st</sup> century learning from the traditional era towards IT based learning and the internet, so learning can be done anywhere and anytime, and also information can be obtained from anywhere. Needless to say, the traditional teaching strategies are practical; however, with advances in educational technology, the effectiveness of traditional learning methods has become something of the past. As Wikramanayake (2014) puts it, advances in digital technology have opened up many avenues of learning. Technology has made information accessible/ transmittable from anywhere and by/to all groups of people. Education has reached most parts of the world and Information and Communication Technology has become an integral part of human life. Govindarajan and Srivastava (2020) also advocated for more 'flipped classrooms' and a 'horses for courses' be spoke

approach to online delivery. LeBlanc (2020) calls for competency-based degree pathways untethered to time—and for the sector to ‘break from the tyranny of time’ in order to unleash a wave of innovation and reinvent itself. A way out of the dilemma outlined above seems to be a modified version of blended learning in the form of a hybrid campus, which embraces the advantages of both traditional face-to-face instruction and online learning. With regard to the distribution of courses, they can be divided into two major categories: theoretical and practical. Theoretical courses can be easily taught online while practical courses require face-to-face instruction. For universities, the modified blended-learning model is cost-effective. The modified version and hybrid campus may also boost the admission rate of universities since applicants who have a full or part-time job may find it easier to manage and divide their time between work and school considering the flexibility that the hybrid campus offers and the fact that they can receive 50% of instruction online. It is also environmentally friendly. The great advantage of hybrid campuses for the environment, particularly in large cities, will include less air and noise pollution, and less traffic jam. This type of combinatory model is less boring and more engaging for the learners and it enhances their adaptability skills through self-coordinated style of learning. The synthesis of classroom teaching with online education can also augment students’ interest as they can effectively collaborate with their classmates and teachers, which in turn boosts their competence and confidence. The 24-hour online access to the internet in the online part of the model allows students to concentrate on their tasks and complete them during their free time without being under stress and time pressure (Keshavarz, 2020) The effectiveness of online learning depends on the designed and prepared learning material, the lecturer’s engagement in the online environment, and lecturer–student or student–student interactions (Wu and Liu, 2013 and Bao, 2020) At the same time, the forced move to distance teaching and learning offers important opportunities to propose more flexible learning possibilities, explore blended or hybrid learning and to mix synchronous learning with asynchronous learning (IAU–COVID-19 Global Impact Survey, 2020) The studies show that 80% of Higher Education Institutions reported that they have been affected by the COVID-19 pandemic. The most common impact of COVID-19 has been the cancelling of international travel and the cancellation or postponement of scientific conferences (IAU–COVID-19 Global

Impact Survey, 2020) Online classes have added to the already existing feelings of vulnerability among students. The digital divide has not only led to the exclusion of students from poor and marginalized backgrounds from digital learning but also pushed many underprivileged students towards depression and death (Sarkar, 2020 and Rye, 2008).

Studies related to the institutional preparedness focused on competency level of students and teacher to accommodate with online learning and the difficulties faced by them. The studies need to be undertaken to get the perception of other stakeholders like, administrators, policy makers at the institutional level and also the bureaucrats of statutory bodies who exactly monitor the education system at the state and national level. Studies are required on infrastructural readiness and challenges faced in institutional management to cope with the changing scenario of higher education. In relation to learners’ characteristics, many studies focused on the anxiety or frustration of learners for this outbreak. How the students of varied backgrounds and learning level will accommodate with the forth coming blended system? How do the learners with special needs category will accommodate with it? In relation to teaching and learning, studies focused on what are the problems faced by the teachers and students by offering teaching through online. Review found no such studies relating to what type of special pedagogy required for blended learning? How does the teacher be the creator and user of digital materials and track the progress of students digitally? How do the teachers make the institutional arrangement of subjects, time and resources when teaching will be mostly online mode. The readiness of our existing digital infrastructure, competency and attitudinal factor of teachers and students etc. need to be focused in the studies.

### **Strategic Actions**

Most of the research findings and the thoughts of the experts centered round the ideas that it is an opportunity for the higher education institutions and the government to redefining the higher education and change the policies accordingly (Kanwar, Asha, Carr and Alexis, 2020)

The International Commission on the Futures of Education—established by UNESCO in 2019 recommended nine ideas for concrete actions to advance education of tomorrow.

1. Commit to strengthen education as a common good. Education is a bulwark against inequalities.

2. Expand the definition of the right to education so that it addresses the importance of connectivity and access to knowledge and information.
3. Value the teaching profession and teacher collaboration.
4. Promote student, youth and children's participation and rights.
5. Protect the social spaces provided by schools as we transform education.
6. Make free and open source technologies available to teachers and students.
7. Ensure scientific literacy within the curriculum.
8. Protect domestic and international financing of public education.
9. Advance global solidarity to end current levels of inequality. (UNESCO, Report, 2020)

Professor Scott Galloway of the Stern School of Business Galloway is of the opinion that the event model of education will be no more in the system. There will be a hybrid model of system where students will have to pay a premium for the 'campus experience', and those who can not afford choose to be educated online. Education will be a lifelong process instead of degree oriented. Education will be an online-offline hybrid, not one of either. Much better technology will emerge to blur your offline and online experience. The private business houses and tech companies will see education (along with healthcare) as the next big opportunity. Even in India corporate houses, technology firms and education institutions working much more closely together. A negative fallout could be that the country's digital divide will get more pronounced. Poor students with less access to devices, connectivity and private space will suffer greatly (Galloway, 2020).

Programmes that are industry-linked will be in top priority. They need to provide individualized learning paths for their students and individualized career opportunity to their faculty. They must go for a flexible and decentralized management approach (Mandek.Parimal.V.2020, Personal Communication, April 8<sup>th</sup>, 2021). Tertiary education which fuels competitiveness and growth by preparing professionals, like, managers and engineers, medical personal and teachers. Universities are also centers of research and innovation and—working with small and medium size enterprises—support regional development (World Bank Group, Education, 2020).

A Framework for adaptability which is from the work of political scientist Kathleen Thelen and economist and philosopher Amartya Sen, may a strategic model to work for Higher Education. The key components of educational adaptability are: (1) cooperation, (2) inclusion, and (3) flexibility. It is a collective approach. They suggest that this can be achieved by coordinating various professional, scientific, corporate, community and governmental stakeholders in order to ensure continuity in educational service provision, promoting lifelong learning and overall workforce participation.

UNESCO, IESALC suggested governments to:

1. Include Higher Education in the stimulus plans for economic and social recovery;
2. Forge a national consensus for a strategy for fostering recovery and innovation in higher education;
3. Provide a clear regulatory environment when reopening of classrooms that generates security; and
4. Commit to international cooperation.

For their part, HEIs should:

1. Anticipate a long-term closure, focus efforts on ensuring teaching continuity and guaranteeing equity, and provide governance mechanisms, monitoring, and efficient support;
2. Design pedagogical tools to evaluate training and create mechanisms to support learning for disadvantaged students;
3. Document the pedagogical changes introduced and their impacts;
4. Learn from mistakes and scale up digitization, hybridization and ubiquitous learning; and
5. Promote internal reflection on the renewal of the teaching and learning model UNESCO, IESALC, 2020).

The reviews indicates a paradigm shift in higher education that is event model or degree model to lifelong education. A hybrid of offline and online higher education which will prepare professionals as per the demand of the industries and administration. There will be huge employment in infrastructure building and management of information technology. The thrust areas of Research and innovations may be more contextualized and community based to revive the economy, improving the health care and redirecting the higher education to meet the needs of the changing world. More specifically, research and innovations in higher education will center round the

quality access of higher education to the disadvantage students. Making the teachers competent enough to on online pedagogy of teaching and learning and handle evaluation of learning performances. Research will also address How far the policy makers and administrators of the existing higher education systems will improvise the digitized and lifelong education higher education? The curriculum is expected to be more flexible, modulated, work-oriented and need-based. The reviews centered round the opinions and recommendations of the experts in consultations which is still in idea level and the practicability and objectivity of those ideas are subject to verification. Each country has its own procedure to reform its education system which calls for participation of many stakeholders in various stages of its finalization.

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# Field Reality in Conducting School Experience and Internship

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Teacher education is the backbone of school education system. Quality of education provided to student teachers by the teacher education is reflected in school education. On quality of teacher education, various commissions and committees have recommended modification in various aspects of pre-service and in-service teacher education programmes. Education Commission (1964-66) highlighted various loopholes in teacher education programme and recommended professionalization of teacher education programmes, comprehensive college of education and internship. Even National Commission on Teachers (1983-85) recommended five years integrated teacher education course with internship. Apart from all those recommendations by various Committees and Commissions, the scenario of teacher education didn't change much (Justice Verma Commission, 2012). Based on the report of Justice Verma Commission (2012), need of revamping Teacher Education Programme was done. Batra Report (2014), has recommended changes in Teacher Education Programme not only in terms of duration of training but have suggested changes in school internship, curriculum and qualification of teachers. In the report, school internship has been given highest weightage as its important component of Pre service Teacher Education Programme. Justice Verma Commission (2012) has pointed out that in Pre Service Teacher Education Programme, practice teaching component is performed in mechanical way and student teachers are performing their lesson plans in fixed way. Student teachers do not reflect on their teaching which leads to poor quality of teachers. Duration of practice teaching is short, so student teachers don't get much chance to get feel of school life as a teacher. Theoretical input provided to student teachers is not in real sense implemented in school as their major focus remain on delivering lesson rather than applying learnt knowledge and skills (Pavan, 2015). As a result, there is a gap between expectations by school from teacher education. School teachers find difficulty in applying learnt knowledge received from teacher education institutes (Pavan, 2015). For such gaps, pre service teacher education and schools both are responsible. As the pre service teacher education institutes provide input

to student teachers whereas schools provide practical exposure to practice their learnt knowledge and skills. But due to certain reasons it is difficult to provide all kinds of learning experiences to student teachers during their various phases of practice teaching. To conduct school experience and internship in the school is a big challenge for the teacher training institutes. In this paper, the author has made an attempt to share challenges in conducting effective school experience and internship as practice teaching component of pre service teacher education.

## Practice Teaching in Integrated B.Ed. Programme

National Council for Teacher Education (NCTE) has recommended to run integrated B.Ed. programme to improve quality of teachers. It has suggested that 4 years of integrated B.Ed. programme can provide sufficient exposure to student teachers and be able to develop professional skills among them as they enter with the goal to become teacher as their first choice. Integrated B.Sc. B.Ed./ B.A. B.Ed. programme is of 4 years which consisted of 8 semesters. Across all semesters, component of teacher education is integrated with their academic subjects. At initial years, they have more papers related to their academic subjects compared to teacher education subjects and gradually subjects related to teacher education increase and academic subject weightage reduces.

Whereas in the B.Ed. programme, more weightage is given to school experience and internship. NCTE also recommended to split practice teaching in various semesters. In integrated course it is divided into 3 years i.e. from semester 4 to semester 8. It begins with *School Experience* in semester 4, Micro Teaching and Simulation in semester 5, Stray Lessons in semester 6, Stray Lessons and Block Teaching in semester 7 and Internship in semester 8. Very systematically and logically practice teaching component is distributed in various semester with an objective to prepare efficient teachers as it begins with School Experience and ends with Internship. Each part of practice teaching is important in teacher training process. Every stage of practice teaching promises various kinds of exposure provided to student teachers so that they can understand the school system. Before student teachers enter into real world of school education, they have to work with

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school teachers by assisting them for a few days. This phase of practice is known as School Internship.

### **School Experience and Internship**

School and teacher training institution has to work together for training future teachers. School culture is dynamic and it is changing as per demand of the society. To meet future demand of the society, under future teachers training various aspects of school life is included in School Experience and Internship as practice teaching components of teacher education. During school experience, student teachers have to observe actual teaching learning process carried out by the school teachers by observing their classroom teaching. Apart from this, to gain actual experience of the school life, they are expected to observe sports and other co-curricular activities, role of supervisor or administrator in daily school activities, administrative activities carried out by non-teaching staff at the school, etc. By such experience they get general understanding regarding various school activities.

After gaining basic understanding regarding teaching skills and lesson planning, student teachers have to practice these skills in real classroom of the school. Apart from classroom teaching, student teachers have to participate and conduct co-curricular activities as part of Stray Lesson and Block Teaching in the school. As a part of internship, student teachers spend a few days with school. They have to assist school teachers who perform role of mentor to them. It is expected that for each student teacher, separate mentor has to be allocated who can guide student teachers in various school activities. During internship, student teacher has to work as part of school by performing almost all activities which are carried out by the regular school teacher. There they have to get involved in curricular, co-curricular, administrative, examination and research related activities. The objective of internship is to familiarize student teachers with daily life at the school. Apart from teaching they have to perform role as an initiator, guide, examiner, problem solver and researcher. They have to teach various lessons by adopting different methods and approaches, carry out action research and conduct psychological test, etc. To perform all these activities, co-operation from school is essential. The entire duration of school experience and internship as per NCTE guidelines is 20 weeks. In NCTE guidelines, it has strongly recommended that there should be collaboration between school and teacher education institutions. Training future teacher is collaborative task and school has to support in all possible manner. Apart from this, in the guidelines,

NCTE has also mentioned the role of DEO for guiding and allocating schools for conducting practice teaching. Despite that there are certain practical difficulties experienced by teacher education institutions.

### **Problems in Conducting School Experience and Internship**

Teacher education institutions are facing many problems in conducting school experience and internship. These problems are more of practical in nature. As school and teacher education institutions are working for the betterment of the society, they are functioning at different level which leads to raise in feasibility problem from either side. Based on experience, a few problems related to school experience and internship are as follows.

1. Availability of schools with reference to medium of instruction is biggest challenge for teacher education institutions. Gaining sufficient number of schools for conducting school experience and internship at same time duration is difficult task. Sometime, there is difference in the academic schedule of local medium schools and English medium schools. As a result, it's difficult to decide same time duration for school experience and internship.
2. Even number of local medium schools are more compared to English medium schools and majority English medium schools are private schools. So, getting permission from private organization is big challenge for teacher education institutions.
3. As compared to earlier time, number of teacher education institutions have increased. All teacher education institutions have to conduct practice teaching with the help of school. Most of the time, it is observed that due to academic planning of teacher education institutions, they are having almost same time duration for practice teaching. As a result, getting permission from required number of schools with respect to medium of instruction is a bit difficult, as it is difficult even for schools to accommodate more number of student teachers at same time.
4. One more practical problem is related to number of student teachers to be sent to school for the school experience and internship. If the number of student teachers who have opted science and mathematics as methods of teaching is more compared to student teachers who have opted language and social science subjects as methods of teaching, It is difficult to form a balanced group having all

- subject student teachers in a group. As a result, school is not ready to allow more than 6-8 student teachers in case of English medium schools. As schools are facing difficulty in assigning classes to student teachers to perform their lessons. And on other hand, number of schools are less which have permitted to conduct school experience and internship.
5. In each semester, teacher education institution has to conduct either school experience or stray lesson / block teaching / internship. The duration of each practice teaching activity is different and tasks to be performed by student teachers are different. To get permission to conduct such activities with different time duration from the school is challenging task. Usually, schools are permitting to conduct practice teaching twice in a year i.e. once in each semester. School feels that during practice teaching, it's daily activities get disturbed as a result it doesn't allow to conduct practice teaching for long duration.
  6. The biggest duration of practice teaching is internship. It is almost of a month time. During this time, student teachers have to be with school and have to assist school teachers. As a part of their internship, apart from teaching, they have to conduct test, psychological test, action research, etc. Sometimes, schools show their unwillingness in allowing student teachers to conduct such activities in the school. The duration of internship is long, so, the schools hesitate in permitting as they feel that their daily activities get disturbed and their teacher workload will increase as they have to mentor student teachers. So, most of the time school deny conducting internship.
  7. During school experience, to get feel of school, it is expected that student teachers observe teaching and administrative activities of the school. Schools co-operate in case of teaching learning related activities but in case of administrative part of observation, they try to avoid. Schools are hesitating in providing any guidance related to administrative functions and show unwillingness in allowing student teachers to observe their school records as they consider those are confidential matter and can't reveal to all.
  8. Usually, private schools don't allow to conduct school experience and internship with notion that their teachers will be free. Specially in case of internship where student teachers have not only to teach but have to assist their mentors. School management argues that their paid teachers become free which they consider as loss for them.
  9. Government schools are more co-operative compared to private schools. They allow student teachers to observe school activities as school experience and internship. Schools are willing to provide support for conducting internship and assign mentor to each student teachers who can observe and guide student teachers in school activities. But, sometimes, school teachers exploit student teachers by overburdening them.
  10. Sometimes, a few private schools expect certain monetary rewards against their support in conducting school experience and internship. And there is no such provision in government teacher education institutions to do so. In such cases, it might increase the burden on student teachers and teacher educators side.
  11. Private schools are not ready to provide school more number of days to conduct school experience and internship. Their maximum permitted time duration is for 4 to 5 days. In case of school experience, stray and blocking could be possible to organized in limited time duration. For internship, it is insufficient not only in number of hours to be completed but also in terms of learning experiences need to be provided to student teachers.
  12. As it is mentioned under NCTE guidelines that during internship, student teachers are expected to work under the school teachers. School teachers become mentors for student teachers. But in reality, school teachers are so busy that they don't find time to guide student teachers. Sometimes, schools are not ready to attach their teacher as mentor with student teachers. Schools feel that by mentoring, their teachers daily work gets suffer. They don't even allow students to be part of school activities accept teaching. Even they suggest that student teacher's role is restricted only to classroom teaching as component of practice teaching and real experience student teachers will gain when they will enter into jobs.
  13. In a few schools, student teachers are treated as outsiders. Even though they have permitted to conduct school experience and internship in the school but they don't allow student teachers to interact more with students and staff. They consider student teachers as outsider and hesitate to share any kind of school information. In such situation, it's difficult for the student teachers to complete their assigned tasks such as action research, implementation of psychological test, observing school records and other details related to school as a part of their school experience and internship.

14. Even it has been observed that, student teachers' assessment is carried out by teacher without observing their performance in the school. Even grade/ marks for performance of student teachers is rated very high without justification. Sometimes, without doing correct assessment of the student teachers, mentor certifies student teachers' submissions and certificates. This creates hurdles in achieving objectives of internship and sometimes, student teachers don't get much learning during internship.
15. The intention of including action research, during internship, is to train student teachers to identify classroom problem and gain understanding regarding ways to resolve such problem by means of research. Sometimes, school doesn't support student teachers in conducting action research as they feel that it's a confidential matter and it will affect the reputation of school in the market. They restrict student teacher's role in the school as passive listener rather than researcher.
16. Private schools value more school students' parents and market. School students' parents don't prefer outsiders to participate in their daily activities. Due to this, usually, private schools hesitate to provide schools for conducting internship. They argue that due to internship, given to student teaches schools suffer. The parents of school students don't want any kind of interruption in school activity. Parents feel that student teachers are trainees and are not capable to provide sufficient learning experience to their children. Parents are not satisfied with the teaching done by student teachers. As a result, private schools either allow for a few days or hours and instruct their students and teachers that they have to reteach same content whatever taught by student teachers. So, school teachers also feel that school experience and internship is wastage of time for them.

## Conclusion

Compared to private schools, government schools are more cooperative in all manner. They are ready to provide sufficient exposure to student teachers during their school experience and internship. But reality is that private schools are more resourceful and having better opportunity for student teachers to have exposure of such kind of schools, as in India, various kinds of examination boards are existing. The future teachers should be trained to serve in all kind of schools. The demand of the society is ever changing and schools and educational institutions have to be ready to meet

those demand. Presently, there are many challenges in conducting school experience and internship but its collaborative task which schools and teacher education institutions have to carry out. They both have to make an effort to find out midway to overcome all such problems. This way school activities don't get much affected and actual objective of school experience and internship can be achieved. One of the solutions to such problems can be that school experience and internship can be integrated as part of school activities by including it into school academic calendar. With the mutual agreement of schools, a day in a week can be assigned for internship and on that day student teachers get experience of school throughout the academic year, so that, he will get exposure regarding school life.

Someone rightly said that *problem arises with its solution*. It's duty of schools and teacher education institutions to find out solution so that efficient future teachers can be prepared.

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# Progress Demands Change for a Better Tomorrow

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**M Venkaiah Naidu, Hon'ble Vice President of India delivered the Convocation Address at the 3<sup>rd</sup> and 4<sup>th</sup> Convocation of IIM Jammu, Jammu on April 09, 2021. He said, "The biggest resource and partner for our country in this exciting journey of development is youth, like yourselves. Endowed with an immense demographic dividend, we have the potential to achieve anything. But for us to leverage the potential, we must enrich our human resources. Skill development and quality education are crucial development accelerators. We, as a nation, must focus on them and work consistently to enhance access to education and improve the quality of education. Each and every one of you has the capability to contribute towards the growth of our country and be a catalyst in bringing about a positive change in society. Some of you will enter the corporate world, some of you will be with the government or academia. Some of you will set up enterprises. Whatever you may choose to do, please try to be among the best. Let excellence be your watchword." Excerpts**

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"I am very pleased to be here with all of you at the 3<sup>rd</sup> and 4<sup>th</sup> Convocation Ceremony of the Indian Institute of Management Jammu, the youngest among all 20 IIMs across the country.

Like any young institution, IIM Jammu has the advantage of learning from the best practices in other IIMs as well as the possibility to carve out its own unique identity.

I am happy to note that IIM Jammu has set its sights high. The Board of Governors, the Director and the distinguished faculty members have made a firm commitment to deliver quality education, provide opportunities for high quality research and establish valuable international linkages.

Sisters and Brothers, Jammu & Kashmir has been and will continue to be an integral part of India. We are committed to the overall development and addressing all the challenges unitedly. Any external interference in India's internal affairs is unwarranted.

Jammu and Kashmir like other parts in our country has been an important centre of education since ancient times. This is the land of Patanjali who gave the gift of Yoga to the world. This was the land where aesthetics got a new idiom in the works of Anandavardhana. This was the land where Lalleswari and Habba Khatoon mesmerized audience with their poetry. We must continue to enrich that rich culture of learning and the culture of innovation.

We must make quality education the spring board of development.

India, today, is at crossroads. We have firmly resolved to take the path of sustainable, inclusive development. Certainly, education is at the heart of this transformation.

We need to build a vibrant, resurgent India that capitalizes on its traditional strengths and moves forward by absorbing the best in the world.

Sisters and Brothers, I am glad to note that IIM Jammu is well poised to contribute significantly to this resurgence. The institute has shown great promise with exponential growth over the years. This convocation is a significant milestone for this institution and the students who are graduating. I congratulate the students of the Master of Business Administration (MBA) programme on completing their course successfully.

I would also like to congratulate Prof. B.S. Sahay, Director, IIM Jammu, and the faculty members, who have done their utmost to create congenial learning environment for students and equip them with knowledge, skills and attitudes that will stand them in good stead in their future endeavours. I would also like to commend the parents who have encouraged and motivated their children to succeed in their academic pursuit.

Dear graduating Students, You are reaping the reward of your two years of hard work and dedication, which has brought this proud moment for you and all others associated with you.

The world of immense opportunities and intense challenges awaits you. The knowledge and

skills you have acquired and the values you have imbibed will enable you to successfully navigate a complex world.

There is a whole new world of work and constant learning that promises an exciting voyage of discovery for each one of you.

My dear Friends, While you are going through your journey, you will realize that India is also undergoing a significant transformation. With fast-tracked development over recent years, our country is making great strides to fulfill the aspirations of our people. The ongoing COVID-19 pandemic has brought many challenges, but it did not break our spirit. It has only prompted us to work harder and reach our national goals.

You would have read in the newspapers two days ago that IMF has raised its GDP growth forecast for our country during the coming financial year from 11.5% to 12.5% making India one of the fastest growing major economies. This is truly heartening. This speaks volumes about our resilient spirit and inherent strengths.

The biggest resource and partner for our country in this exciting journey of development is youth, like yourselves. Endowed with immense demographic dividend, we have the potential to achieve anything.

But for us to leverage the potential, we much enrich our human resources. Young people have to be motivated, adequately trained, and be fit and healthy.

Skill development and quality education are crucial development accelerators.

We, as a nation, must focus on them and work consistently to enhance access to education and improve the quality of education.

This is the underlying theme of the National Education Policy, 2020.

I am happy that considerable progress has been achieved over the recent years, in our country with reforms in higher education, establishment of new national institutes, development of ranking framework and easing of FDI in education.

I am hopeful that, with the implementation of the comprehensive and visionary Education Policy, education in India can truly become holistic, child-centered and globally-competitive.

Sisters and Brothers, In addition to the above initiatives, we must push harder to make our higher education more in line with the realities of the world.

Industry-institute linkages must be further strengthened. Only through solving real-world problems can the students become adept at the fundamentals of their subjects. Our industry will greatly benefit too, from the fresh perspectives young minds can offer.

Our educational institutions too have to be quick on their feet to anticipate the future trends that might evolve as the nation recovers from the pandemic. The world of learning and the world of work are changing very rapidly and institutes such as yours need to be ever alert, ever agile. You should be able to adapt, evolve and respond to situations that have never before been faced by mankind.

In the course of this pandemic, we have realised both the necessity and potential of technology in delivering education. We must ensure that technological tools are used extensively and prudently. We should also make sure that the existing digital divide doesn't get widened. The most remote areas and most underprivileged students should be enabled to benefit from this technological revolution.

National institutes like IIM Jammu must become innovative in the courses they offer. Based on market realities and new demands of the fourth industrial revolution, they must offer diplomas and minor degrees that bring diverse fields like agriculture, business, technology, humanities and management together. This is the spirit of the multidisciplinary push of the New Education Policy.

Remember, we cannot solve the problems of the future with the same superficial, segregated approach of the past.

We need to develop a mindset that encourages innovation, an institutional reform that fosters creativity and promotes excellence.

Dear Students, As future managers, you have to respond to a world that is changing very rapidly.

Your ability to take decisions in an uncertain world, your agility to adapt to new contexts will become very crucial.

As you try to excel in your fields and go about solving problems, your success will depend on your ability to assimilate information, analyze evidence and experiment with possible solutions.

Your active interaction with key stakeholders and respect for other's views can broaden your own horizons.

The bottom line ultimately is not only maximizing profit but also maximizing happiness and enhancing the quality of lives.

I am confident that each and every one of you has the capability to contribute towards the growth of our country and be a catalyst in bringing about a positive change in society.

Some of you will enter the corporate world, some of you will be with the government or academia. Some of you will set up enterprises. Whatever you may choose to do, please try to be among the best. Let excellence be your watchword.

If you keep listening and learning, as aspiring entrepreneurs, managers and consultants, you will identify innovations that might work at the grass roots. Bring your expertise to achieve scale for these indigenous solutions. You can bring in technology to complement traditional skills of our craftsmen.

You can help farmers increase farm productivity and get better returns. You can work with farmers in improving the marketing of farm produce. e-NAM is a great tool for better price realization. This should be further scaled up and new innovations be brought into post-harvest facilities.

I am hopeful that each one of you can lead this change process, a change that makes 'tomorrow' better than 'today'.

Sisters and Brothers, In the end, I wish you all a professionally rewarding career, good health, and success in all your endeavours.

I am confident that the Institute has given you a sound base to move forward.

As you advance in your career and gain further competence, I also hope that each one of you will remember your social responsibility and commitment to building a happy, prosperous, and equitable India.

I compliment the management and the Director as well as the faculty members for their commitment to the cause of quality education. I am hopeful that in the next few years, IIM Jammu will be among the best management institutes in the country.

Thank you.  
Jai Hind!"

□

### **NAAC Seminar on Best Practices in Higher Education Institutions**

One-day NAAC Sponsored National Seminar on 'Best Practices in Higher Education Institutions: In NAAC Accreditation' was organized by Internal Quality Assurance Cell (IQAC), Salipur College, Salipur Cuttack, Odisha, recently. About 152 teacher delegates including IQAC Coordinators and Principals of different colleges and research scholars from various institutes participated in the event. The seminar was inaugurated by Prof. Amiya Kumar Rath, NAAC Adviser and Dr. B S Ponmudiraj, NAAC adviser by lighting the lamp. In the Inaugural Speech, Prof. Amiya Kumar Rath said, "The objective of NAAC in Assessment and Accreditation is to make quality the defining element of higher education in India through a combination of self and external quality evaluation, promotion and sustenance initiatives." He asserted that colleges who undertook best practices have positive impact on their assessment and accreditation process earning them the expected grade or score. Best practices will create conducive atmosphere among stakeholders and society around them, he further stated. The Resource Person, Dr B S Ponmudiraj, NAAC Adviser also submitted that the mission of NAAC is to arrange for periodic assessment and accreditation of HEIs or units thereof, or specific academic programmes or projects, to stimulate the academic environment for promotion of quality in teaching-learning and research in higher education institutions and to encourage self-evaluation, accountability, autonomy and innovations in higher education. Dr. Umesh Chandra Pati, Principal, Salipur College, Salipur presided over the Inaugural function. Dr. Pati delivered his Welcome Address. Convener, Dr Asit Parija introduced the guests. Dr. D N Patri, IQAC Coordinator was the Organising Secretary of the event. On the eve of the occasion a Souvenir comprising of twenty two articles was released. Similarly, the Research Journal of the College Elixir and Campus Bulletin of the college 'The Fresh Lines' were also released by the NAAC Advisers. Mr. U K Panda, Coordinator NAAC Steering Committee of the College proposed Vote of Thanks during the Inaugural Function.

The Technical Session was based on the thrust area Assessment and Accreditation Methodology in Revised Accreditation Framework (RAF). Resource Person, Prof. Amiya Kumar Rath presented power point presentation on 'Process of Revised Accreditation Framework of NAAC'. He gave an elaborate description on each and every parameter. The SSR has two kinds of Metrics: i) those requiring quantifiable facts and figures as data which have been indicated as 'quantitative metrics' (QnM); and ii) those metrics requiring descriptive responses and are accordingly named 'qualitative metrics' (QIM). He discussed the seven criteria to serve as basis for assessment of HEIs are Curricular Aspects, Teaching learning and Evaluation, Research, Innovations and Extension, Infrastructure and Learning Resources, Student Support and Progression, Governance, Leadership and Management, Institutional Values and Best Practices. In his presentation, he stated that the assessment process will be carried out in three stages. As stated earlier, it will comprise three main components, viz., Self Study Report (SSR), Student Satisfaction Survey and the Peer Team Report. He covered key aspects of assessment such as QIF, the assessment process, procedures, grading system, fee structure and other financial implications, preparation of SSR, data required for SSR, submission of IQAC and AQAR, etc. At the end of the session, Dr Asit Parija, Convener of the Seminar proposed the Vote of thanks.

The next Technical Session was on 'Best Practices in Higher Education Institutions, Innovative Benchmarking'. The Resource Person, Dr. B S Ponmudiraj, NAAC Adviser said, "Benchmarking is an ongoing systematic means for measuring and comparing the work processes of an organization. The scene for benchmarking can be set, by considering three fundamental performance issues; whether we are performing better than we have ever performed, whether there are any other organisations that are performing well and from whom we can learn, and are there any practices that will improve our performance? In simple terms, the practices which add commendable value to an institution and its various stakeholders are the best practices. However, they depend on many variables.

These should be kept in mind while identifying the practices.” The Organizing Secretary, Dr. D N Patri proposed the Vote of Thanks.

### **International Conference on Advances in Engineering, Science and Management**

A two-day International Conference on ‘Advances in Engineering, Science and Management’ is being organized by the Institute for Engineering Research and Publication, Bangalore, during November 28-29, 2021. The Faculty Members, Research Scholars, MBA/M. Sc. Students, Educators, Industry Professionals (CEOs, CMOs, Vice Presidents, Directors, GMs), Practitioners (Brand Specialists, Head of Marketing), Delegates, Stakeholders, Editorial Board Members of Journals, Innovators, Government Officials, Technology Experts, etc. may participate in the event.

Now-a-days the academia and researchers are not only pondering but also experiencing the overwhelming outcomes of interdisciplinary researches. Moreover, it has been ubiquitously encouraged by the governments, research agencies and by the academic institutions. The intent behind the event is to provide a common platform, where academia, delegates from industry and nominees from various Government and Private Universities and Institutions can sit together, and cherish about achievements so far, as well as deliberate upon futuristic approaches along with major bottlenecks. The deliberations will not only encompass all avenues of electrical, electronics, computer science and information technology but also through spotlight on positive and inadvertent impact of modern technologies on society.

The context of the conference is to foster as well as exaggerate the research culture among academia and industry facilitated by sprinkled out ideas by exchange of the intellect during conduct of the conference. Furthermore, the intent of the activity is to let the folks acquaint with transcendental growth, recent trends, innovations and security issues involved in the domain of communication technologies, sustainable smart electrical systems, high performance computing, big data, social media, hardware and software design, advanced software engineering, Internet of Things (IoT), e-governance, etc. and their impact on societal applications through various brainstorming sessions. The Tracks of the event are:

### ***Applied Sciences***

- Applied Physics.
- Applied Mathematics.
- Architectural Science.
- General Engineering.
- Computer Science.
- Computer Engineering.
- Communication Studies.
- Applied Physics and Electronics.
- Science and Mechanics.
- Electronics Science.
- Sound Technology.
- Systems Engineering.

### ***Engineering and Technology***

- Industrial Engineering.
- Information Management.
- Integrated Electronics Engineering.
- Information Systems.
- Engineering and Mechanical Science.
- Engineering Management.
- Ecological Engineering.
- Geological Engineering.
- Mechatronics Engineering.
- Mining Engineering.
- Nanotechnology Engineering.
- Technology Management.
- Manufacturing Engineering.
- Mechanical Engineering.
- Electrical Engineering.
- Aeronautical Engineering.

### ***Business Management and Studies***

- Managing Technology and Sustained Innovation.
- Resource Management and Sustainable Development.
- Social Entrepreneurship.
- Corporate Ethics, Responsibility, and Liability.
- Accounting and Finance.

- Advertising.
- Business Development.
- Business Planning Guides.
- Company Composition.
- Customer Service.
- E-Commerce.
- Employment Management.
- Energy Topics.
- Financial Management.
- Inventory Control.
- Insurance.
- Legal Concerns.
- Marketing.
- Market Research.
- Merchandising.

### ***Education and Technology***

- Edtech Policy Development.
- Computational Thinking.
- Edtech Ecosystems.
- Edtech Agencies.
- Distribution and Organization of Digital Media.
- Professional Learning.
- AR, VR and Mixed Reality.
- Artificial Intelligence.
- Global Learning.
- Learning Profiles.
- Learning Sciences.
- Digital Citizenship.
- Student-Centric Online Learning.

For further details, Contact Organising Secretary, Institute for Engineering Research and Publication, Fourth floor, Indique south Island RK Colony, 2<sup>nd</sup> Phase, JP Nagar, Bengaluru-560041(Karnataka), Mobile No : 091501 56932 or 076694 09022, E-mail: [info@icaesm.com](mailto:info@icaesm.com). For updates, log on to: [www.iferp.in/events/](http://www.iferp.in/events/)

### **International Conference on Emerging Trends in Engineering Technology and Medical Sciences**

A three-day International Conference on ‘Emerging Trends in Engineering Technology

and Medical Sciences’ is being organized by the Yeshwantrao Chavan College of Engineering, Wanadongri, Nagpur (Maharashtra) during October 21-23, 2021. The event is focused on research and emphasizes the latest technological advancements in the field of Engineering and Health Informatics. The researchers, educators, students, practitioners, technocrats, and health professionals from across academia, government, industry and nongovernmental organizations may participate in the event to discuss, share and promote current works and recent accomplishments. Distinguished people will be invited to deliver keynote speeches and invited talks on trends and significant advances in the emerging technologies. The topics of the event are:

### ***Engineering Technology***

- AI and Data Science.
- Robotics and Cybernetics.
- Circuits and Systems.
- Devices, Materials and Processing.
- Control and Instrumentation.
- VLSI and Nanotechnology.
- Power, Energy and Power Electronics.
- Antenna and Microwave Techniques.
- Communications Networks, IoT.
- Computer Architecture and Embedded Systems.
- Signal and Image Processing.
- Security and Privacy.
- Aerospace Technology.
- Disasters and Humanitarian Technology.
- Engineering Management.
- Engineering Education.
- Marine and Offshore Engineering.
- Multimedia Engineering.
- Photonics.
- Software and Database Systems.
- Social Implications of Technology.
- Block chain and Emerging Technology.
- Technology Innovations in Medical Science
- Computational Biology and Biomedical Informatics.

- Biomedical Engineering.
- Artificial Intelligence, Machine Learning and Deep Learning in Health Care.
- AR/VR/MR in Health Care.
- Assistive Technologies, Home Monitoring.
- Biomedical Data Mining.
- Biomedical Instrumentation and Electrical Stimulation.
- Biomedical Signal Processing.
- Cloud computing and Big Data for Healthcare.
- Computer Aided Detection and Diagnosis.
- Cyber Medicine.
- Data Science and Predictive Analytics.
- Diagnostic Devices.
- Digital Innovation on Health Care.
- Edge and Fog Computing for Medical System and Applications.
- Health Applications.
- Health Monitoring Devices.
- Health care Communication Networks.
- Integrating Wearable Devices into Patient Care.
- Intelligent and Information Systems.
- Internet of Medical Things.
- Patient Portal.
- Telemedicine.

For further details, contact Organising Secretary, Yeshwantrao Chavan College of Engineering, Hingna Road, Wanadongri, Nagpur-441110 (Maharashtra), Mobile: 09850620111, E-mail: [icetems21@gmail.com](mailto:icetems21@gmail.com). For updates, log on to: <https://www.ieee.org/conferences/publishing/templates.html>

### **International Conference on Humanities, Social Sciences, Management and Education**

A three-day International Conference on

‘Humanities, Social Sciences, Management and Education’ is being organized by NIIT University, Neemrana, Rajasthan during October 28-30, 2021. This conference attempts to provide an international platform for the academicians, researchers, industry personnel and students to share their research studies and innovative ideas in their respective areas.

Digitization and advancements in information technology has significantly proliferated Global information mobilization. Due to the massive mobility across humanity, the era of multi-dimensionality has come into existence. The word globalization is not just limited to economy or financial systems. In fact, the intervention of Globalization in day-to-day life and, this quantitative and qualitative shift from trade or professional opportunities to normal human existence has strong links with UNO’s Sustainable Development Goals. The Themes of the event are:

- Language and Literature.
- Social Science.
- Management and Allied Fields.
- Education and Allied Fields.
- Interdisciplinary and Innovative Titles are Highly Encouraged.

For further details, contact Organising Secretaries:

Prof. Gurendra Nath Bhardwaj at E-mail: [gurendra.bhardwaj@niituniversity.in](mailto:gurendra.bhardwaj@niituniversity.in)

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Dr. Yogendra Pal at E-mail : [yogendra.pal@niituniversity.in](mailto:yogendra.pal@niituniversity.in)

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Mobile No. 09828819990

For updates, log on to: <https://www.niituniversity.in/entente2021>



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# THESES OF THE MONTH

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## SCIENCE & TECHNOLOGY

### A List of doctoral theses accepted by Indian Universities (Notifications received in AIU during the month of July-August, 2021)

#### BIOLOGICAL SCIENCES

##### Bioinformatics

1. Santhosh Kumar, N. **Structural characterization of somatostatin receptors and their ligands using in silico approaches.** (Dr. Thirumurthy Madhavan), Department of Bioinformatics, SRM University, Kattankulathur, Chennai.

##### Biotechnology

1. Suriya Prakash, R. **Strength and properties determination of boric acid and borax decahydrate for radiation shielding efficiency of bio-caulk incorporated High Performance Concrete (HPC).** (Dr. Kantha Deivi Arunachalam), Department of Biotechnology, SRM University, Kattankulathur, Chennai.

2. Vishwakarma, Veena. **In vitro studies on chemopreventive effects of silymarin and andrographolide against nickel induced genotoxicity in cultured human cells.** (Dr. Anita Yadav), Department of Biotechnology, Kurukshetra University, Kurukshetra.

##### Life Science

1. Baruah, Joyashree. **Assessment of selection criteria for development of high yielding variety of *Capsicum Chinense* jacq.** (Dr. M Lal), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

2. Dihingia, Anjum. **A study on the prophylactic role of vitamin K against impaired glucose metabolism and vascular inflammation in type 2 diabetes.** (Dr. J Kalita), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

3. Jagdeo, Varkekar Namrata. **Processing of *Parkia biglandulosa* W & A for traditional food formulations of Manipur: evaluation of nutritional quality and storage stability.** (Dr. Ng. I. Singh), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

4. Paddar, Masroor Ahmad. **Exploring the molecular mechanism(s) of Trastuzumab resistance in HER2 positive breast cancers.** (Dr. Fayaz Malik), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

5. Sadat, Anwar. **Understanding the molecular mechanism of GroEL/ES assisted folding of a substrate.**

(Dr. Kausik Chakraborty), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

6. Sharma, Surbhi. **Elucidating the role of a novel circadian transcript in retina.** (Dr. Souvik Maiti), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

7. Singh, Manoj Kumar. **Investigating the effects of chronic systemic inflammation on zebrafish liver.** (Dr. Chetana Sachidanandan), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

8. Theresa, Shalini R M. **Functional expression and characterization of wax synthase from sunflower (*Helianthus annuus*).** (Dr. Asha Martin), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

9. Thorat, Meghana Namdeo. **Bacterial nanocellulose by *Komagataeibacter* strain PG2: Production, characterization and potential applications.** (Dr. Syed G Dastager), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

#### EARTH SYSTEM SCIENCES

##### Environmental Science

1. Geetha Suvarna, A. **Molecular characterization and comparative analysis of lectin from *Canavalia Spp* of Dakshina Kannada Region.** (Dr. Bhagya B Sharma and Dr. Arun Bhagwath), Faculty of Allied Health and Basic Sciences, Yenepoya (Deemed to be University), Mangaluru.

#### ENGINEERING SCIENCES

##### Civil Engineering

1. Shrivastava, Ruchi Pankaj. **Consolidation by dissipating radial seepage flow using prefabricated vertical geodrain reinforced clay beds.** (Dr. Sweta P Dave), Department of Civil Engineering, Gujarat Technological University, Ahmedabad.

##### Computer Science & Engineering

1. Audichya, Milind Kumar. **A computational linguistic approach for metadata generation for Hindi poetry.** (Dr. Saini Jatinderkumar Ramdass), Department of Computer Science and Engineering, Gujarat Technological University, Ahmedabad.



2. Bala Krishna, G. **Agriculture As A service (AAAS): A ESBL cloud service model for IOT supported agriculture data analytics.** (Dr. M Nageswara Rao), Department of Computer Science & Engineering, Koneru Lakshmaiah Education Foundation, Guntur.

3. Bhatt, Priyang Prakashchandra. **Novel revelation frameworks for prediction of BOTNET attacks in Internet of Things (IoT).** (Dr. Bhasker V Thakker), Department of Computer Science & Engineering, Gujarat Technological University, Ahmedabad.

4. Borukati, Sandhya Rani. **Development, characterization and durability of sansevieria trifasciata-carbon fiber reinforced polymer hybrid composites.** (Dr. A Ramesh Dr. B. Durga Prasad), Department of Computer Science & Engineering, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

5. Harsh, Shree. **Bilingual code-mixing typology in machine translation system.** (Dr. G Rama Krishna and Dr. T V Prasad), Department of Computer Science & Engineering, Koneru Lakshmaiah Education Foundation, Guntur.

6. Harvinder Singh. **QoS scheduling in cloud computing environment using evolutionary approach.** (Dr. Sanjay Tyagi and Dr. Pardeep Kumar), Department of Computer Science and Engineering, Kurukshetra University, Kurukshetra.

7. Kathiria, Preeti Vipul. **Document analysis for trend estimation of research scenario in Indian Universities.** (Dr. Harshal A Arolkar), Department of Computer Science & Engineering, Gujarat Technological University, Ahmedabad.

8. Muralidhar, K. **Approaches to overcome the connectivity, storage and computing capability limitations of mobile nodes in MANETS through mobile cloud.** (Dr. K. Madhavi), Department of Computer Science & Engineering, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

9. Poornima, S. **Prediction of rainfall using intensified LSTM and rule based crop recommendation over drought period.** (Dr. M. Pushpalatha), Department of Computer and System Science, SRM University, Kattankulathur, Chennai.

10. Rai, Prerana. **Advancements in the estimation of software development efforts using computational techniques.** (Dr. Dinesh Kumar Verma), Department of Computer Science & Engineering, Jaypee University of Engineering and Technology, Guna.

11. Rajnikant, Nirmal Khyati. **Improving and optimizing K-prototype clustering algorithm using frequency based dissimilarity measurement and map-reduce paradigm.** (Dr. K V V Satyanarayana), Department of Computer Science & Engineering, Koneru Lakshmaiah Education Foundation, Guntur.

12. Rao, M Subba. **Machine learning approaches for texture classification using novel feature selection methods.** (Dr. B Eswara Reddy), Department of Computer Science & Engineering, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

13. Shrivastava, Kush. **Analysis and design of text classification based applications using deep learning algorithms.** (Prof. Shishir Kumar), Department of Computer Science & Engineering, Jaypee University of Engineering and Technology, Guna.

#### **Electrical & Electronics Engineering**

1. Anuradha, C. **Design and development of multi-port DC-DC converters for DC micro-grid applications.** (Dr. N. Chellammal), Department of Electrical & Electronics Engineering, SRM University, Kattankulathur, Chennai.

2. Pardeep Kumar. **Study of photocatalytic and disinfection properties of Tio2 based nanocomposites for water treatment application.** (Dr. Virender Singh Kundu and Dr. Baljeet Singh Saharan), Department of Electronic Science, Kurukshetra University, Kurukshetra.

3. Ravi Kumar. **Functionalization of graphene oxide for gas sensor applications.** (Dr. Dinesh Kumar and Dr. Mukesh Kumar), Department of Electronic Science, Kurukshetra University, Kurukshetra.

4. Sivaperumal, P. **Power quality enhancement using interline dynamic voltage restorer.** (Dr. S. S. Dash), Department of Electrical & Electronics Engineering, SRM University, Kattankulathur, Chennai.

5. Suresh Kumar, A. **Implementation of certain advanced SVPWM strategies for multi-level inverters.** (Dr. K Sri Gowri and Dr. M Vijaya Kumar), Department of Electrical Engineering, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

6. Venkateswarlu, B. **Optimal operation of power system with static and transient security constraints.** (Dr. K. Vaisakh), Department of Electrical Engineering, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

#### **Electronics & Communication Engineering**

1. Chiluka, Ramesh. **Image restoration using patch based regression analysis with global sparse features.** (Dr. K S N Murthy), Department of Electronics & Communication Engineering, Koneru Lakshmaiah Education Foundation, Guntur.

2. Das, Nitish. **Development of gradient-based optimization techniques to solve the assignment problem in high-speed realtime applications.** (Dr. Aruna Priya), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

3. Devireddy, Sreenivasa Rao. **Design and analysis of planar UWB antennas with controllable band-notched characteristics for wireless communication**

**applications.** (Dr. I Govardhani), Department of Electronics & Communication Engineering, Koneru Lakshmaiah Education Foundation, Guntur.

4. Dilipbhai, Sachaniya Prashant. **An efficient design of corrugated horn antenna.** (Dr. Jagdishkumar M Rathod), Department of Electronics & Communication Engineering, Gujarat Technological University, Ahmedabad.

5. Gubbala, Naga Raju. **An optimized secure hybrid watermarking in medical imaging.** (Dr. P Pardhasaradhi), Department of Electronics & Communication Engineering, Koneru Lakshmaiah Education Foundation, Guntur.

6. Narendran, S. **Design and modeling of digital superconducting logic circuits.** (Dr. J Selvakumar), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

7. Suryakala, S Vasanthadev. **Exploratory study of non-invasive blood glucose classification and prediction using NIR diffuse reflectance spectra: A chemometric approach.** (Dr. Shanthi Prince), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

8. Uma Kumari, C R. **Design and development of intrinsic fiber optic sensors for salinity, temperature and refractive index measurements for ocean observation.** (Dr. R. KUMAR), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

#### Genetic Engineering

1. Abiramavalli, M. **Characterization of Sucrose Transporters (SUTS) in nicotiana tabacum cv petit havana and elucidating the role of NTSUT3 in root exudation.** (Dr. B. Usha), Department of Genetic Engineering, SRM University, Kattankulathur, Chennai.

#### Mechanical Engineering

1. Jagdishgiri, Goswami Jigishkumar. **Development and performance analysis of hybrid biodiesel as sustainable fuel for automotive applications.** (Dr. Pravin P Rathod), Department of Mechanical Engineering, Gujarat Technological University, Ahmedabad.

2. Saradesh, K M. **Grain refinement and age hardening studies of 24karat and 22karat gold alloyed with titanium.** (Dr. G. S. Vinodkumar), Department of Mechanical Engineering, SRM University, Kattankulathur, Chennai.

3. Srithar, A. **Experimental investigation on machining characteristics of AISI D2 steel.** (Dr. K. Palani Kumar Dr. B. Durga Prasad), Department of Mechanical Engineering, Jawaharlal Nehru Technological University Anantapur, Ananthapuram.

4. Tushar, Parshottambhai Gundarneeeya. **Performance analysis of journal bearing with nano-lubricants.** (Dr.

D. P. Vakharia), Department of Mechanical Engineering, Gujarat Technological University, Ahmedabad.

#### MATHEMATICAL SCIENCES

##### Mathematics

1. Balaganesan, M. **A study on replacement problems under uncertain environment.** (Dr. K. Ganesan), Department of Mathematics, SRM University, Kattankulathur, Chennai.

2. Gavaraskar, Kirti Nitin. **Disclosure criteria for patents: Evolution and implications.** (Dr. Paromita Banerjee), Faculty of Mathematical and Information Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

3. Lakshmi Priya, S. **Study of immiscible flows with heat and mass transfer.** (Dr. A. Govindarajan), Department of Mathematics, SRM University, Kattankulathur, Chennai.

4. Leoni, Sharmila S. **Novel hybrid fuzzy neural network algorithms for datamining.** (Dr. C. Dharuman), Department of Mathematics, SRM University, Kattankulathur, Chennai.

5. Mahendran, R. **Fitted finite difference method and asymptotic numerical method for third order singularly perturbed delay differential equations.** (Dr. V. Subburayan), Department of Mathematics, SRM University, Kattankulathur, Chennai.

6. Manjula, Vinnakota. **Heat and mass transfer effects on MHD casson fluid flow through porous media in the presence of thermal radiation.** (Dr. K V Chandra Sekhar), Department of Mathematics, Koneru Lakshmaiah Education Foundation, Guntur.

7. Sangeetha, S. **Squeeze film characteristics of couple stress and micropolar fluid in bearings with different geometries.** (Dr. A. Govindarajan), Department of Mathematics, SRM University, Kattankulathur, Chennai.

8. Vidhya, V. **A study on single and multiple objectives fuzzy transportation problems.** (Dr. K. Ganesan), Department of Mathematics, SRM University, Kattankulathur, Chennai.

#### MEDICAL SCIENCES

##### Medicine

1. Thermadam, Tim Peter. **Cheiloscopy and dermatoglyphics for gender determination and personal identification: A descriptive study.** (Prof. Laxmikanth Chatra and Prof. Auswaf Ahsan K P), Department of Oral Medicine and Radiology, Yenepoya (Deemed to be University), Mangaluru.

##### Nursing

1. Renford, Nancy Grace Robert. **Impact of nurse-led interventional programme on quality of life of caregivers of children with autism spectrum disorder.** (Dr. K. Kanchana Mala), Department of Nursing, SRM University, Kattankulathur, Chennai.

## Pharmaceutical Science

1. Bansal, Kushal Kumar. **Design, synthesis, characterization and biological evaluation of anticancer and anti-infective activities of thiazole based heterocycles.** (Dr. Prabodh Chander Sharma), Department of Pharmaceutical Sciences, Kurukshetra University, Kurukshetra.

2. Basu, Debdoot. **Effect of vitamin D supplementation in patients with cardiometabolic disorders: A clinical study in Ahmadabad population.** (Dr. Anita A. Mehta), Department of Pharmacy, Gujarat Technological University, Ahmedabad.

3. Devchandbhai, Ramani Vinodkumar. **Formulation and evaluation of nanoparticles of HMG - CoA reductase inhibitor.** (Dr. Girish K. Jani), Department of Pharmacy, Gujarat Technological University, Ahmedabad.

4. Manasa, K. **Neuroprotective role of camalexin in aldehyde dehydrogenase mediated benomyl induced Parkinson's disease in zebrafish and animal models.** (Dr. V. Chitra), Department of Pharmacy, SRM University, Kattankulathur, Chennai.

5. Naik, S B Thirumalesh. **Formulation and evaluation of mini tablets filled hard gelatin capsules for preventing stroke in postoperative transient ischemic attack patients.** (Dr. M Purushothaman), Department of Pharmaceutical Science, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

6. Pradeep Kumar, Y. **Improvement of oral bioavailability of agomelatine and tacrolimus by using colloidal carriers.** (Dr. Jukanti Raju and Dr. D. Subba Rao), Department of Pharmaceutical Science, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

## Physiology

1. Anandhalakshmi, S. **Assessment of neurocognitive functions in individuals with type 2 diabetes mellitus.** (Dr. M. Thirunavukkarasu), Department of Physiology, SRM University, Kattankulathur, Chennai.

## PHYSICAL SCIENCES

### Chemistry

1. Elavarasan, S. **Development of heterogeneous metal organic hybrid catalysts for C-C and C-N bond formation reactions.** (Dr. M. Sasidharan), Department of Chemistry, SRM University, Kattankulathur, Chennai.

2. Kesavan, T. **Development of carbon based electrode materials for lithium ion batteries and supercapacitor applications.** (Dr. M. Sasidharan), Department of Chemistry, SRM University, Kattankulathur, Chennai.

3. Morri, Ashok Kumar. **Development of metal-free syntheses of alkynes, thioamide and 1,3-dienes from 1,1-dibromoalkenes and their mechanistic investigations.** (Dr. Subhash Ghosh), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

4. Nair, S Kanakangi. **Synthesis and fabrication of flexible lead-free piezoelectric nanocomposites for energy harvesting applications.** (Dr. Surendran K P), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

5. Narasimhamurthygandikota. **Design, synthesis and characterization of nitrogen and oxygen heterocyclics: 3-phenacylideneoxindoles, [1,2,4] triazolo[4,3-a] pyridine, aryl azoxy sulfides and sulfones of benzo dioxane.** (Dr. Pradeep Kumar Brahman), Department of Chemistry, Koneru Lakshmaiah Education Foundation, Guntur.

6. Sharma, Abhilash. **Development of transition-metal free cascade strategies for ortho-functionalization of arenes, synthesis of arylated coumarins and indoloquinazolinones via arynes.** (Dr. P Gogoi), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

7. Sharma, Sumit. **Medicinal chemistry around nitroimidazole scaffold to discover new generation anti-TB leads.** (Dr. Parvinder Pal Singh), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

### Nanotechnology

1. Davis, Deepak. **An investigation on the feasibility of Cr<sub>2</sub>AlC max phase for automotive applications.** (Dr. Sheela Singh), Department of Nanotechnology, SRM University, Kattankulathur, Chennai.

2. Lakhera, Sandeep Kumar. **UV-visible light driven metal oxide photocatalysts for water-splitting (H<sub>2</sub> production).** (Dr. B. Neppolian), Department of Nanotechnology, SRM University, Kattankulathur, Chennai.

### Physics

1. Pokam, Rekharani. **Comprehensive investigations on luminescence properties of rare earth ions (Sm<sup>3+</sup>, Dy<sup>3+</sup>, Ho<sup>3+</sup> and Nd<sup>3+</sup>) doped BaPbAlF<sub>6</sub> glasses for photonic applications.** (Dr. M Venkateswarlu and Prof. A Srinivasa Rao), Department of Physics, Koneru Lakshmaiah Education Foundation, Guntur.

2. Rimpi Kumari. **Surface Patterning of LDPE, HDPE, and PC polymers by oblique Ar<sup>+</sup> irradiation.** (Dr. Sanjeev Aggarwal), Department of Physics, Kurukshetra University, Kurukshetra.

3. Saravanan, G. **Synthesis and multifunctional properties of tausonite (SrTiO<sub>3</sub>) compound doped with ceria (CeO<sub>2</sub>), Tungsten trioxide (WO<sub>3</sub>) and gallium sesquioxide (Ga<sub>2</sub>O<sub>3</sub>) materials.** (Dr. K. Ramachandran), Department of Physics, SRM University, Kattankulathur, Chennai. □

*Refer University News Volume 59 Issue No. 38 (September 20-27, 2021), in the advertisement of Bharati Vidyapeeth, (Deemed to be University), Pune (for requirement of Principal in Yashwantrao Mohite College, Pune), the matter inadvertently included in it as (Affiliated to Shivaji University, Kolhapur) may be treated as dropped.*



**INDIAN INSTITUTE OF TECHNOLOGY DELHI  
HAUZ KHAS, NEW DELHI-110016**

ADVT. NO: IITD/EST-1/02/2021

**ADVERTISEMENT FOR THE POST OF ENGLISH LANGUAGE  
INSTRUCTOR (ON CONTRACT)**

Applications are invited from Indian Nationals for appointment to the post of English Language Instructor (on contract) in the Department of Humanities & Social Sciences of the Institute as follows:-

<b>Name of Post</b>	English Language Instructor
<b>No. of Posts</b>	02 (General-01 & OBC-01)
<b>Salary</b>	Consolidated Salary of Rs. 60,000/- per month + HRA@24% of the consolidated salary.
<b>Tenure</b>	Initially for one year, extendable up to three years.
<b>Website Link for advt. details</b>	<a href="https://home.iitd.ac.in/jobs-iitd/index.php">https://home.iitd.ac.in/jobs-iitd/index.php</a>
<b>Address for correspondence</b>	Joint Registrar (E-1), Indian Institute of Technology Delhi, Hauz Khas, New Delhi-10016. <b>Telephone:</b> +91-11-26591716/26591709, <b>E-mail:</b> fac_recruit@admin.iitd.ac.in
<b>Last date of application</b>	<b>31 October 2021</b>

Any further query relating to the post may be made through email to [fac\\_recruit@admin.iitd.ac.in](mailto:fac_recruit@admin.iitd.ac.in).

**Joint Registrar (E-1)  
IIT Delhi**



**INDIAN INSTITUTE OF TECHNOLOGY  
DELHI  
HAUZ KHAS, NEW DELHI-110016**

ADVT. NO. IITD/EST-1/03/2021

**SPECIAL DRIVE FOR RECRUITMENT OF  
SC/ST/OBC/ PWD/EWS CATEGORY**

**ADVERTISEMENT FOR ASSISTANT  
PROFESSOR / SYSTEM ARCHITECT**

Applications are invited from Indian Citizens belonging to SC/ST/OBC/PWD/EWS category for the post of Assistant Professor/System Architect in all the academic units of the Institute under Special Recruitment Drive. The details of the advertisement is available in the IIT Delhi website: (<https://home.iitd.ac.in/jobs-iitd/index.php>). Last date for submission of application is **31st October 2021**. For online submission of application, use the link: <https://ecampus.iitd.ac.in/IITDFR-0/login>. For any further inquiry email may be sent to : [fac\\_recruit@admin.iitd.ac.in](mailto:fac_recruit@admin.iitd.ac.in)

**Joint Registrar (E-1)  
IIT Delhi**



**Matsyodari Shikshan Sanstha, Jalna  
Motibag, Near Railway Over Bridge,  
Jalna-431203**

**WANTED**

Applications are invited for the following post. Eligible candidates should submit their application along with all necessary documents **within 15 days** from the date of publication of this advertisement.

Sr. No.	Name of the College	Post	Reservation	Remark
01	MSS's Arts, Commerce & Science College, Ambad, Tq. Ambad, Dist. Jalna	Principal	OPEN to All	Granted

- Educational qualification, pay scale and service conditions are as per rules and regulations prescribed by the UGC, Govt. of Maharashtra and Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.
- The applications should be submitted to **The President, Matsyodari Shikshan Sanstha, Motibag, Near Railway Over Bridge, Jalna, Dist. Jalna, Pin-431203.**
- Candidates who are already in service, should apply through proper channel.

**Administrative Officer  
Secretary**

**DEVA MATHA COLLEGE, KURAVILANGAD  
KOTTAYAM, 686 633, KERALA  
Phone: 04822 232951, 230233  
Website: [www.devamatha.ac.in](http://www.devamatha.ac.in)**

**WANTED**

**ASSISTANT PROFESSORS**

Applications are invited from eligible candidates to the following three (3) Assistant Professor posts in Deva Matha College, Kuravilangad against permanent vacancies. One vacancy is reserved for persons with benchmark disabilities mentioned in clause 34 of the Rights of Persons with Disability Act, 2016. Qualifications, age, approval, etc. will be as per norms stipulated by UGC, Government of Kerala and Mahatma Gandhi University, Kottayam. The application form and other details can be had from the college office on all working days or can be downloaded from the college website. Duly filled in application along with copies of all the required documents, Rs. 1500/- by cash or Rs. 1550/- by Demand Draft in favour of Principal, Deva Matha College payable at Kuravilangad as application fee, must be submitted to the college office during working hours either by hand or post **on or before the 30<sup>th</sup> day** from the date of this notification.

Subject	Category	No. of Posts
Mathematics	Community Quota	1
	Open Quota	1
	Persons with Disabilities Quota (Ref: G.O.(Ms)No.96/2021/HEDN dated 15.02.2021)	1

Kuravilangad  
11.10.2021

**Sd/-  
Manager**

**The Atpadi Education Society's  
Shrimant Babasaheb Deshmukh  
Mahavidyalaya, Atpadi  
Tal. Atpadi, Dist. Sangli, 415301 (Maharashtra)  
(Affiliated to Shivaji University, Kolhapur)**

**WANTED**

Applications are invited from eligible candidates for the following posts.

Sr. No.	Designation	Vacant Post	Unreserved (Open) Post
A.	Principal	1	1

**Note:**

For detailed information about post, qualifications and other terms and conditions, please visit University website: [www.unishivaji.ac.in](http://www.unishivaji.ac.in).

Place: Atpadi Secretary  
Date: 01-10-2021 The Atpadi Education Society, Atpadi,  
Tal. Atpadi, Dist. Sangli

**ATTENTION ADVERTISERS**

Advertisers are requested to send their text matter at following Email IDs:

1. [advtn@aiu.ac.in](mailto:advtn@aiu.ac.in)
2. [publicationsales@aiu.ac.in](mailto:publicationsales@aiu.ac.in)

**Text matter may be sent in MS-Word document file OR in PDF file in original (as per Mechanical Data/Size of the Advertisement).**

All the correspondence may be addressed to the **Under Secretary (Publication & Sales)**, Association of Indian Universities, AIU House, 16 Comrade Indrajeet Gupta Marg, New Delhi-110002.

**Mob: 09818621761**

**Phone Office: 91-11-23230059, Extn. 208/213.**

**CHINCHANI TARAPUR EDUCATION SOCIETY'S**

**Shri Purushottamdas Laldas Shroff College of Arts & Commerce  
At/PO. Chinchani, Tal. Dahanu, Dist. Palghar-401503**

APPLICATIONS ARE INVITED FOR THE FOLLOWING **CLOCK HOUR BASIS** POSTS  
FOR THE ACADEMIC YEAR 2021-2022

**AIDED**

Sr. No	Cadre	Subject	Total No. of CHB Posts	Post Reserved for
1	Assistant Professor	English	04	01-SC 01-0BC 02-OPEN
2	Assistant Professor	Mathematics		
3	Assistant Professor	Business Law		
4	Assistant Professor	EVS		

The posts for the reserved category candidates will be filled in by the same category candidates (Domicile of State of Maharashtra) belonging to that particular category only.

Reservation for women will be as per University Circular No. BCC/16/74/1998 dated 10<sup>th</sup> March, 1998. 4% reservation shall be for the persons with disability as per University Circular No. Special Cell/ICC/2019-20/05 dated 05<sup>th</sup> July 2019.

Candidates having knowledge of Marathi will be preferred.

“Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18<sup>th</sup> July, 2018, Government of Maharashtra Resolution No. Misc-2018/C.R.56/18/UNI-1 dated 8<sup>th</sup> March, 2019 and University Circular No. TAAS/(CT)ICD/2018-19/1241 dated 26<sup>th</sup> March, 2019 and revised from time to time”.

Remuneration of the above post will be as per University Circular No. TAAS (CT)/01/2019-2020 dated 2<sup>nd</sup> April, 2019.

The Government Resolution & Circular are available on the **Website: mu.ac.in**.

Application with full details should reach the PRINCIPAL, Chinchani Tarapur Education Society's College of Arts & Commerce, At/PO. Chinchani, Tal. Dahanu-401503 **within 15 days** from the date of publication of this advertisement. **This is University approved advertisement.**

Sd/-  
PRINCIPAL

## WANTED

**Adarsh Shikshan Sanstha, Beed, Tq. & Dist. Beed** invites applications with duly attested xerox copies of requisite documents for below mentioned posts at **P.G. level within 15 days** from the date of publication of this advertisement.

Sr. No.	Name of the Post	Name of the College	Subject	Number of the posts	Reservation	Status of Grant
1.	<b>Asst. Professor</b>	Kalikadevi Arts, Commerce & Science College, Shirur (Ka.), Tq. Shirur (Ka.), Dist. Beed.	(A) English	02	01 Open 01 S.C.	Permanent Non-Grant
			(B) Commerce	02	01 Open 01 S.C.	

- 1) Educational qualification and other requirements will be as per norms specified by U.G.C., State Government of Maharashtra, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S.) from time to time.
- 2) Backward class candidates should send one copy of their application to Dy. Registrar, Special Cell Dept., Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S.).
- 3) 30% posts are reserved for women, 4% posts are reserved for persons with disability. 10% posts are going to reserved for economically weaker section within unreserved posts, therefore, number of posts earmarked for unreserved category may change accordingly.
- 4) Percentage of marks is relaxed from 55% to 50% for S.C., S.T. & P.W.D. candidates.
- 5) Caste Reservation for VJ-A, NT-B, NT-C and NT-D is interchangeable.

**Note:-** No T.A., D.A. will be paid for attending interview.

**Address for the correspondence:-**

To  
Principal  
Kalikadevi Arts, Commerce and Science College  
Shirur (ka.), Tq. Shirur (ka.), Dist. Beed 413249  
(Maharashtra)

**PRINCIPAL**

**SECRETARY**

## WANTED

**Adarsh Shikshan Sanstha, Beed, Tq. & Dist. Beed** invites Applications with duly attested xerox copies of requisite documents for below mentioned post **within 15 days** from the date of publication of this advertisement.

Sr. No.	Name of the post	Name of the College	Number of the post	Reservation	Status of Grant	Remarks
1.	<b>Principal</b>	Kalikadevi Arts, Comm. and Sci. College, Shirur (Kasar), Tq. Shirur (Kasar), Dist. Beed	01	Unreserved	Grant-in-Aid	Post is approved by Joint Director subject to the final decision in the Writ Petition No. 12051/2015.

Educational qualification, research publication, API score based on PBAS, experience, tenure, pay scale etc. are as per the norms specified by U.G.C., State Government of Maharashtra, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad (M.S.) from time to time.

**Note:-** No T.A., D.A. will be paid for attending interview.

**Address for the correspondence:**

To  
The Secretary  
Adarsh Shikshan Sanstha,  
S.K.H. Medical College Campus, Shivajinagar, Beed,  
Tq. & Dist. Beed 431122 (Maharashtra)

**President**

**Secretary**

## Announcement

The **Special Number of the University News** on ‘**Realising Sustainable Development Goals through Higher Education Institutions**’ is being brought out on various themes. The **Special Issue** will cover articles of eminent educationists and policy makers. Readers of the University News are also invited to contribute to the Special Number by submitting papers/articles on above theme by **October 25, 2021**. The papers will be published in the Issue subject to the approval of the Editorial Committee of the University News. The Issue shall contain papers on Sustainable Development Goals on the following Subthemes:

- A. *Implementation of SDGs in India: Status, Scope and Future Action.*
- B. *Strategies and Approaches in Teaching-Learning to Realize SDGs.*
- C. *Realising SDGs through Research and Innovation: Strategies and Approaches.*
- D. *Engagement of Universities with Society to Realise SDGs.*
- E. *Creating Policies and Roadmap for Realizing SDGS through Indian Higher Education.*
- F. *Individual Article on each of the 17 SDGs.*

### Guidelines for Contributors

Articles submitted for the Journal should be original contributions and should not be under consideration for any other publication at the same time. A declaration is to be made by the author in the covering letter that the paper is original and has not been published or submitted for publication elsewhere.

Manuscripts including tables, figures and references should be around 3000-4000 words for articles, 2000 – 5000 words for Convocation Addresses, 1000 words for Book Reviews and 600 words for Communications. All the manuscripts should typed in double-space with 12 point font and ample margin on all sides on A 4 size paper.

The cover page should contain the title of the paper, author’s name, designation, official address, address for correspondence, contact numbers and e-mail address.

The main text should not contain footnotes. References should be given at the end of the manuscript and should contain only those cited in the text of the manuscript. The full reference should be listed at the end in alphabetical order running the following style:

#### Books

- Miles, M., and Huberman, M., (1994). *Qualitative Data Analysis*. London: Sage.

## Articles

- Over, R.(1982). Does research productivity decline with age? *Higher Education* 11: 511-20.

## Chapter in a Book

- Rendel, M. (1986). How many women academics 1912-1977? In R. Deem(ed.), *Schooling for Women's Work*. London: Routledge.

Authors may send their articles addressing to the Editor through e-mail: **ramapani.universitynews@gmail.com/rama.pani2013@gmail.com with a copy to universitynews@aiu.ac.in.**

Authors are responsible for any copyright clearance, factual inaccuracies and opinion expressed in their paper.

The final decision on the acceptance or otherwise of the article rests with the Editorial Committee and it depends entirely on its standard and relevance. The article accepted may be modified to meet the journal's standards of contents, presentation and style. Authors may also be requested to revise their manuscripts before they can be accepted for publication. Correspondence in this regard will be done with the first named author unless otherwise indicated.

The Editor is free to make editorial corrections in the content as well as title of the article and change the title in accordance with the content of the article as well as the overall theme of the Issue.

Maximum time taken for processing the article is six months. Contributors are free to send the material to any other publication after a period of six months from the date of their submitting the article to the University News, if they do not receive any intimation from AIU.

Author will receive two complementary copies of the Journal immediately after its publication.

AIU may re-use the articles published in the University News for its various other publications including University News.

AIU may extend courtesy to other journals or websites to use the articles published in the University News if due credit is given to the author(s) of the article(s) and the University News.

Manuscripts be sent to: The Editor, University News, Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi- 110 002. E-mail: *ramapani.universitynews@gmail.com / universitynews@aiu.ac.in* on or before **October 25, 2021.**

**Editor, University News**



## **AIU Invites Proposals for Collaboration for organizing *ANVESHAN- Student Research Conventions-2021-22***

Association of Indian Universities, New Delhi organizes *Anveshan-Student Research Convention* every year to identify and nurture the young talents and budding researchers in the Indian Universities. In these Conventions, Innovative Research Projects are invited from the Students (Undergraduate to Ph.D. level), and assessed by a group of experts of the field on a well laid criteria. The best Research Projects are conferred with certificates and awards. The Projects are invited from the disciplines of Basic Sciences and Applied Sciences, Engineering and Technology, Agriculture and allied fields, Health Sciences and allied fields, Social Sciences; Humanities; Commerce; Business Management; and Law. The Conventions are to be held at two levels i.e. **Zonal and National**. The duration of each convention is of **two days**. These events are to be conducted in the current Financial Year i.e. before **March 31, 2022**.

AIU invites proposals from member universities/institutions for hosting these Conventions in Five Zones - East, West, North, South, Central and One National Level Convention. Interested Member universities/institutions may send their Expression of Interest (EoI) along with proposal duly endorsed by the Head of the Institutions to AIU at the address given below:

**Dr Amarendra Pani**  
**Joint Director and Head**  
**Association of Indian Universities**  
**AIU House, 16 Comdrade Indrajit Gupta Marg**  
**New Delhi – 110 002**  
**E-mail: *researchaiu@gmail.com***

**The proposals are required to be submitted latest by October 20, 2021.** The Event will be finalized on mutually convenient dates and terms and conditions laid down by AIU. For any further query, please contact on: 011-23230059, Extn-202/209, **E-mail: *researchaiu@gmail.com***. The details can also be downloaded from AIU Website: ***www.aiu.ac.in***

**N.B.: AIU is not a Funding Organization. All these events are AIU activities for which Collaboration from member institutions are solicited. Primarily, the events will be conducted under the banner of AIU. The details of terms and conditions will be communicated on selection of the Proposal. In case of the events to be organized in physical/ conventional mode, a token financial support will be provided by AIU.**

**Proposal must be sent to AIU with the Approval /Endorsement of Vice Chancellor/ Head of the Institution.**

# Announcement

Edited Volume

on

*'75 Years of Higher Education in Independent India'*

An Edited Volume is being brought out on the theme '**75 Years of Higher Education in Independent India**' to commemorate *75 years of Indian Independent, Azadi Ka Amrit Mahotsav*. The Volume will cover articles of eminent educationists and policy makers. Readers of the University News are also invited to contribute to the Edited Volume by scholarly papers on the above theme, and below sub theme by December 15, 2021. The Volume shall contain papers on the following Subthemes:

- i. *Significant Landmarks in Higher Education in Independent India.*
- ii. *Higher Education Policies and their Impact.*
- iii. *Democracy, Plurality, Equality and Universality of Indian Higher Education.*
- iv. *Rise of Research, Innovation and Entrepreneurship in Independent India.*
- v. *Student dynamics in Indian Higher Education.*
- vi. *Impact of Indian Higher Education on Community.*
- vii. *Functional Dimensions of Indian Higher Education: Governance, Leadership, Financing.*
- viii. *Professional Education in India.*
- ix. *Islands of Excellence in Indian Higher Education.*
- x. *Higher Education in India: Roadmap for 75 years Ahead.*

The papers will be published in the volume subject to fulfillment of AIU Norms for publication as given in AIU Website and on the approval of the Editorial Committee. Manuscripts may be emailed to the Editor, University News, Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi-110 002. E-mail: [ramapani.universitynews@gmail.com](mailto:ramapani.universitynews@gmail.com)/[universitynews@aiu.ac.in](mailto:universitynews@aiu.ac.in)/[rama.pani2013@gmail.com](mailto:rama.pani2013@gmail.com), Phone: 011-23235009 (6 lines), Fax: 011- 23232131 on or before **December 15, 2021**.



**EDUCATIONAL TECHNOLOGY AND  
MANAGEMENT ACADEMY**

and



**ASSOCIATION OF  
INDIAN UNIVERSITIES**

*Present*

**International Conference on Hybrid, Blended and E-Learning**  
**3-4-5 December 2021**

**Association of Indian Universities (AIU) and Educational Technology and Management Academy (ETMA) are jointly organizing an Online International Conference on 'Technology Integrated Learning Focusing on Hybrid, Blended and E-Learning' during December 03-05, 2021.**

The primary objective of the Conference is to create a forum for practitioners to meet the global leaders in technology-integrated education. To meet this objective, the Conference will be bringing together some of the finest experts on technology integrated education from all over the world and India at a common platform. The Conference will have four keynote sessions, two panel discussions, ten paper presentation sessions and eight workshops.

Patrons of the Conference are: Col. Dr G. Thiruvassagam, President AIU and Vice Chancellor, AMET University, Chennai; Prof Marmar Mukhopadhyay, Former Professor, NIEPA and President, ETMA; and Dr Pankaj Mittal, Secretary General, Association of Indian Universities, New Delhi.

Invited Keynote Speakers of the Conference are *Prof. Stephen Petrina*, Professor, Department of Curriculum and Pedagogy, University of British Columbia, Vancouver; *Prof. V. Chinapah*, Emeritus, Department of Education, Stockholm University, Stockholm; formerly at UNESCO Headquarters in Paris-France for 16 years; *Dr N. M. Ostashewski*, Associate Professor, Athabasca University Distance Education Program, Alberta, Canada; *Dr Libing Wang*, Chief of Educational Innovations and Skills Development and Senior Programme Specialist in Higher Education at UNESCO, Bangkok.

The Sessions will be chaired by *Dr. Pankaj Mittal*, Secretary General, Association of Indian Universities, Former Vice Chancellor, BPS Women University, Government of Haryana; *Prof Tony Bates*, Distinguished Visiting Professor, Chang School of Continuing Education, Ryerson University; *Prof Matiul Alam*, Professor of the Education, University of British Columbia, and CEO of World Education, Vancouver, Canada; *Dr Sanjaya Mishra*, Education Specialist, e-Learning, Commonwealth of Learning, Vancouver.

There will be two panel discussions – one each on **Technology-enabled Learning Assessment and Examination Management; and Innovations and Research on Technology Enabled Learning** on 5<sup>th</sup> December, 2021.

Expert panelists invited for the Session on 'Technology-Enabled Learning Assessment and Examination Management' are *Dr Vineet Joshi*, Additional Secretary, Ministry of Education, Government of India and Chairman, National Testing Agency, India; *Mr Anshul Sonak*, India Global Director, Digital Readiness Programs and Senior Director for Global AI Readiness at Intel Corporation, Singapore; *Dr Manish Gupta*, Director of Google Research India & Infosys Foundation, Chair Professor at IIIT.

Expert panelists invited for the session on 'Innovation and Research on Technology-Integrated Education' include *Dr Som Naidu*, Principal Fellow of the Higher Education Academy (PFHEA); Executive Editor, Distance Education Journal (Australia's ODLA), Former Pro-Vice Chancellor, The University of South Pacific, Fiji; *Dr Indira Koneru*, Associate Dean and Head, e-Learning Department, ICFAI Business School and Founding Director, Koneru Bhaskara Rao and Hemalata Human Development Foundation; *Prof Amarendra Behera*; Joint Director, Central Institute of Educational Technology (CIET), National Council of Educational Research and Training, New Delhi.

There will be 8 parallel workshops on the themes: Learning 321 Going forward to Normal: Education in a Different World Design Thinking Repurposing OER for Blended Learning; Virtual Reality in Education; Open Education Resources; Advanced Educational Research Methods; AI and Machine Learning. Workshops are free for all the participants. Workshops will be run parallel, participants can choose one theme, and must register in advance.

**Call for Paper Presentation and Participation:** The Conference invites participation and presentation of case studies, thematic and research papers on **Technology-integrated Education, Hybrid Learning, Blended Learning, Online Education and e-Learning.**

A nominal Registration Fee of Rs.1000/- need to be paid for registration through the link [https://docs.google.com/forms/d/e/1FAIpQLSffPXeR10iGh\\_T83pSh0JivJvC0kBTUixPw7ZqChTCSUM9Q/viewform](https://docs.google.com/forms/d/e/1FAIpQLSffPXeR10iGh_T83pSh0JivJvC0kBTUixPw7ZqChTCSUM9Q/viewform).

For updated information, please visit: [www.aiu.ac.in](http://www.aiu.ac.in) or [www.etma-india.in](http://www.etma-india.in).

For further information contact, Principal, Amitava Ghosh, Conference Secretary at [amitavaghosh2k1@gmail.com](mailto:amitavaghosh2k1@gmail.com) or Sri Chandan Sarkhel at [etma.india@gmail.com](mailto:etma.india@gmail.com).

or

Dr S Rama Devi Pani, Editor, University News, Association of Indian Universities, New Delhi at [ramapani.universitynews@gmail.com](mailto:ramapani.universitynews@gmail.com) or Mobile No: 09582573719



# The Maharaja Sayajirao University of Baroda

**MULTIDISCIPLINARY EDUCATION & RESEARCH UNIVERSITY (MERU)**

NAAC Accredited 'A' Grade with CGPA 3.16 in the year 2016

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Times Higher Education World University Ranking 2022	1201+
QS Asia Ranking 2022	601-650
QS Indian Universities 2020	78
NIRF 2021	90



## Research Profile of MSUB

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Ph.Ds Awarded	3900+
Research Projects	500+
Center of Excellence	07
Research Publications (SCOPUS)	8000+
H-index (SCOPUS)	98
MoUs	150+
Patents and Copyrights	60+

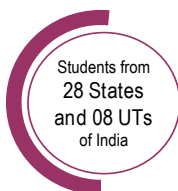
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\*Centralized admissions by Government of Gujarat through ACPC



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- Centre for Corporate Training
- Human Resource Development Cell

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- The Maharaja Ranjitsinh Gaekwad Institute of Design (MRID)
- Institute of Fashion Technology
- Water Resource Engineering Management Institute
- Institute of Interdisciplinary Studies

**Institute of Leadership and Governance**

- Centre for Theological Studies
- Centre for Indic Studies

**Office of Career Advancement for Students (OCAS)**

- Centre for Incubation
- Career Counselling & Training & Placement Cell
- Students' Internship & Mentorship; Students' Apprenticeship
- Centre for Start-up & Innovation

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- Computer Center
- University Health Center
- Directorate of Students' Welfare
- Office of International Affairs
- Office of Alumni Affairs & Donors Relation
- Office of Corporate Affairs
- Research and Consultancy Cell
- All India Civil Services Training Center
- NSS, NCC, ACC

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