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Announcement

Special Issue of 'University News'

A Special Number of the University News on the theme '*Transformative Higher Education for Atmanirbhar Bharat*' is being brought out in the Month of March, 2023.

The Special Issue will cover the articles of eminent educationists on the afore mentioned theme. Readers of the University News are also invited to contribute to the Special Number by submitting papers/articles on the above theme by **March 10, 2023**. The papers will be published in the Issue subject to the approval of the Editorial Committee of the University News. The contributions are invited on the following Subthemes:

Internationalization: Modes of Engagement

- Experience of Hosting International Students on Campus
- Modes of Sustainable Partnership ((Mr Mathew Johnston)
- Roadmap to Establish Office of Global Affairs

Minimum Government: Maximum Governance- What does it Mean for Universities

- Ideal Model for HECI
- Ranking & Rating Differential Harmony
- Autonomy: Issues and Concerns

Reforms for Holistic Education

- Promoting Outcome Based Learning
- Integrating Skills with Higher Education
- Innovative Assessment & Evaluation Techniques

Creating an Ecosystem for Research & Excellence

- National & International Collaboration to Boosting Research
- Ways to Create Research Ecosystem on Campus
- Innovative Methods & Skills for Impactful and Socially Relevant Research

Future of Education, Learning and Workplace

- Technology based Personalized Teaching-learning Models
- Changing Role of Teachers as Facilitators
- Preparing the Students for Future Jobs

Any Other Relevant Subthemes

Guidelines for contributors are placed on AIU Website. Manuscripts may be sent to the Editor, University News, Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi- 110 002 through E-mail: ramapani.universitynews@gmail.com with a copy to: universitynews@aiu.ac.in on or before **March 10, 2023**.

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Experiential Learning in Higher Education

B L Gupta*

The National Education Policy—2020 (NEP—2020) created several challenges for higher education institutions to assure the quality of educational programmes stating the aspirations of the stakeholders viz to develop good, thoughtful, well-rounded, and creative individuals, multidisciplinary education, integration of research in educational programmes, vocationalization of higher education and use of information technology. The NEP—2020 made provision for three core areas of functioning of Higher Education Institutions (HEIs) i.e. education, research, and service. The HEIs need to contribute to knowledge creation and innovation, problem-solving, constructive public engagement, and productive contribution to society. The policy incorporated a four-pillar approach for higher education programmes stated in Fig 1.

These four pillars will ensure the quality of educational programmes to satisfy the aspirations of students and major stakeholders of higher education institutions. Experiential learning is well suited for the effective implementation of the provisions of NEP—2020 in educational programmes and for achieving the goals of quality education strategically. Experiential learning has its roots in Kolb's experiential learning cycle viz concrete experience, reflective observation, abstract conceptualization, and active experimentation (Kolb, 1986). Experiential learning needs to be incorporated into the curriculum design, curriculum implementation, and assessment of learning. Experiential learning cannot be effectively, efficiently, and productively implemented without having considered it in programme structure, curriculum design, and assessment of learning. UGC (2021) stated that 24-32 credits may be earned through field visits/ internships/ apprenticeships/ community engagement and service for undergraduate programmes.

John (2002) stated the benefits of experiential learning as an alternative learning mode, understanding of the profession, better employment opportunities, financing to education, and personal development. The benefits to employers are getting work-ready and willing students, less recruitment and selection cost, a synergetic collaboration between the institution and employing organization, and fast career growth.

Jane et al (1986) stated that the values of the institution such as research, preparation for work, practical application, response to the current market, long-term planning, open image, and competency-based curricular focus are relevant in the context of NEP—2020. The NEP—

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Fig. 1: Four Pillars of Educational Programmes

Appropriate curriculum	Engaging pedagogy	Continuous formative assessment	Adequate student support
<ul style="list-style-type: none"> • Interesting and relevant • Updated regularly • Meet specified learning outcomes • Choice based credit system • Innovation • Flexibility 	<ul style="list-style-type: none"> • High quality pedagogy • Learning experiences • Directly influencing learning outcomes 	<ul style="list-style-type: none"> • Scientific • Designed to continuously improve the learning • Test the application of knowledge • Criterion based grading • Fair • Continuous and comprehensive evaluation 	<ul style="list-style-type: none"> • Development of capabilities that promote students wellness • Fitness • Goals health • Psycho-social well being • Sound ethical grounding

2020 emphasizes developing creative and critical thinking, imagination skills, collaborative skills, effective communication skills, professional ethics, and universal human values. Experiential learning is the right approach to developing knowledge, skills, and attitudes as envisaged in the NEP—2020. Kolb and Kolb (2017) concluded that experiential learning will play a central role in transforming higher education.

Centor (1995) stated reasons for experiential learning in higher education. These are a smooth transition from education to employment, a variety of learning approaches to cater to the needs of different types of learners, enabling students to make a decision about their career and creating interest in continuing their education. Kolb (2014) stated three stages of learning acquisition, specialization, and integration which are relevant in developing the skills of the 21st century in students of higher education.

The selection of an experiential learning method is governed by the learning outcomes stated at programme, course, and session levels. The experiential learning method should match the requirements of the learning outcomes considering other limiting factors.

Contextual Definition of Experiential Learning

There are numerous definitions and concepts of learning propagated by educationists, sociologists, and psychologists in different learning contexts. These are; learning is a process, learning is a change in behaviour, learning is a holistic process of adaptation to the world, and learning is a process of creation of knowledge Kolb & Kolb (2005). There

could be various methods of learning viz learning through reading, observing, imitating, introspecting, reflecting, listening, receiving feedback from others and self, assessing progress, performing, and the like Gupta (2007). Kolb (1984) defined experiential learning as a process of creating knowledge through the transformation of experiences. Colin (2023) stated that let the learners do the learning by using the rich resource available inside them and interacting with their peers.

In the context of NEP—2020, experiential learning is defined as a process of undergoing a series of world of work experiences (situations that are new, different, unique, meaningful, relevant to learning outcomes, and multidisciplinary which create challenges for students to struggle for learning, generating alternative and innovative solutions to the complex problems using individual and or team creativity, reflection, and feedback) for resolving the situation developing and using combination and variety of competencies (cognitive, affective and psychomotor). The competencies so developed become the base for developing a higher level of competency and proficiency in the world of work situations. In other words, experiential learning occurs in a series of world-of-work situations to develop higher-order competencies and proficiency to bring a spiral effect in the process of learning and development.

As a caution, many people say that experiential learning may lead to wrong learning and thereby result in a waste of time and effort. It may result in disinterest in learning because of wrong learning has happened. Again it is difficult to unlearn the

learning in general and the learning in the affective and psychomotor domains in particular. Learning correctly to achieve learning outcomes becomes challenging in such kind of situations. Therefore it is advisable to professionally design the experiences to assure that the right learning takes place the first time and every time.

Professionally designed experiential learning is conducted under the mentorship and guidance of trained teachers to achieve intended learning outcomes. In the context of the NEP— 2020, there are new competencies and skills to be developed in students with whom teachers are not familiar. In such situations, teachers are expected to develop the competencies and proficiencies to manage experiential learning in new areas through undergoing training, mentoring, and guidance. Wolf and Byrne (1975) suggested a four-phase approach to conduct experiential learning viz design, conduct, evaluate, and feedback.

Factors Affecting Experiential Learning

In the changing context of higher education, there are numerous factors responsible for facilitating and restraining experiential learning in higher education institutions. Slaviša, et. al. (2021) analysed the facilitating and hindering factors that influence experiential learning based on the literature review and classified facilitating factors on student characteristics, teaching and learning environment characteristics, and mediating characteristics. Similarly, they have analysed the hindering factors on student characteristics with and without influence. Some significant factors in the context of the NEP—2020 are stated below:

Facilitating Factors

The availability of and higher magnitude of facilitating factors will promote the use of experiential learning from the micro (session) level to the meta (capstone project) level and will bring a spiral effect in the process of learning.

- The availability of teachers who have first-hand experience in the world of work situations in a wide spectrum of professional areas will result in scientific design and implementation of experimental learning.
- The teachers possess competencies to mentor, guide, coach, facilitate and provide constructive

feedback for resolving the complex situation without withdrawing from the learning situation.

- The availability of physical and learning resources in sufficient quantity at right time will lead to motivating teachers and students to accept the challenge of learning.
- The entry behaviour of students or learning maturity of the students to learn or possession of learning to learn skills speeds up the learning in experiential learning.
- The culture of the institute is aligned with requirements of experiential learning viz interpersonal relationship among teachers and students, norms and standards observed in the institute, and cooperation among different stakeholders.
- The collaboration of the institute with industry, stakeholders and community for working on live problems of industry and community.
- The flexibility in the programme schedule to organize experiential learning events at different locations and in different modes.
- The scope of the curriculum for developing learning outcomes aligned to experiential learning.
- The practice of doing experimentation, conducting research and risk-taking among academic leaders, teachers and students.
- The alignment of institutional practices with national missions in vogue in general and related to programmes offered in particular.
- Open environment for constructive criticism, feedback, and cooperation.

Restraining Factors

The existence of the following factors in high intensity will slow down the use of experiential learning at the institute level.

- Lack of professional governance and management at the institute level leads to a lack of policies for quality education and excellence.
- Insufficient financial resources to create supporting facilities to facilitate experiential learning.

- Weak networking and collaboration with industry, alumni, and stakeholders to undertake challenging experiential learning projects and activities.
- Institute is not technology savvy which is affecting the process of experiential learning as a whole.
- Students are interested in obtaining a degree and they are parallelly engaged in some other activities including full-time jobs.
- Low degree of accountability of students for learning and development. At the same time, parents are not bothered about learning from their wards.
- Ineffective and inefficient communication at the institute level related to the implementation of educational programmes.
- Curriculum design is weak, obsolete, and focuses on the lower level of thinking and performance. Assessment of learning outcomes is also focused on a lower order of thinking and performance.
- The student-teacher ratio is very high inhibiting the use of experiential learning in the institute.
- Availability of limited time for designing, implementing and evaluating the learning outcomes for experiential learning.

Impact of Experiential Learning

Professionally designed and implemented experiential learning brings a wide spectrum of impact from the micro level to the meta-level in the institution.

At a micro level, it enhances motivation to learn because of the challenges of the world of work. It involves students in the learning process as they take interest in performance, learning, and seeing the results of their learning effort. On the other hand, it reduces the monotony and boredom of listening and sitting for long hours in the classroom. At a macro level, it enhances the learning to learn skills of the students to further involve them in the learning process in order to think creatively and reflect on the previous learning to form their own concepts. It gradually shifts the responsibility of learning from the teacher to the students. In a true sense, it is a process of empowering the students for their learning.

At a mega level, it enhances the culture of the institute to voluntarily come forward to participate in experiential learning events which are drawn from real-life situations. The institute moves its culture closure to an industry culture of confronting, struggling, collaborating, and cooperating, for coming out of the situation. At this level, the institution building takes place from a learning and research point of view. Norms, values, and professional ethics get established at this stage. The next batch of students gets socialized in the culture of experiential learning. Nagraj et al (2016) concluded that a hierarchy of projects ranging from mini projects to capstone projects is used as linking theory with practice and exposing students to technological development. The overall project approach resulted in the best paper award, paper publication, participation in conferences, product development, and obtaining industry assignments.

At the meta-level, the academic image of the institute in terms of quality education and academic excellence gets enhanced. There are a greater number of research publications on students and teachers in their specialization on experiential learning. More students opt for higher education and research. More faculty members develop a collaborative relationship with the industry to ease out the process of experiential learning, obtain academic consultancy projects, and organize collaborative events. Mamatha (2021) elaborated on the benefits of experiential learning for students such as accelerated learning, alternative mode of learning, realistic understanding of the profession, enable personalized learning, reflective practice habit, immediate application of knowledge, guidance for the career, and preparation for real life. Similarly, benefits to institutions are deeper understanding, involvement of students, industrial and community relations, connecting education, research, and community, consolidation of civic role, and connecting with alumni. The benefits to the community are timely completion of the project, strengthening of relationships, source of volunteers, and community partners.

Skills and Competencies Developed by Experiential Learning

The National Education Policy—2020 spelled out generic skills for an educational programme which are further detailed by UGC in guidelines

for innovative pedagogical approaches and evaluation reforms. These are character, ethical and constitutional values, intellectual curiosity, scientific temper, creativity, the spirit of service, and 21st-century capabilities. The focus is given to creativity and innovation, critical thinking, higher-order thinking, problem-solving abilities, teaming, and communication skills. Development of intellectual, aesthetic, social, physical emotional, and moral capabilities. Development of universal human values, citizenship values and life skills.

Apart from these skills, the NBA has incorporated programme outcomes such as investigation, environment and sustainability, professional ethics, project management, and lifelong learning (NBA, 2015). UGC (2020) discussed the graduate attributes encompassing knowledge, skills, attitudes, and values. These attributes for undergraduate students are as follows; disciplinary knowledge, communication skills, critical thinking, problem-solving, analytical reasoning, research-related skills, cooperation/teamwork, scientific reasoning, reflective thinking, and information/digital literacy. Self-directed learning, moral and ethical awareness, leadership readiness, and lifelong learning.

It is clearly stated in NEP–2020 that changes such as revamping curriculum, pedagogy, assessment, and student support for enhanced student experiences will be undertaken. UGC (2020) states that graduate attributes will be developed through meaningful learning experiences.

Criteria for Selecting Learning Situations

The learning situations should be challenging, meaningful, and interdisciplinary in nature from the world of work. These situations should match with the levels of course outcomes or learning outcomes which are holistically crafted considering the current and future requirements of the world of work. The situations should create adequate challenges for learning, reflection, conceptualization, and action (Kolb, 1984). The students and teachers engage in the world of work situations for learning and applying previously learned creative skills, critical thinking, investigating skills, collaborative skills, assessment skills, receiving and offering feedback, communication skills, and consensus-seeking skills. The situation should create scope for developing core skills, associated and peripheral skills, or

transformational and transactional skills Gupta (2021a). The characteristics of the learning situation stated in fig. 2 foster higher-order learning for the students. Gentry (1990) described the components of experiential learning such as applied, participative, interactive, whole-person emphasis, contact with the environment, variability and uncertainty, structured exercise, evaluation of the experience and feedback.

Fig. 2: Characteristics of Learning Situation



Hierarchy of Experiential Learning Methods

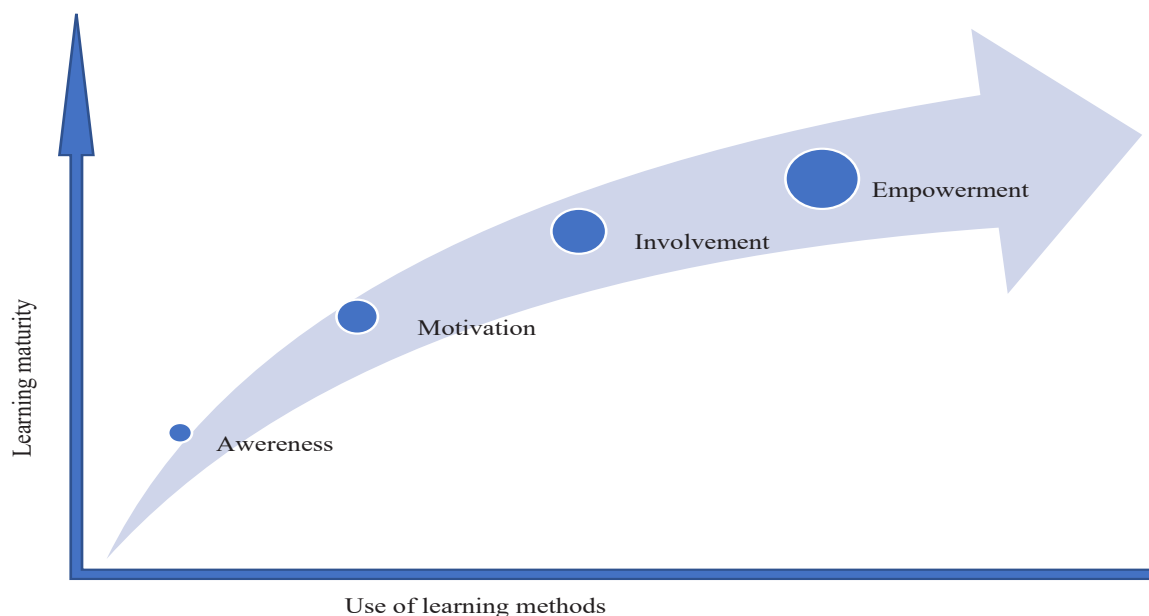
A wide variety of learning methods are in use for creating experiential learning opportunities for individuals and teams. These methods have generic and specific strengths and limitations for producing learning in students. A particular set of methods is selected considering course outcomes, entry behaviour of the students, the competence of the teacher to use a set of methods, and resources (physical, budget, time, ICT tools) available with the department offering the educational programme. The relationship between levels of the hierarchy of experiential learning methods and the learning maturity of the students is shown in fig 3.

The hierarchy is as follows:

Empowerment for Experiential Learning

Multidisciplinary Research, Action learning, Capstone Project, Major Internship.

Fig 3: Hierarchy of Experiential Learning Methods and Level of Learning Maturity of Students



Involvement in Experiential Learning

Internship, Minor Project, Investigation, Problem-Based Learning, Workshop Practice, Lab Experiences, Design Studio, Search Conferences, Survey.

Motivation for Experiential Learning

Excursion, Field Visit, Exhibition, Team Building,

Awareness of Experiential Learning

Simulation, roleplay, educational games, debate, discussion, assignments, seminars, creativity techniques, case methods, storytelling, augmented reality, and virtual reality.

Experiential Learning Methods

The experiential learning methods with their strengths, limitations, and applications are given in Table 1.

The students are expected to achieve learning outcomes at different levels of learning. The teaching-learning process plays an important role in achieving learning outcomes. UGC (2020) states that pedagogical practices determine the learning experiences arranged for the learners. The pedagogy should have an inclusive approach to communication, discussion, debate, research, and cross-disciplinary and interdisciplinary thinking

opportunities for students. NEP–2020 emphasizes inclusive, multidisciplinary, learning mode-centric, and learning method-based pedagogy to achieve learning outcomes. The suggestive pedagogical approaches for developing different abilities are given in the guideline document, (prepared by UGC) many of them belong to experiential learning.

Gavillet (2018) discussed experiential learning opportunities available inside and outside the classroom. Gavillet briefly discussed simulation-based learning, internship, and study abroad and stated that students need to be developed socially responsible and global citizens using experiential learning.

Role of the Teacher in Managing Experiential Learning

There are four stages of managing experiential learning of students to develop intended learning outcome ability in the students. These four stages, the role of the teacher, and the competencies required in a teacher are briefly stated below:

Stages of Experiential Learning

State 1: Design of Experiential Learning

Role of the Course Teacher

- Incorporate experiential learning in the programme structure as per the academic credit

Table 1: Strengths, Limitations and Application of Experiential Learning Methods

Experiential Learning Methods	Strengths	Limitations	Applications
Research	<ul style="list-style-type: none"> Higher-order multidisciplinary and cross-disciplinary cognitive competence is developed. Generate alternative solutions for complex problems Develop collaborative abilities in students and teachers 	<ul style="list-style-type: none"> Difficult to introduce in initial semesters of the programme Requires resources and time 	<ul style="list-style-type: none"> In four-year undergraduate and higher programmes of study More relevant and common for research-intensive universities
Action Learning	<ul style="list-style-type: none"> The collaborative approach to experiential learning Continuous improvement in learning in a context Learning from sharing and reflection at the institute level 	<ul style="list-style-type: none"> The long-term instructional strategy needs to be designed High levels of professional teachers are required Huge resources are required in time Requires conducive culture and environment 	<ul style="list-style-type: none"> Excellent for developing higher levels of abilities, collaboration and experiential learning culture in the institute Excellent for building academic and research culture
Project	<ul style="list-style-type: none"> Produce learning in all three domains of learning at a higher level Develop core abilities, associated abilities and peripheral abilities Integrate previous learning to overcome a situation 	<ul style="list-style-type: none"> Require scientific design aligned with learning outcomes at different levels of the programme Requires resources and time Requires close collaboration with the industry 	<ul style="list-style-type: none"> The project approach can be effectively implemented Students may be prepared to deal with an innovative, new and complex situation The career aspirations can be aggravated
Internship	<ul style="list-style-type: none"> Easy to organize at the end of the year/ after the achievement of certain credits First-hand experience in the world of work Fewer resources are required in the institute 	<ul style="list-style-type: none"> Permission of relevant industry is difficult to get The discipline of students during the internship 	<ul style="list-style-type: none"> Excellent for developing affective and psychomotor domain abilities Deciding to choose the industry after completion of the programme
Investigation	<ul style="list-style-type: none"> Develops a wide range of high levels of skills Opportunity for struggle, inquiry, testing, and verification 	Difficult to find situations for many student groups	Excellent for developing higher levels of skills in all three domains of learning
Problem-based learning	<ul style="list-style-type: none"> Understanding the practical problems Visualization of the whole situation from different perspectives Opportunity to practice different skills Aligned with principles of adult learning 	<ul style="list-style-type: none"> Difficult to get the world of work problems for a large size of the batch Students may get demotivated when unable to solve the problem 	<ul style="list-style-type: none"> Excellent for developing planning, problem-solving, decision-making and evaluation and investigation skills

Experiential Learning Methods	Strengths	Limitations	Applications
Workshop practice	Develops psychomotor and affective domain skills at a moderate level of proficiency	<ul style="list-style-type: none"> • May not be fully relevant for changing requirements of the industry • Difficult to update machines in the institute 	Initiation of motor skills and affective domain skills
Lab experiences	Good for initiation of development of psychomotor and affective domain abilities	<ul style="list-style-type: none"> • The proficiency may be low • Difficult to update machines in the institute 	Psychomotor and affective domain skills may be initiated
Design studio	Develops higher level of abilities	<ul style="list-style-type: none"> • Needs to be updated 	Developing creative, design, drawing, evaluation skills
Search conference	<ul style="list-style-type: none"> • Develops higher level of cognitive abilities • Sharing of thoughts and experiences with students, faculty and professionals 	Requires funds and planning	Developing a new product, process, plan, technology, and strategy
Survey	<ul style="list-style-type: none"> • Opportunity for practice in the world of work situations • Teamwork • Liaisoning 	Requires planning and resources	Enhance the level of competency and proficiency
Excursion	<ul style="list-style-type: none"> • Makes appreciation of the world of work • Helps to relate theory with practice and vice versa 	<ul style="list-style-type: none"> • Time and effort required for planning is more than benefits 	<ul style="list-style-type: none"> • All types of educational programmes • At least one excursion related to each course
Exhibition	Provides a wide spectrum of disciplines and trends in the development	Opportunity may not come at the right time	<ul style="list-style-type: none"> • Excellent for multidisciplinary abilities and emerging disciplines
Team building	<ul style="list-style-type: none"> • Ease in organization • Produce a synergic effect • People-building process 	<ul style="list-style-type: none"> • Requires professionals to conduct • Time taking • Does not work with persons having an internal locus of control 	<ul style="list-style-type: none"> • Excellent for developing leadership, moral, ethics, communication, collaboration and cooperative skills
Simulation	<ul style="list-style-type: none"> • Risk free learning • Close to real life 	Requires huge resources	Excellent for developing safety, hygiene, quality, and motor skills
Roleplay	<ul style="list-style-type: none"> • Risk-free learning • Develops affective domain abilities effectively 	Requires role scenario and professional level of role enactment	Excellent for developing interpersonal, communication, leadership, and safety skills
Educational Game	<ul style="list-style-type: none"> • Easy to organize • Encourages self-learning 	Requires game design at a higher level of learning	Excellent for developing strategy design, accepting challenges, and winning attitude

Experiential Learning Methods	Strengths	Limitations	Applications
Debate	Develop cognitive and affective domain skills	Less effective for higher-order skills in all the three domains	Excellent for resolving conflict, consensus-seeking, listening and communication skills
Discussions – group discussion, panel discussion, focus group, Fish Bowl, socio-gram	Develop cognitive and affective domain skills	Less effective for higher-order skills in all the three domains	Excellent for developing communication, negotiation, and leadership skills
Assignments	<ul style="list-style-type: none"> • Easy to design and use • Promotes self and peer learning 	Requires motivation and orientation	<ul style="list-style-type: none"> • Excellent to develop learning-to-learn and peer learning • Excellent to use scaffolding and reflection skills
Seminar	<ul style="list-style-type: none"> • Easy to organize • Good for developing communication skills 	Preparation on the part of the students is required to a greater extent	Excellent for understanding theory and relating it to real life
Creativity techniques such as brainstorming, Delphi, six thinking hats, force field analysis	<ul style="list-style-type: none"> • Develop a habit to think creatively • Easy to organize 	Less effective in developing psychomotor skills	Excellent for developing creative and analytical abilities
Case method	<ul style="list-style-type: none"> • Initiation of higher levels of learning • Freedom to think in own way 	<ul style="list-style-type: none"> • Requires theoretical background • Need to be professionally administered 	Excellent for developing analytical, planning, and creative abilities
Storytelling	<ul style="list-style-type: none"> • Easy to organize at any time • Enjoyed by everyone 	Requires real-life experience	<ul style="list-style-type: none"> • Excellent for developing communication, articulation, and interest-creation skills • Development of professional ethics, moral, safety, hygiene, cleanliness, and quality abilities

- framework developed by UGC viz credits for the internship, capstone project, minor project, seminar, field visit, and services to the community.
- Incorporate experiential learning in the course plan.
 - Select a suitable experiential learning method(s) to satisfy the requirements of learning outcomes.
- Competencies Required in a Course Teacher**
- Assess the competency needs of freshers needed by the industry.
 - Prioritize among competency needs.
 - Transform needs into learning outcomes
 - Select relevant experiential learning methods to develop learning outcomes in all the students.
 - Identify the competencies which can be developed through a process of experiential learning without putting additional effort into learning.
 - Design learning experiences in the form of a situation, case study, role scenario, problem, theme, issue, model, story, anecdote, incidence, report, and the like.

Stage 2: Organize for Implementation of Experiential Learning.

Role of the Course Teacher

- Identify industries and stakeholders from the world of work where the methods may be implemented.
- Establish a collaborative relationship with the industry.
- Competencies Required in a Course Teacher
- Identify the resources required to complete the experiential learning.
- Organize the resources of the institute and stakeholders.
- Assign experiential learning situations to the students' teams.
- Conduct orientation for participating in experiential learning events.

Stage 3: Implementation of Experiential Learning

Role of the Course Teacher

- Implement experiential learning methods to develop intended learning outcomes in the students.
- Monitor the progress of experiential learning.
- Solve the learning and administrative problems of the students.

Competencies Required in a Course Teacher

- Provide instructions for undergoing experiential learning using a guideline document.
- Form groups considering the requirements of the situation viz heterogeneous or homogeneous.
- Motivate students to accept the challenge of performing on the situation /project/ task/ theme.
- Mentor the students to use the right concept, principle, process, tools, techniques, and approach to overcome the situation
- Solve routine problems of students related to experiential learning.
- Assess the performance and learning approach of students.
- Provide constructive feedback for improving performance and learning.
- Participate with them to overcome difficulties.

- Create opportunities for students to think and reflect during the learning process.
- Guide students to write a report on experiential learning.
- Create frequent opportunities for sharing the experiences of experiential learning.

Stage 4: Assessment of Learning of Students

Role of the Course Teacher

- Assess the learning of the students for awarding achievement certificates.
- Analyse the assessment results of students to further improve the complete cycle of experiential learning.
- Prepare a report on experiences of experiential learning.

Competencies Required in a Course Teacher

- Design various assessment tools viz checklist, rating scale, observation schedule, rubrics for formative and summative assessing the performance.
- Select the appropriate method of assessment.
- Use assessment for self and team learning.
- Assess the process as well as the product of experiential learning.
- Involve students in the self and peer assessment.
- Analyse assessment results for improving the quality of experiential learning.

Lam & Chan (2013) described the teachers' role in experiential learning viz setting a positive atmosphere for learning, acting as a guide, providing learning resources and information during experiential learning, providing freedom to do experimentation, and sharing feelings and thoughts with learners. Kolb and Kolb (2017) described educators' roles around the learning cycle as a coach, facilitators, subject experts, standard setters, and evaluators. Stavroula (2022) stated that this allows changes from an expert in knowledge to an expert in the facilitation of learning.

Principles of Experiential Learning

Emma (2015) summarized the principles of experiential learning as relevant experiences followed by reflection, critical analysis and synthesis, structured experiences, involvement of students in the learning process, nurturing the relationship,

experience may be any type of experience, experience is seen as a learning opportunity, and learning is influenced by the teacher. Gupta (2021) described the opportunities created for committing mistakes, struggling for learning, motivation for learning, reflection and scaffolding, observation, self-analysis and introspection, and the like. Gupta (2007) stated that the responsibility of learning may be shifted from teacher to student and the level of responsibility may be increased. Students become mature for learning using experiential learning.

Assessment of Experiential Learning

The assessment is used for learning and of learning in experiential learning. The course teacher should be competent in selecting the right assessment method at a particular stage of learning to assess learning achievement and produce a higher level of learning based on the assessment results. The course teacher should be able to design the right assessment tool based on the learning outcomes and the experiential learning situation. Gupta (2021b) described a wide range of assessment tools and techniques in the context of higher education. These assessment tools are different types of rubrics such as holistic, analytic, feedback, and cascading. The other tools are a learning portfolio, rating scale, observation schedule, checklist, interview schedule and the like.

The course teacher prepares the assessment tools in advance and handover the tools to the students for self-assessment and peer assessment for obtaining self-feedback, and feedback from peers. Students use these assessment tools for reflection on the progress of learning and the process of learning.

National Institute of Technical Teachers Training and Research Bhopal (NITTTRB) Experience

NITTTRB integrated experiential learning especially problem-based learning and project-based learning in the diploma engineering programme, programme structure, curriculum, pedagogy, and assessment as early as 1990 in a competency-based approach which was further value added during 2013 with the implementation of outcome-based education in the country. Three cycles of curriculum design, implementation, and assessment have been successfully completed in different states of the country. It was a holistic approach to integrate experiential

learning in which policy provisions, administrative support, capacity building of the institute and system as a whole, creating resources, establishing linkages, and involving industries to a larger extent were the essential component of the project.

The curriculum document addressed the challenges of the world of work by identifying problems/situations/ themes topics of micro, macro, and a major capstone project. The students were oriented right from the beginning of the session about the experiential learning projects, events, and activities. The projects were completed in the industry/ field/under the guidance of industry professionals. The concept of mentoring, guidance, coaching, and feedback was integrated with the experiential learning process. The assessment of learning especially in the affective and psychomotor domain of learning was carried out using rubrics, an observation schedule, and a rating scale. The concept of process and product assessment was inbuilt in the process of learning. The assessment tools and techniques were designed by the course teacher to make them relevant, valid, reliable, and productive.

Experiential learning was used in the implementation of the curriculum at the micro level using learner-centric approaches like seminars, group discussions, debates, laboratory experiences, role play, internships, creativity sessions, industrial visits, technology exhibitions, and the like. These methods of experiential learning resulted in the achievement of programme outcomes and programme-specific outcomes. Three types of learning took place in the outcome context i.e. core domain-specific (core and cross-discipline outcomes), associated domain-specific (problem-solving, critical thinking, investigation, safety, sustainability, environment, hygiene, cleanliness, economic), and peripheral (communication, collaboration, working in a team, leadership, project management, learning to learn and social).

Suggestions for Institutionalizing Experiential Learning

It is suggested that institutions should:

- i. Integrate experiential learning in their strategic institute development plan to achieve the vision, missions, and goals of the institute related to quality education, research and services to the community. The experiential learning culture needs to be

- developed at the institute level using relevant experiential learning approaches, methods, tools, and techniques.
- ii. Integrate experiential learning in the programme structure and provide due credits for major experiential learning as mentioned in UGC (2021) and UGC (2022) guidelines. Direct credits may be given in educational programmes for seminars, capstone projects, research work, investigation, internship, fieldwork, and the like. UGC (2022) made provision for 2 credits for the community engagement and social responsibility course.
 - iii. Integrate experiential learning in the curriculum of each course and create adequate resources including funds for effectively implementing experiential learning as a pedagogical process. The integration may be in the form of a minor project, field visit, seminar, excursion, community service, interview, interaction, field assignment, practicals, discussions, debate, educational games and the like.
 - iv. Professionally train all faculty members of the institute to effectively, efficiently, productively and positively implement experiential learning in the institute to make it a culture of the institute.
 - v. Prepare a guidebook for effectively implementing experiential learning at the institute level addressing the role of everyone involved in experiential learning.
 - vi. Assure quality of experiential learning at the institute level through an internal quality assurance cell. Conduct an audit of experiential learning at the institute level every year to bring continuous improvement in the process and outcomes of experiential learning.
 - vii. Create a programme-wise bank of learning resources such as themes for the project work, problems, role scenarios, an issue for investigation, case studies, educational games, incidences, anecdotes and the like. Also, create an assessment scheme comprising assessment tools and techniques for assessing the outcomes of experiential learning.
 - viii. Make experiential learning a means to shift the responsibility of learning onto students and thereby develop learning to learn skills in the students.
 - ix. Make experiential learning a tool for multi-disciplinary education, research and service for students. Involve employers, industry, alumni and other significant stakeholders in experiential learning, culture-building, and academic excellence-building process.
 - x. Align experiential learning with national missions like make in India, Digital India, skilled India, Innovation, *Swachh Bharat*, and *Unnat Bharat*.
 - xi. Encourage the use of augmented reality, virtual reality, virtual laboratories, and online resources of the industry.
 - xii. Cascade the effect of experiential learning throughout all educational programmes using change agents (having training, experience in managing experiential learning and willingness to mentor other faculty members and students for undertaking experiential learning projects). The framework developed by Petric et al (2022) may be adapted.
 - xiii. Prepare an annual report on the use of experiential learning institution-wide and publish it on the institute's website.
 - xiv. Organise a conference on experiential learning every three years for sharing national-level experiences and best practices.

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Is ChatGPT a Game Changer for Higher Education in India?

Ranjana Mary Varghese*

When an Open AI chatbot and a large-scale neural network-based language model came together, ChatGPT was born. The Generative Pre-trained Transformer as GPT is called is trained on vast amounts of text data to generate human-like text. On a technical front, an Artificial Intelligence program or algorithm uses a data set to recognize certain patterns, whereby they make conclusions and predictions when given enough information. Natural Language Processing (NLP) is used to generate human-like text, though ChatGPT is unable to capture the complexes and nuances of human language. Further advancements in NLP and machine learning may improve the efficiency of chatGPT's human-like conversations. Open AI, which is a research lab founded by Sam Altman and Elon Musk has generated this GPT-3 and hence can be called the founder of ChatGPT.

How is It Implemented?

ChatGPT is trained on 570 gigabytes of text and has 175 billion which helps it perform tasks it was not explicitly trained for. Apart from being the largest language model ever trained, ChatGPT comes with additional Reinforcement Learning with Human Feedback (RLHF), which gives it a clear advantage over earlier tools. Chat GPT is often executed as a chatbot that can be opened through different platforms like a website, a smartphone app, or a messaging service (OpenAI, 2023). The text given to the bot gives a real-time response. Multiple users can be accommodated at the same time, but heavy traffic can take the system down. The GPT-3 language model is used by Chat GPT, a potent chatbot, to deliver tailored and interactive help to users in a conversational mode. AI has the potential to change and revolutionize the learning and how students will approach education. ChatGPT can deliver prompt-based text in a few seconds AI technologies can enhance the motivation and also the participation of students in learning. This is an encouragement to autodidactic learners. This increases the autonomy to learners whereby

there is personalized support, convenient and flexible learning, real-time feedback, self-assessment and reflection, and many more.

What All Can ChatGPT Do?

ChatGPT can even create jokes and narratives, write codes and make arguments which makes it very interesting and impressive for an individual as their conversation is going on. ChatGPT or any other AI tool can change the learning atmosphere totally. Learning digitally requires an "autodidactic" profile, characterized by a strong motivation to learn, the ability to find and effectively use digital resources, and a willingness to take ownership of one's own learning process of "autodidactic" profile, characterized by a strong motivation to learn, the ability to find and effectively use digital resources, and a willingness to take ownership of one's own learning process.

Autodidactic learning, or self-directed learning (SDL), is the method where the learner learns independently, without an instructor's guidance. (Candy, 1991) (Garrison, 1987). Self-Directed learning helps the learners to be effective in learning and better social beings. SDL relies on the autonomy and independence of the learner to drive their own learning process and is often characterized by using Open Educational Resources (OER) and other open educational practices (Caswell, et. al. 2008). Autodidactic learning allows learners to take control of their own learning and development, and to learn at their own pace and in a way that is tailored to their individual needs and goals (Gureckis & Markant, 2012; Schweder & Raufelder, 2022) Understanding and responding to input in natural language is one of ChatGPT's primary characteristics.

According to Jeff Maggioncalda, Chief of Coursera, ChatGPT is like a thought partner but also cautions that sometimes, it gives information, which is false, but that is where the critical thinking of humans comes into play. These AI chatbots seem to be grabbing the space which was occupied by the Edtech sector during the pandemic. Edtech saw a huge rise during the pandemic, but many of them

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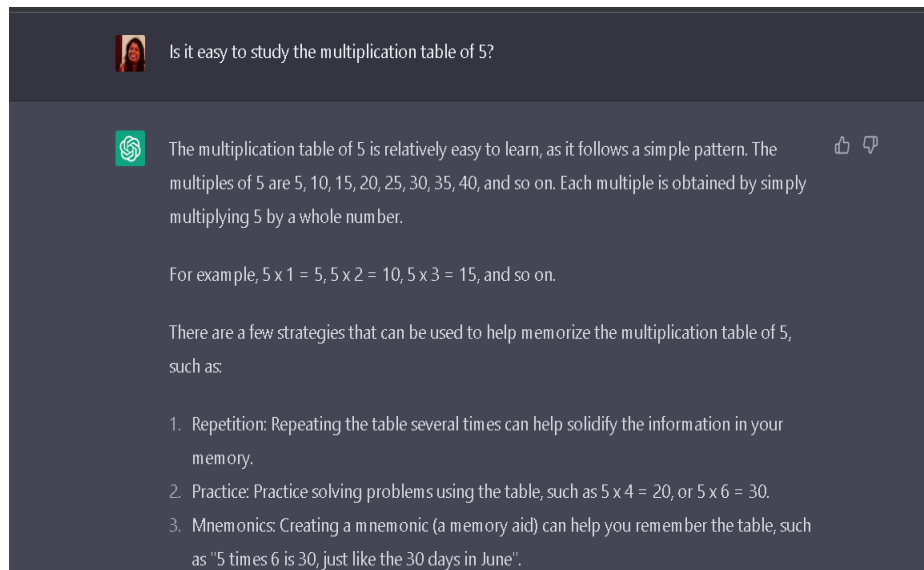
are undergoing corrections now with regard to the structure and the content.

Is ChatGPT going to be a Google Killer? Well, there are mixed opinions. While ChatGPT is able to generate human-like answers based on the input keyed in, the algorithm definitely has its flaws. People who use ChatGPT will agree that it learns the relationship between the words in the input given and it finds out words that can make sense to it, from a statistical

point of view as an answer to the input given. But Google is not just a search engine- It's your email, your Maps, your calendar, your workspace, your storage, and many more. ChatGPT may be a catalyst to improve productivity in various domains, but it doesn't have the breadth and depth of what Google has. ChatGPT may be a threat to the subsidiary of Google called Deep mind. It's said that DeepMind is thinking of developing a chatbot called "Sparrow",



Source: Statista, January 24, 2023



Source: Self & ChatGPT

which could be a dialogue agent which gives us useful, correct information. It depends upon the needs and preferences of the user to decide whether ChatGPT is an alternative to Google.

Should Higher Education in India be Concerned About this Conversational AI?

Many Universities and colleges in India and abroad have banned the usage of ChatGPT in their labs and have even issued a notice that states that strict action will be taken if a student or faculty doesn't resort to originality in submissions. Some institutions have even informed the students that they will be asked to reproduce the content at any time and would take disciplinary steps if there is differences in the submissions. Publishers of many journals have banned researchers from using the contributions of this AI chatbot in academic research.

Well, on one side, tools like ChatGPT gives the learner or the student an interactive answer, but it is hampering the critical and logical thinking of the student. Recruiters would be looking out for students who have the power and skill of thinking logically rather than being a machine that gathers the output given by such AI tools. A good understanding of concepts, critical thinking, and an analytical mind are required to be the stars in the corporate world.

The biggest challenge to educators is the way they need to rethink the way they assess learning. There could be integrity challenges where students might use ChatGPT to cheat on assignments or exams by generating answers to questions. Moreover, there could be accuracy issues as well, since ChatGPT's knowledge is restricted to global events that occurred before 2021. Too much dependence on the AI tool will kill the problem-solving and decision-making skills of the students which may impact their ability to succeed in the workforce. Thinking beyond the horizons, based on existing parameters, is how a person builds up creativity. AI tools like ChatGPT can generate a long list of ideas, but only thinkers with creativity can identify the correct solution, within the opportunities. A solution creation that is future-oriented will not be possible by AI, as it requires predictions of how people will respond to a specific incident or process. Since these AI tools are based on the data they draw on, they have built-in biases which cause unethical decisions to be made. It is very

important to assess what is unjust and set boundaries to the decisions made by AI tools. Ethics needs to be a core skill when AI tools are used for education and learning. It is no wonder then that this is being seen as a breakthrough model for content generation, though it lacks human interaction, which is typical of a machine-based model. While some publishers have banned the usage of the bot in the preparation of the manuscript, some others see its adoption as inevitable. Some legitimate usage of ChatGPT has led it to be a co-author in some research papers. Unless there is a check on the research papers by the publishers, there could be misinformation and junk science as there could lot of inaccurate information due to the data that is fed into the system.

Way Forward

Though on one hand, ChatGPT may be a threat to education, with stories from around the world where educational institutions are banning this AI, there could be some ways in which this powerful natural language processing tool can be used to benefit higher education in India in several ways. Listing down a few of them

- (a) Automation of administrative tasks: Routine repetitive tasks can be automated by ChatGPT. This can help the staff use their time productively for other important tasks.
- (b) Tailored learning: Personalized learning experiences can be created, where the content can be tailored to the individual student's needs. This will create a more engaging and effective learning experience.
- (c) Tutoring and support: ChatGPT can be used to provide students with personalized tutoring and support. It can help students with homework, answer questions, and provide feedback on their work.
- (d) Innovation and Research: Researchers can use this bot to process a large volume of data, and generate conclusions and ideas which will speed up the research process and also can nurture innovation.
- (e) Content Generation: Educators can generate content for teaching purposes like articles, reports, etc which can save time allowing the teachers to focus on more important tasks like teaching and research

The age of Machine Learning and AI has taken to it step forward. We cannot stop the advent of these AI tools and these are here to stay. If the opportunity of AI is not captured in its right sense, embraced and integrated, and adopted as complementary tools, education will land up teaching obsolete and ineffective skills. The knowledge base and ability of this bot need to be increased and its ability to respond and understand the context needs to be improved.

The way in which assessment and learning are done should be re-envisioned. The tasks and evaluations should be creatively redesigned to reduce the potential for AI-generated submissions. Educators should move from conventional teaching to being learning facilitators. Universities need to redefine the learning outcomes in such a way that they complement to the developments in AI and machine learning. More emphasis should be given to the skills of the students. Recruiters should also be able to capture the skills of the candidates which will be complementary to these technological advancements.

AI and Machine learning calls for a revolutionary change in education where the whole system must go for a 360-degree transformation. It's important to note that the use of ChatGPT in higher

education should be implemented with caution, and with appropriate safeguards to ensure that it is being used ethically and responsibly.

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AIU Publication on

REIMAGINING INDIAN UNIVERSITIES

'Reimagining Indian Universities' edited by Dr. (Mrs) Pankaj Mittal and Dr S Rama Devi Pani is a collection of essays by some of the greatest thinkers in the field of Indian higher education. Each essay in the book examines one or more of the critical topics and provides solutions and methods to overcome the issues involved in them. It provides new solutions and methods in the form of reforms and innovations to elevate Indian universities to world-class top-ranking levels. The book aims at providing a roadmap to government as well as the universities to gear themselves towards becoming more responsive to the present and future demands of higher education. Generating a corpus of new ideas that are significant for reimagining, reforming and rejuvenating Indian higher education system, Book is 'must read' for all those who are interested in reforming Indian Higher Education System.

The release of the book in the Annual Meet of Vice Chancellors 2020, coincides with the launch of New Education Policy. The Foreword for the Book was written by the then Minister of Education Shri Ramesh Pokhriyal 'Nishank'.

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Concerns of Quality Teacher Education in Context of National Educational Policy—2020

Akhil Kumar Rai* and Garima Rai**

Teachers care for the future of our children, who are the future of our nation. The noblest occupation is said to be teaching. It is through teachers that our children are imparted with values, knowledge, empathy, creativity, ethics, life skills, and social responsibility, teachers, thus form the heart of the education process, and in order to create a society that is progressive, just, educated, and rich, teachers constitute a crucial vehicle. A teacher's education genuinely affects the community the most and advances efforts to reform society. Hence, the varied dimensions of teacher education mentioned in National Education Policy—2020 (NEP—2020) must be properly analyzed with social concern, responsibility, and an integrated view for policy implementation. According to NEP—2020's declared aim, all children at all stages of schooling will be taught by teachers who are enthusiastic, motivated, highly qualified, professionally trained, and equipped. In this context, NEP—2020 recommends revolutionary policy changes in the teacher education system to resolve any issues/challenges faced by the teachers/educationists at different stages (foundational, preparatory, middle, and secondary) of the school education at pre-service and in-service levels. Major changes indicated in NEP—2020 for teacher education are mentioned below:

- a) Restoring the teacher preparation system's credibility and integrity.
- b) Introducing transdisciplinary colleges and universities to teacher education.
- c) Pedagogical methods used in teacher preparation.
- d) Establishing links between pre-service training programs and academic possibilities like internships and mentoring.
- e) Admission to a programme for educating future teachers.

- f) Programmes for education and training while in-service. Pre-service training programs should be connected to educational experiences like internships and mentorship.
- g) Enrollment in a program for pre-service teachers.
- h) In-service education and training programme.

Teachers and professors are acknowledged and designated as the core of the educational process in the National Education Policy. This strategy outlines several changes for Indian teachers' ongoing professional development, recruiting, service conditions, etc., as intended by educationists. NEP—2020 acknowledges that instructors will receive training in both pedagogy and exceptionally high-quality material. Institutions for teacher education will increasingly transition into multifunctional universities or colleges by 2030. Following that, a 4-year integrated B.Ed. degree that covers a variety of methodologies, knowledge, and the material will be the minimal need for becoming one of our instructors. A significant practical component of this degree will be student teaching in nearby schools. Meanwhile, the same interdisciplinary university provides the 4-year integrated B.Ed. will also offer 2-year B.Ed. programs. It will only be available to instructors who already hold Bachelor's degrees in other fields of specialization. These B.Ed. programs can be appropriately modified to become 1-year B.Ed. programs. Only individuals who have earned a Master's degree in a specialist stream or the equivalent of a four-year interdisciplinary bachelor's degree will be eligible to apply. Furthermore, BITEs, DIETs, and school complexes will provide unique, shorter local teacher education programmes. The local arts, music, business, sports, agriculture, and trades like carpentry and other skilled crafts will all be promoted through these courses. This is also the vision of the policy as holistic education.

The National Curriculum Framework for Teacher Education, or NCFTE 2021, will be updated and expanded. The framework will be created following consultations with all parties

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involved, including state governments, pertinent central government ministries and departments, and numerous expert groups. It will be made available in all regional languages. The demands of the teacher education curriculum for vocational education will also be taken into consideration by the NCFTE in 2021.

NEP–2020 allows instructors more freedom to select their pedagogy, or method of instruction, so they may instruct their pupils in whichever they believe is best. Teachers will also place an emphasis on socio-emotional learning, which is vital to the overall development of every student. Teachers that use creative teaching methods to enhance learning results in their classrooms will be honored. Teachers will constantly have the chance to better themselves and learn about the newest developments in their fields. These will be made available in a variety of formats, including online teacher development courses and workshops at the local, regional, state, national, and worldwide levels (Sahu, 2002). For their own professional development, guided by their own interests, teachers will be required to engage in at least 50 hours of CPD activities annually. The most recent pedagogies for teaching basic reading and numeracy, as well as for formative and adaptive evaluation of learning outcomes, will all be covered in-depth in CPD opportunities.

Outstanding teachers will be rewarded and rewarded with a strong merit-based tenure, promotion, and remuneration structure that has numerous levels within each teacher stage. We continue to be grateful to the dedicated teachers for their efforts to form brains and create our nation, as the Hon’ble Prime Minister, Shri Narendra Modi has stated. In NEP– 2020, all educators’ contributions to building India a Vishwa Guru will be recognized and honored.

Integrated Teacher Education Programme

Several colleges in India have begun a four-year Integrated Teacher Education Programme (ITEP) that is specifically created for school teachers as of January, 2022. This course combines a B.A., B.Sc., and B.Ed. degree with a B.Ed. course to produce a dual-major bachelor’s program that enables students who want to become teachers to save one year of study time. The ITEP gives a significant advantage to the candidates in comparison to the existing

situation, where applicants must commit five years following graduation to B.Ed. before starting their careers as teachers. According to the NEP– 2020, ITEP will serve as the only criterion for hiring teachers starting in 2030. The National Common Entrance Test, or NCET, scores will be used to determine admission to this programme. Currently, the programme is provided by 45 interdisciplinary universities in India (in 2022–2023). The following list highlights several significant changes that the NEP made to teacher education.

- **Pre-service Teacher Education** : The National Curriculum Framework for Teacher Education, or NCFTE 2021, is suggested as a framework for pre-service teacher education and training in the NEP– 2020. For teachers working in academic, vocational, and other specialized education streams, the NCFTE will prescribe the finest pre-service and in-service education/training techniques.
- **Teacher Recruitment and Employment** : The instructor must pass the National Testing Agency’s Teacher Eligibility Tests (TETs) in order to be hired in a private or public school. NEP 2020 encourages schools to share instructors across campuses in order to address the teacher shortage, particularly for subjects like art, craft, music, and dance. The initiative also suggests contacting prominent individuals or local authorities to serve as “master instructors” in traditional arts.
- **Teaching Career and Professionalism**: The National Professional Standards for Teachers (NPST), which will govern all areas of teacher career management, professional development initiatives, pay increases, etc., are the goal of the NEP–2020. Another crucial component of NEP–2020 for teachers is teacher audits and professional evaluations. NCERT will conduct a thorough analysis of foreign educational methods and incorporate their results into the programs for NEP–2020 teacher training’s Continuous Professional Development (CPD). In accordance with NEP–2020, teachers must complete a minimum number of hours of Continuous Professional Development (CPD) annually.
- **Enculturation of Teacher Empowerment** : The strategy outlines the crucial part that teachers will play in NEP– 2020. In the long term, teachers will be granted the ability to take part

in establishing school goals and rules. Giving teachers the ability to choose what and how to teach will give them control and ownership over their work and will include them in the reform process. It is thought that the crucial component of teacher autonomy is to empower teachers and inspire them to perform better. The policy also strives to acknowledge, record, and disseminate novel pedagogies and instructional strategies developed by Indian educators. Finally, NEP— 2020 will aim to create active teacher communities as part of the enculturation of teacher empowerment in order to improve networking and lessen teacher isolation. The NEP— 2020 for teachers has come as a welcome development in light of the ineffective attempts made in the past to enhance the working conditions and compensation for teachers. A better learning environment for pupils worldwide may be created with the support of initiatives for pre-service teacher education and in-service NEP— 2020 teacher training programs. In the upcoming years, the education industry has a good chance of becoming into a rewarding employment choice for bright young people.

Concerns for Four Stages of Integrated Teacher Education

1. There are not enough basic-level teacher education institutes in India, and there are no courses specifically developed to prepare instructors for foundational classes.
2. Teacher educators at various stages of teacher education do not exhibit professionalism.
3. The pedagogy and curriculum used in institutions for teacher education are not student-friendly and do not equip instructors to handle the constant barrage of new difficulties.
4. The varied stages of teacher education provide trainees with an inadequate internship, school experiences, and mentorship.
5. There are no training programs specifically developed for foundational and upper secondary teachers at the in-service and pre-service levels.
6. There is no opportunity for instructors in independent schools and teacher education colleges to upgrade or reskill the abilities that are necessary.

7. There is no system for teacher vertical mobility.
8. Proper research opportunities are not given to teachers and teacher educators.
9. There is insufficient cooperation between teacher education, higher education, and school education

Reflective Suggestions for Teacher Education programmes

Here are some suggestions based on discussions with stakeholders of teaching-learning and teacher education regarding the betterment of the said programme:

- i. There must be a minimum standard for teacher educators in universities with many disciplines.
- ii. Separate training facilities are needed for the foundational, preparatory, intermediate, and secondary levels.
- iii. To provide excellent training for aspiring teachers, it is important to ensure the job safety and security at government, aided, and unaided schools.
- iv. Direct, practical teacher training programmes need to take precedence over online teacher training programmes (Muskan, 2020).
- v. Equal weight must be given to extracurricular, co-curricular, and curricular activities during teacher training and evaluation processes.
- vi. To improve teachers and teacher educators, research opportunities must be made available and encouraged.
- vii. Development and research to encourage teacher researchers and teacher educators to do research, wing should be established or reinforced at DSERT/DIETs.
- viii. If prospective/in-service teachers want to increase their knowledge of the relevant subjects or abilities, they should be given consideration for updating their status if they have online course certifications from MOOC, NPTEL, etc.
- ix. In order to advance the policy of fairness and access to education, special consideration must be given to teacher aspirants from rural, underdeveloped, tribal, women students, and other marginalized social groups.
- x. Differently abled teacher candidates should be given precedence for teacher education, if at all practicable.

- xi. The teacher development programme should honour Indian history and serve as a tool for achieving national objectives and populace aspirations.
- xii. This new curriculum shall educate instructors about the social, cultural, and values of indigenous groups in order to satisfy the demands of future students within the context of NEP— 2020.
- xiii. Benchmarks must be established together with study, integration, and practice in order to develop appropriate curricula for qualitative teacher education and training at four levels.
- xiv. The departments of higher education and school education must collaborate to create a curriculum framework for teacher preparation.
- xv. To draw exceptional individuals to B.Ed. programmes, a programme of merit-based scholarships should be implemented. State governments and UTs may put this into practice.
- xvi. Every school of teacher education shall hold accreditation from a national organization created specifically to evaluate and accredit such institutions.
- xvii. The Department of Higher Education ought to establish a national mentoring mission. In order to help teacher educators professionally and via mentorship, this goal will concentrate on working with a sizable pool of excellent senior/retired teachers.
- xviii. Subject-specific networking has to be established so that teacher educators at various levels may share ideas for new approaches.
- xix. Outstanding instructors would get training over time to assume academic leadership roles in schools/school complexes, BRCs DIETs, CTEs, and DSERT. These teachers would have exhibited leadership and management qualities.
- xx. Professionalism is still another issue that has to be examined in light of professional standards, professional conduct, and professional obligations.
- xxi. The main issue with vocational educational requirements is finding specialists from industry,

business, or other vocational backgrounds who can be trained to the required secondary school level.

The success of student learning depends on the quality of the teaching in higher education. But at a time when the higher education industry is under pressure from a variety of angles, encouraging great teaching poses several problems for institutions of higher learning. Institutions must make certain that the education they provide satisfies both the demands of employers now and in the future as well as the aspirations of students. Though higher education institutions are complex organizations, bottom-up practices and innovations in teaching and learning must be well-aligned with the institution's overall vision and goal. Leadership, cooperation, and strategies to deal with tensions between innovators and those resistant to change are also necessary for the development of institutions as successful learning communities where outstanding pedagogical practices are created and shared.

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Online Education and COVID-19 Pandemic: Challenges for Higher Education

Pushpendra Yadav* and Meenakshi Ingole**

In the last two years, not only India but the entire world has witnessed the danger and consequences of the COVID-19 pandemic, surely it has come as the biggest pandemic of the century that shook the entire human race from within. This pandemic has affected all of us, due to which we have to make changes in our lifestyle. In order to stop the disease from spreading, all higher educational institutions in India had to close as of March, 2020. Suddenly, we had to convert our entire educational system to an online format in order to both help the students and stop the pandemic from spreading. There was no better option than this to continue studies. India is a developing country and here the necessary infrastructure for online education, trained teachers, and policy for online education was in a development order. Therefore, there are now many issues facing students, teachers, management, parents, and policymakers as a result of the pandemic and the transition of the entire higher educational system towards online and ICT-based education. In this review-based article, the researcher has tried to explain the challenges faced by stakeholders especially in higher education during COVID-19.

“The challenges are there, but they are only temporary challenges. Online education will flourish...(Philip Regier). India is one of the biggest developing countries in the world and its diversity makes it distinct from other developing countries in the world. Most of the people in India still rely on agriculture for their livelihood. They use mobile phones for communication but are still away from smartphones and are not exposed to internet access (Prasad, 2021). Hence for effective incorporation of online education, it is very essential to develop pre-requisite infrastructure and internet facilities across the country. But this biggest hurdle on the way is that in India more than 65% population still lives in rural or remote areas so it is a difficult task for the

government to develop the essential infrastructure which is required for online education in less time. It will surely take more time to develop basic infrastructure and resources in rural and remote areas of India. Along with the good quality of internet accessibility of smartphones and laptops is also a big question mark for the government (Atika, et. al., 2020). Because those families who belong to the Economically Weaker Section and Marginalized groups cannot afford smartphones, laptops, and a good internet connection for their children. But in the difficult time of the pandemic, no other better way of teaching and learning is available so we all rely on online education. In India, from March, 2020 all educational institutes remain closed. Our country's higher education system abruptly moved toward online and ICT-based teaching and learning during the COVID-19 pandemic. Numerous problems and difficulties are presented to India's higher education system as a result of this abrupt change in the teaching environment.

Because classroom pedagogies were an essential intervening variable in face-to-face instruction, many different elements have an impact on teachers and students when using an online or ICT-based teaching method or applying an e-learning pedagogy. And the interaction between students and teachers is limited from one screen to another screen therefore use of non-verbal communication and classroom pedagogies are limited to a certain level (Raashid, et. al., 2020). Sometimes in offline classrooms, teachers use different kinds of pedagogies for the needs of different types of students so that they can reach each and every student. And every student learns from college/institute but in the current scenario of online education, it is difficult for teachers to use a variety of pedagogy in one class as per the need for an inclusive classroom.

Review of Related Literature

Mishra, S. (2009). had worked on e-learning; in their work, he gave an overview of e-learning in India

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and explained that the ministry of human resource development and the union grants commission were working together to develop a national program to support online and ICT-based teaching and learning across the nation. Based on research experience, researchers feel that the establishment of statutory bodies for Online Education in India is very important for the upcoming time. Verma, A. (2020) has studied how medical undergraduate students perceive online teaching during COVID-19. In her work she explains medical education is also affected due to pandemic, further, she explains after teaching for more than one month through online mode she found 47% of students want online teaching must be a part of the curriculum. In her research, she addresses some issues related to a lack of training in using ICT devices. Perryman (2013). Explicitly explained in his work in India we have a huge requirement for skilled teachers. Existing teachers are not trained for online mode; they need immediate pre-service training programs so that they can improve the standard of the Indian higher education system further. He described how open educational resources (OER) are used in India and how they can be useful for both teachers and students while conducting online and ICT-based instruction. Muthu, et, al., (2021) worked on Indian students' opinions and preferences on online learning during the COVID-19 pandemic For their research project, they polled agricultural students on how they would adjust to online learning. Researchers in this study indicated that there are still many unanswered questions regarding the applicability and usability of e-learning in India. In his study, he concluded more than 70% of students were ready to adopt online teaching and mostly preferred smartphones for this. Atika Qazi (2020) during the COVID-19 pandemic, worked on converting traditional to online education. Do developed and developing countries cope similarly? In his research, he conducted a cross-sectional study of 320 students to determine the level of SATISFACTION WITH ONLINE EDUCATION DURING THE Covid-19 outbreak. Students in urban regions are more satisfied (about 50%) with online-based learning than students in rural areas, according to the findings of this study (around 37%). Dhawan, S. (2020). Did work on online learning during COVID-19 in her descriptive analysis she discussed the Strength, Weaknesses, Opportunities,

and Challenges (SWOC) examination of online education. Palvia, et. al, (2018) conducted a study on Online Education: Worldwide Status, Challenges, Trends, and Implications in which they explained that by 2025, online education would become a mainstream method of delivering education, but that the quality and quantity of online education would be a crucial factor that we would need to take into account. Rasheed, A. et, al, (2020) worked on online learning and challenges in this research work in blended mode with face-to-face teaching and online learning which kinds of problems arise in front of teachers and college/institute management? Basically for teachers use of technology related to online teaching is a real concern but providing training for them for such type of blended learning is also a big challenge for college/institute management and other authorities. Diane, Hockridge. (2013) did a study titled Distance Education: Challenges for Educators Using Online and Distance Education to Prepare Students for Relational Professions. In his research work, he explained issues and challenges for teacher educators in implementing online and distance education. For this study researcher selected theology educators from an Australian theological institute and the findings of this research study provide a platform for educators to development of formational learning. Objectives of the Study are:

- To understand the preparedness, designing, and effectiveness of online education in the context of higher education during the COVID-19 pandemic.
- To describe concerns and obstacles that the coronavirus has posed for higher education during the COVID-19 pandemic.

Research Methodology

This study is descriptive, attempting to comprehend concerns and challenges for higher education in India in adapting online education during times of crisis and pandemic, such as COVID-19. The analysis was carried out to better understand the different concerns and obstacles linked with online education for higher education. A content analysis was utilized to analyze the data acquired from various sources for the study, and researchers employed a descriptive method for this analysis. Researchers also considered the qualitative component of the research study. This research study

was fully based on secondary data and an analytical review was done for data collection.

Challenges for Higher Education System

Changes in the higher education system were anticipated a few years ago but a sudden complete move towards online education was not anticipated. That makes teaching and learning more challenging for teachers as well as students because we are not ready for this spontaneity in Education (Verma, et, al., 2020). The management of the higher institutes faces a significant problem in making the full transition from offline, face-to-face mode to online mode. Because our curriculum followed in higher education in India was not designed for a completely online mode. And curricular and co-curricular activities were remains an integral part of our higher education curriculum. During this pandemic, our teachers and educators start thinking about alternatives to those co-curricular activities through virtual mode, but there is no rigorous research work available that the virtual activities will be helpful for an inclusive online classroom where learners of different needs present there (Dhawan, 2020). Therefore, a few questions also cross the researcher's thoughts. It would be beneficial to explore these problems and difficulties from the perspectives of students, teachers, parents, administrators, and policymakers.

Issues and Challenges for Students and Parents

Before the pandemic, students are habitual to limited use of ICT in the process of teaching and learning but a sudden complete shift of education towards online/ICT may bring a few challenges in front of students as well as parents:

- Those students who are good in the live interactive face-to-face mode of teaching and learning feel monotonous in online teaching and learning because maximum communication is limited from one screen to another screen.
- Students and parents are not confident about the assessment process because there are no pre-existing guidelines, documents, or policies available for online assessment.
- Since all students are not tech savvy, sometimes they feel difficulty in adjusting to online teaching and learning.

- Those students who are very tech savvy in such types of teaching do not pose in front of them new challenges to learning so they do not use their full capacity in this.
- Nationwide connectivity and speed of internet, not even so students from rural and remote areas suffer problems in connection with online classes and we have a few examples in which students from these areas walk miles away from their home in search of suitable internet connection.
- Students belonging to economically weaker sections and marginalized groups cannot afford equipment and devices which are essential for online teaching and learning.
- Sometimes education based on ICT is more costly and monotonous in comparison to the face-to-face mode of teaching in which students have enough time for collaboration, work in groups, discussion in face-to-face mode, learning through hands-on activities and the environment works as a catalyst for learning.
- Online teaching and learning may affect the health of students negatively because such types of learning provide limited scope for the engagement of psychomotor skills and physical skills.

Issues and Challenges for Teachers

- Teachers who are not well equipped with online teaching and learning feel difficulty engaging students through online mode because sudden lockdowns in the country don't provide them enough time to train themselves (Martin, 2020).
- Since offline teaching strategies are an integral part of teaching and learning so it is difficult for teachers in online teaching and learning to implement a few aspects of offline teaching strategies like nonverbal communication, gesture-posture, and use of voice pitch.
- Sometimes online class is more time-consuming than the face-to-face mode of education so it may put an extra workload on teachers.
- This is very important to develop faith and belief in online teaching among students and parents.
- Try to include students of different needs and individual differences in their online classroom.
- Since the need for online classrooms in comparison

to the face-to-face mode of teaching is completely different, so to catering, is also a challenge.

- Try to use online software like Google classroom, Mentimeter, Poll everywhere, etc. for online assessment of students.

Challenges for Management

- The big issue in front of higher institutes' management during the time of the pandemic is how they implement their curriculum in online mode. And when they don't have any official or authorized documents that can build trust among students and teachers.
- To provide online teaching and learning material to our students so that the learning can go on uninterrupted and also assess the learner's achievement with transparency.
- To prepare a pool of teachers in a short period of time who can take online classes and can implement ICT-based teaching and learning efficiently.
- To provide seamless internet connectivity to the college/institute staff so that they can update all online reports of students timely and ensure all teachers can deliver their lectures on time to students.
- Publish the result of the online assessment timely and with full transparency so that students can participate in the assessment process with full enthusiasm.

Challenges for Policy Makers

- During the time of pandemic there is no special curriculum available for students which are specially designed for online education. So, there is an urgent need for such types of documents, curriculum, or policy which is specially focused on online education.
- Policymaking for large groups is a time-consuming task because it requires a lot of expertise, studies, the grass root level of research, areas of priority increase with time, and also experience in specific field needs is a must. In this time of the pandemic, there is really less time to interact with such types of target groups who can actually suffer problems in online education so it is quite challenging for the government to prepare policy in this small span of time.

- Sometimes implementation of policy takes time because geographically India is a large country and there are state wise many languages and cultures followed by a group of people therefore preparing a single policy for the whole nation and translating it to different regional languages will take time. And preparing modules for heads, principals, and college/institute teachers and providing them formal training from the district level to the block level is a time-consuming task for the government and policymakers also.
- To make sure whatever document they prepare must be flexible and give autonomy to students so that they can build their understanding through reflecting over text and discussion.

Suggestions

- From the researchers' point of view there is an urgent need for official documents or policies for online teaching and learning and also for the assessment of the same.
- Central government and state government in collaboration with different universities and institutes must initiate a few awareness programs about online teaching and also for assessment so trust can build up among students and teachers.
- Since most of the working staff in higher institutes are not much familiar with the equipment and use of online education so there is a need for formal training by college/institute management and state government so they can adopt such type of technology easily.
- During the COVID-19 pandemic many good institutions in India conducted Open Book Exams for semester assessment and evaluation of students but from the side of teachers and students, a lot of problems arose. So, in this regard clear and structured guidelines for examination and submission should be prepared and provide proper time for answer scripts submissions of the students. If any students fail to upload their answer scripts due to various reasons then alternative options should be designed for the submission of the same.
- We see in the past few months assessment and evaluation of answer scripts of the open book exam is not an easy task for universities and Institutes.

Because for timely assessment and evaluation, they need well-equipped and trained evaluators in large numbers so from the researcher's point of view, they can prepare a pool of trained and skilled evaluators in advance according to various subjects to complete the work on time.

- Periodically e-assessment should be part of online education and provide online remedial teaching to weak students or those students who need this.
- At this critical time of the COVID-19 pandemic principals or heads of colleges/institutes tried to conduct online parent and teachers' meetings wherein parents can share their doubts, and worries about their child and online education with their teachers. So, such types of meetings will become a good bridge between parents and teachers.
- This is important for students in online or open-book exams; they must write their genuine and original thoughts based on their understanding. So, in this sequence, it is important for college/institute management they should use software like plagiarism checkers, etc. to avoid repetitive thoughts and answers during students' assessments and evaluations.
- In today's scenario a lot of online software is available for periodic assessment of students, but college/institute management tries to use such types of software which are user-friendly and keep informed of students confidential.
- Heads and principals must establish good relationships with teachers, staff, students, and parents and arrange periodic meetings with all college/institute families to transmit the love of learning among all.

Conclusions

In the past two years, we are all going through a hard time due to the COVID-19 pandemic and it affects the higher education system not only in India but also across the world. Providing constant and uninterrupted learning for students was the motto of the government in India. So, for constant teaching and learning during the pandemic, we are using online education because at this time no better alternative for education is available for us. During this pandemic, we used online teaching as an

opportunity but this sudden shift in education brings some challenges to higher education (Saxena, 2020, Realey, 2020). This pandemic creates new learning opportunities for students and teachers at their homes but at the same time, they feel some issues and challenges which are obvious in this sudden change in higher education.

Since in absence of uniform policy or documents regarding online education in India some students and parents are quite uncertain about the assessment and evaluation process so there is an urgent need for the same. There is a need for properly structured and Planned Open Book examinations but at the same time, they must be flexible so that students from all socio-economic statuses can easily participate in such types of exams. In this pandemic, a lot of students feel discomfort and uneasy with online education so college/institute heads and principals should take initiative for that and arrange periodic meetings with students and teachers that boost some confidence and positivity inside students about online education.

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The Essence of Education is Justice and Goodness

J K Maheshwari, Hon'ble Justice, Supreme Court of India, New Delhi delivered the Convocation Address at the 5th Convocation Ceremony of Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore, Madhya Pradesh on December 26, 2022. He said, "Make use of your education. You have excellent educators, professors, and researchers or whatever you have, utilize it. Apply your knowledge. Employ your tools, to help make our country and the world better where no one is left behind or excluded. You can and must accomplish the goal. It is now your turn." Excerpts.

I express my gratitude to Chancellor and Vice Chancellor of the Shri Vaishnav Vidyapeeth Vishwavidyalaya for inviting me to speak at its 5th Convocation ceremony today, with its rich history of 138 years, to promote education and research in various disciplines and benefitted all sections of society, working relentlessly for the upliftment of the society and country as a whole. It is a privilege for me to give this convocation address to more than 1600 bright young minds graduated/post-graduated in this year, out of which, I am told- we have with us, 9 Ph.D. scholars and 8 gold medallists. I congratulate you all and in particular Ph.D. scholars and gold medallists for their laudable achievements and wish you all the success in your future carrier.

Today is a day of joy. This is your day, dear graduates and post graduates of 2022, many congratulations. I am honoured to be here today and hope to share some of my thoughts. This ceremony signifies the conclusion of an intensive and perhaps challenging time in your life. Now the door is opening to a new existence. That is both exciting and inspirational. I would like to begin today with the words.

कौन कहता है कि आसमां में सुराख नहीं हो सकता,
एक पत्थर तो तबीयत से उछारो यारों...!

— Dushyant Kumar

I'm sure a lot of you must've heard these lines before, in some other speech or read them in a motivational article, these are famous words because they identify with the youth, with highly motivated young individuals like you, who are filled with zeal and enthusiasm.

But we need youth of a character -

लोहे की तरह ठोस मांसपेशियों की आवश्यकता है, मजबूत
स्नायु वाले शरीरों की आवश्यकता है,

युवाओंको दृढ़ इच्छाशक्ति संपन्न करने की, आवश्यकता है,
ऐसी दृढ़ इच्छा शक्ति जिसका कोई प्रतिरोध न कर सके।

आवश्यकता है, अदम्य साहस की,
जो ब्रम्हांड के रहस्यों को भी फोड़ दे।

मेरा विश्वास रखिए इस आवश्यकता के लिए हमारे देश के युवाओं को अथाह सागर में जाना पड़ा, मौत का सामना करना पड़ा, तो यह काम उनको अवश्य करना पड़ेगा और इसके लिए सिर्फ तीन बातों की जरूरत महसूस करता हूँ।

युवाओं को अपने आप पर विश्वास रखना होगा, परमात्मा पर श्रद्धा रखनी होगी और अपने राष्ट्र पर श्रद्धा रखनी होगी और एक चरित्रवान युवा बनकर राष्ट्र निर्माण में वे सहयोगी बने इसकी सर्वाधिक आवश्यकता है।

Today I would like to extract the meaning of these lines to emphasize on 2 things-

- Taking Risks; and
- Daring to dream

"Taking Risks"

Taking a risk involves straying out of your comfort zone and stepping into the unknown. It involves confronting your fear and taking a leap of faith that everything will work out for the better. This doesn't mean that every risk is a blind gamble. Understanding the complexities of the risk involved can help you take managed, calculated risks that make sense in relation to your goals. This is the main reason why people avoid taking chances in life – fear of failure. Everyone fears failure to some degree. If we think that carrying out a certain action will put us at risk of danger or failure, we tend to avoid this to protect ourselves.

Sure, fear of failure may protect us from doing something dangerous, like walking too close to the edge of a cliff. But this state of mind can also limit our true potential and erect a barrier to create the life that we want to live. *Mark Twain* famously said that-

"Twenty years from now you will be more disappointed by the things you didn't do than by the ones you did. Explore; Dream; Discover" *"Daring to dream"*

When you dare to dream big, you are taking an active role in your life. You are being present and allowing yourself to experience things as they happen. As you make a conscious effort to set goals and achieve them, you are going to have a richer life experience. As you begin to dare to dream think about your goals. Do a brainstorming session and write down every conceivable possibility of something you might want to do, accomplish, or be. Choose goals that you feel is meaningful and important to you. You'll be more likely to succeed in things that you care about deeply. As *Mahatma Gandhi* said, "*Be the change you want to see in the world*", it begins with having the audacity within yourself to go against all odds in pursuit of your dreams, but it is important to hold yourself accountable and not lose oneself in the process. It is important to strategize your dreams in order to conceptualize them. US President *Barack Obama* said

"You have to go through life with more than just passion for change; you need a strategy. I'll repeat that. I want you to have passion, but you have to have a strategy. Not just awareness, but action. Not just hashtags, but votes."

Convocations are accompanied with mixed emotions. You will all be filled with excitement, hope and perhaps some apprehension as you stand on the cusp of entering the "real world." As lawyers we always looked forward to our next date of hearings with some degree of anticipation, already anticipating our triumphs and shortfalls, to quote *Andy Warhol*, "*The idea of waiting for something makes it more exciting*". It is always better to look forward to changes rather than dreading them with trepidation.

James Madison, one of the founding fathers of the United States; once said "*Knowledge will forever govern ignorance; and people who mean to be their own governors must arm themselves with the power which knowledge gives.*" I find nothing more apt to say at this momentous occasion, then to remind each and every one of you of the treasure of knowledge you have received from this Institution and are about to enter the world to make your contribution and to put that knowledge towards the welfare of society and mankind.

Make use of your education. You have excellent educators, professors, and researchers or whatever you have, utilize it. Apply your knowledge. Employ your tools, to help make our country and the world better where no one is left behind or excluded. You can and must accomplish the goal. It is now your turn.

As a free democratic nation, the Constitution of India bestows various rights on its citizens, at the same time it also places the responsibility to always adhere to the central tenets of our democracy - justice, liberty, equality, and fraternity. It is with these constitutional ideals & values in the backdrop that we as citizens should conduct ourselves. By doing so, we will be adding a meaningful dimension to the growth and development of our own selves and this country, as the torchbearers of a socially equal and efficient society. *Dr. B.R. Ambedkar*, famously said - "*Constitutional morality is not a natural sentiment. It has to be cultivated. We must realize that our people have yet to learn it. Democracy in India is only a top-dressing on an Indian soil which is essentially undemocratic.*"

The adoption of the constitution with a pledge to promote constitutionalism in India brought forth the concept of constitutional morality. Constitutional morality is the adherence of core constitutional values such as Democracy, Socialism, Equality and Integrity etc. Lately, there have been a plethora of judgments by the Supreme Court, where the principle of "Constitutional Morality" has been invoked and highlighted to deliver justice. One of the recent is *NCT of Delhi (2017) case*, *Puttaswamy (2017) case*, *Navej Singh Johar (2018) case*, and the *Aadhar (2018) case*, the Supreme Court has utilized the principle of "Constitutional Morality" to assure the dignity, life, liberty, and identity of individuals.

With the end of your journey at this Institution dear batch of 2022, you enter into a society so diverse, so vibrant, with different organs of the State working tirelessly to keep the wheels of the largest democracy in the world functioning smoothly. It is not just the Institutions who have been vested with this duty but each and every one of us as citizens to uphold the precious values so inscribed in the Constitution. At the same time, we must strive, as the Soldier of the

Constitution to transform its understanding with the evolution of time and societal change, to reflect the realities of the day and for it become a guiding light into the future.

Mahatma Gandhi once said, "The true source of rights is duty. If we all discharge our duties, right will not be far to seek. If leaving duties unperformed we run after rights, they will escape us like a will-o'-the-wisp. The more we pursue them, the farther they fly". As citizens, it is our duty to conduct ourselves with Constitutional morality in our day-to-day lives. As young minds stepping into the society to make your contribution, it is pivotal for each and every one of you to introspect the consequence of your actions, as to whether you are in any way contributing to the Constitutional ethos and imbibing constitutional morality.

Justice Patanjali Shastri in the case of Romesh Thappar v. State of Madras; observed- "Freedom of speech and of the press lay at the foundation of all democratic organizations, for without free political discussion no public education, so essential for the proper functioning of the process of popular government, is possible." For the students of Journalism, the role of a journalist in a vibrant democracy as India, is not just to report facts and occurrences, but to shed light on the socio-economic affairs in the society and to freely represent the issues of the day so that people can make an informed choice and exercise their liberty.

Over the years, media has played an important and influential role in the governance and functioning of a democratic country such as India. They not only have a direct influence on the audience but also have the ability to shape opinion on a particular policy/event/ideology. Media is often deemed to be a mirror to the society and hence how democratic should a society be, in right ways is reflected through media. Media is a tool for social change. In the words of US talk show host Oprah Winfrey, - The truth exonerates and it convicts. It disinfects and it galvanizes. The truth has always been and will always be our shield against corruption, our shield against grief and despair. The truth is our saving grace. You are here to tell it, to write it, to proclaim it, to speak it, and to be it. Be the truth. Be the truth. - Oprah Winfrey, US Talk Show host

So some constraints are required which are missing.

In the "real world," one must frequently ask, "Am I doing the correct thing? Am I performing an action because it is the proper thing to do, or because it is possible?" This is my thought for you today, you should ask yourself these questions repeatedly. Do we decide the laws of technology, or does technology dictate how we interact? Do we prioritise people's dignity in all of its facets, or do we simply see the consumer, the data sources, and the objects of surveillance?

These are tough questions. I have learned that it's possible to find solutions to seemingly difficult problems if we have an open mind and try to view things from other people's perspectives; if we honour and value the heritage and beliefs of those with whom we interact; if we never compromise on our own set of unchangeable principles; and if, despite the pressure to move quickly, we take a minute to reflect in silence.

My advice is -

"Don't react against a bad situation; Merge with that situation instead. And the solution will arise from the challenge. Because surrendering yourself doesn't mean giving up, it means acting with responsibility."

With the trying times our country has faced in the recent years such as the onslaught of the COVID-19 pandemic an unparalleled circumstance, which taught us that *no matter how tough the going gets we get even tougher.* Now, no one can tell you "No, you're too young to understand" or "This is how it's always been done." Because there is so much uncertainty and everything is suddenly in your palms, it is up to your generation to shape this world.

Don't be afraid. India has endured difficult times in the past, Like the Spanish Philosopher *George Santayana* said,

"Those who cannot remember the past are condemned to repeat it"

And each time, we have emerged stronger, typically because a new generation, comprised of

young people like you, learnt from past errors and figured out how to improve things.

Strive to create a community. Nobody accomplishes great feats by oneself. In this time of uncertainty, it's tempting to be cynical and think just of one's own safety, or the safety of one's own family, or the safety of those who share one's own race, religion, and other identifying characteristics. But if we're going to get through these challenging times; if we're going to create a world where everyone can find a job and afford education; if we're going to conserve the environment and combat future pandemics, then we're going to have to work together. Therefore, be aware of each other's hardships. Respect one another's rights. Set the world on a new course by abandoning the old ways of thought that separate us: sexism, bigotry, status, and greed.

I imagine that throughout your entire life, people have told you that you are the future. There is a rationale for this. I have faith in you because you are the future. And right now, in 2022, your future appears both exhilarating, full of tremendous possibilities, and terrifying for every person on the planet.

STORY – to remember how you should make yourself.

It is of utmost importance to understand the essence of our duty towards our democracy in upholding and protecting the constitutional values bestowed upon us - so we have to work.

यदि हम जागृत नहीं हुए, संविधान के कर्तव्य का पालन नहीं किया, सफलता के मंत्र नहीं अपनाए, तो हम फिर से गुलाम हो जाएंगे और इस बार गुलामी सांस्कृतिक होगी, वैचारिक गुलामी होगी, धार्मिक गुलामी होगी और इस गुलामी से आजादी के लिए हमारे पास फिर कोई बापू, नेहरू, या कोई सुभाष नहीं होगा।

I would like to end this commencement address today with the a few lines by the poet *Henry Wadsworth Longfellow* in his poem *A Psalm of Life*-

“Lives of great men all remind us We can make our lives sublime, And, departing, leave behind us Footprints on the sands of time”

So don't be afraid to take risks, to dream and realize your potential and leave an impact- like your very own footprints in the sands of time.

Jai Hind!

□

HANDBOOK ON ENGINEERING EDUCATION (2016)

The 12th Edition of “**Handbook on Engineering Education**” is primarily meant for students seeking admission to Engineering/Technology/Architecture programmes at the undergraduate and postgraduate levels. It contains State-wise information on 1050 colleges/institutes/ university departments in the country. The information of Institutions in the Handbook includes: Year of establishment of Institute/ Department/ name of its Principal/ Director; probable date of Notification/last date of application; Number of seats available in each Engineering/ Technology branch; seats for NRIs/Foreign students; Eligibility; Application procedure; State-wise Common Entrance Test Rules for B.E/B.Tech/B.Arch courses; Fees; Hostel facilities, etc. Also given is ‘Faculty strength’, commencement of Academic Session, and System of Examination. Brief details of Post-graduate courses are also included.

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CAMPUS NEWS

Faculty Development Programme on The Latest Perspectives of Research

The eleven-day Faculty Development Programme on 'The Latest Perspectives of Research in Behavioural Sciences (Interdisciplinary)' was organized by the Department of Teacher Education, School of Education, Central University of South Bihar, Gaya, under Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMNMTT) Scheme of Ministry of Education, Govt. of India, recently through online mode. The main objective of the programme was to acquaint the teachers of higher education institutions with the new techniques and strategies of research in behavioural science.

The Inaugural Session of the programme was chaired by Prof. Kameshwar Nath Singh, Vice Chancellor, Central University of South Bihar, Gaya, and Prof. Harikesh Singh, former Vice Chancellor, Jai Prakash University, Chapra, Bihar was the Chief Guest of the programme. Prof. Kameshwar Nath Singh made the audience and participants mesmerized with his words of wisdom in his presidential address during the session. He stated that research is a rigorous practice which needs passion, perseverance, honesty and dedication. It makes the teachers capable and competent enough to bring quality education.

Prof. Harikesh Singh, in his speech in the inaugural session, emphasized that every research must add an iota of knowledge to the existing knowledge. He said that the Indian Knowledge System must be given priority in research through the medium of Indian languages. A total of 113 participants from various universities and colleges across 20 Indian states took part in the programme. A total of 25 resource persons (1 from Indiana University, USA and 24 from different reputed universities/institutions of the country) contributed to the programme by enlightening and enriching the participants on the latest perspectives on research in behavioural sciences across 40 sessions during the programme.

The main focus areas of discussion in the programme were Introduction to Research and its types, pre-positivism, positivism and post-positivism

in research, qualitative research perspectives in relation to quantitative research perspectives, qualitative approaches to study human behaviour, quantitative and qualitative research tools, behavioural science research and research in general sciences-A comparison, experimental research and its designs, semantic differential analysis, Q-methodology, The context and techniques of using statistics in behavioural research, uses of statistical software for data analysis in behavioural research, historical research-A qualitative research method in behavioural sciences, policy analysis- purposes and processes, grounded theory research, ethnomethodology, symbolic interactionism, narratives, phenomenological research, discourse analysis, interpretative study, naturalistic inquiry, participatory research, case study, content analysis, triangulation, significance and process of using mixed methods research in behavioural sciences, behavioural research for innovation and development, frontline areas of behavioural research, interdisciplinary research in behavioural sciences- the way forward, research issues in diversified behavioural sciences- social sciences, psychological sciences, educational sciences and other such fields, issues of quality of research in behavioural sciences- the global perspective and others.

The valedictory session was chaired by Prof. Prakash Chandra Agarwal, Principal, Regional Institute of Education, NCERT, Bhubaneswar. He inspired the participants to be honest and transparent while conducting research in behavioural sciences. He suggested that research requires patience and is a time-consuming affair, therefore, mutual cooperation or collaboration is important in the process of conducting research. The active involvement and cooperation of Prof. Kameshwar Nath Singh, Vice Chancellor, Central University of South Bihar, Gaya led the programme towards its success in the self-sustaining mode. Prof. Kaushal Kishore, Head, Department of Teacher Education, and Dean, School of Education, Central University of South Bihar, Gaya provided help and cooperation for making the programme successful.

Dr. Tapan Kumar Basantia, Nodal Officer of the PMMNMTT Scheme and Associate Professor, Department of Teacher Education, Central University

of South Bihar, Gaya was the Coordinator of the programme.

The programme was coordinated by Dr. Tapan Kumar Basantia, Nodal Officer of the PMMMMNTT Scheme and Associate Professor, Department of Teacher Education, Central University of South Bihar, Gaya. Dr. Mitanjali Sahoo, Assistant Professor, Department of Teacher Education, Central University of South Bihar, Gaya and Dr. Sandeep Kumar, Assistant Professor, Department of Teacher Education, Central University of South Bihar, Gaya were the Co-coordinators of the programme. The programme acted as a platform to acquaint the faculty members of Higher Education Institutions across the country with the contexts, processes, outcomes, issues/problems, challenges and future prospects of research on behavioural sciences, especially from interdisciplinary perspectives.

International Conference on Religious Tourism

A two-day International Conference on 'Religious Tourism' is being organized by the Department of Management Studies, Babasaheb Bhimrao Ambedkar University, Lucknow, Uttar Pradesh during March 27-28, 2023. The event is sponsored by the Ministry of Tourism, Government of India. Academicians, researchers, and other professionals from around the world may participate in the event to discuss and present their knowledge and research on different facets of religious tourism. The event will also serve as a leading interdisciplinary platform for academicians, researchers, experts and practitioners to share and deliberate on recent advances, developments, and issues in the domain of Religious Tourism as well as practical challenges and solutions.

Tourism is a cultural phenomenon that has profound social, cultural and economic implications. It is one of the leading global industries and a key driver for economic growth and employment generation. Tourism is a vital component of the culture which provides an important means of dissemination of culture, strengthening and preservation of cultural heritage and creativity and inculcation of art consciousness among the people. Religious tourism makes up roughly 60% of domestic travel in India, and also accounts for the major share of the entire travel and tourism sector across the globe. India is home to one of the world's oldest civilizations and cultures and a unique display of "unity in diversity". It has historical cultural and primary pilgrimage sites for many great religions of the world including

Hinduism, Jainism, Buddhism and Sikhism. These sites are a massive attraction for travelers from all over the world for fervour and religious purposes. Some of the most well-known religious places for pilgrimage in India are Badri Nath, Kedar Nath, Gangotri, Yamunotri, Amarnath, Vaishno Devi, Jagannath Puri, Sun Temple Konarak, Bodh Gaya, Sarnath, Golden Temple, Kashi Vishwanath, Tirupati Balaji, Ajmer Sharif, Hemkunt Shahib, Prayag, Ayodhya, Mathura, Varanasi, Sai Baba Shrine at Shirdi and Haridwar. Sarnath, Meleodganj, Rajgir, and Bodh Gaya hold divine importance for followers of the Buddhist Sects. Uttar Pradesh has the honour of being home to renowned pilgrim cities and towns like Ayodhya (Awadh), Mathura (Braj), Varanasi (Kashi) and Prayagraj, etc. and these sites are a major source of revenue and employment for people of the country. The Themes of the event are:

- Tourism, Culture, Pilgrimage, Art, Music and Heritage.
- Religious Tourism and Pilgrimage -Spirituality and Well-Being.
- Spiritual Tourism.
- Motivation of Pilgrimage and Religious Tourism.
- Mindfulness, Yoga, Wellness and Meditation.
- Experiencing & Promoting Pilgrimage and Religious Tourism.
- Religious Tourism Management.
- COVID-19 Pandemic and Religious Tourism.
- Religious Tourism and Pilgrimage as Tools for Development.
- Religious Tourist Circuits.
- Buddhist Circuit.
- Pilgrimage Routes.
- Religious Conventions and Rallies.
- Challenges In Religious Tourism.
- Stakeholders In Religious Tourism.
- Management Perspective of Tourism.
- Human Resource Strategies and Issues in Tourism.
- Capacity Building and Leadership Development in Tourism.
- Government Initiatives for Religious and Pilgrimage Tourism.
- Society, Culture and Tourism.
- Gender and Religious Tourism.
- Gender and Culture.
- Sociology and Tourism.
- Tourism and Economics.

- Tourism Marketing.
- Entrepreneurship and Tourism.
- Tourism and Crisis Management.
- Tourism and Travel.
- Hospitality and Tourism.
- Global Trends and Innovations in Tourism.
- Responsible and Sustainable Religious Tourism.
- Ecotourism.
- Green Pilgrimage.
- Climate Change and Tourism.
- Waste management issues and Tourism.
- Technology, Media and Communication in Tourism.
- Legal and Ethical Issues in Tourism.
- Indian Knowledge System and Culture.

For further details, contact Convener, Dr. Taruna, Assistant Professor, Department of Management Studies, Babasaheb Bhimrao Ambedkar University, Vidya Vihar, Raebareli Road, Lucknow-226025 (Uttar Pradesh), Mobile No: +91-9415765841 E-mail: icrtourism2023@gmail.com/icrt2023@email.bbau.ac.in. For updates, log on to: www.bbau.ac.in/Events.aspx

International Conference on Social Science, Arts, Business and Education

The One-day International Conference on 'Social Science, Arts, Business and Education' is

being organized by the Institute for Scientific and Engineering Research on April 09, 2023 at Bangalore. This event will bring leading scientists, academicians, industry professionals, speakers, and experts to one platform. The ISER aims to present techniques, skills, and the latest information in various fields like science, technology, medical sciences, environment, education, business, banking, finance, languages, history, and much more. It helps participants to explore speaking opportunities, present their unique ideas and create significant connections. The Topics of the event are:

- Accounting.
- Economics.
- Education.
- Entrepreneurship.
- Finance.
- Innovation and Technology Management
- International Business
- Management
- Marketing
- Social Business
- Social Sciences

For further details, contact Programme Manager, Institute for Scientific and Engineering Research, Mobile No: +91 9344535394, E-mail: event@iser.org.in. For updates, log on to: www.iser.org.in/conf/

AIU News

Faculty Development Programme on Improving Teaching-learning Process through Technical Intervention

The Faculty Development Programme on 'Improving Teaching-learning Process through Technical Intervention' was jointly organized by the Association of Indian Universities, New Delhi and the Academic and Administrative Development Centre (AADC), Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), Indore during January 09-20, 2023. About 30 participants registered for eleven days programme and around 26 participants received the certificates. Eminent experts across the nation deliberated upon various topics on improving the teaching-learning process through technical interventions in a blended mode. There were 18 sessions wherein all experts

shared their perspectives and knowledge with the faculty members.

The inaugural session began with the worship of Goddess *Saraswati* followed by the welcome of the guests. Dr. Anand Rajavat, Dean, Academic, SVVV and Nodal Officer from AIU introduced the first Faculty Development Programme organized under the aegis of AIU-SVVV-AADC, and its objectives. He said, "Technology enhances learning, improves education by saving time" and hence ICT is primary catalyst of change in all the domains of modern society. He introduced the keynote speaker and all the eminent speakers of the programme who were from renowned institutions across the country.

Dr. Upinder Dhar, Vice Chancellor stated in his welcome address that continuous faculty development

is required for the overall development of students and to do justice to teaching and learning through advanced technologies. He shared his views on the transformation of teaching methodology from chalk and duster to online teaching and the importance of the student-centric classroom.

The guest on the occasion, Prof. Suranjan Das, President, Association of Indian Universities And Vice Chancellor, Jadavpur University, Jadavpur, Kolkata Delivered The Presidential Address. He expressed his sincere thanks to SVVV for establishing AIU-SVVV-AADC. He said, there is a paradigm shift in the education system in India as well, as it is a necessity for effective mapping of teaching pedagogy. The use of educational technology is important to enhance the teaching-learning process. Additionally, he cited constructivism, social contrarianism, behaviouralist, and emancipation as four well-known pedagogical approaches.

Dr. Jigyasu Dubey, Head, IT Department read the citation of the Chief Guest. Dr. Upinder Dhar presented the citation to the Chief Guest, Dr. D B Phathak (a recipient of Padma Shri), Professor Emeritus, Department of CSE, IIT, Bombay. His keynote address was based on storytelling pedagogy. He explained the importance of qualitative lecture delivery focusing on hard work, face-to-face learning, and counselling. The inaugural session concluded with a vote of thanks by Mr. Premansh Sharma, Assistant Registrar, Academic Section, SVVV.

The first session of the FDP was conducted by Dr. Upinder Dhar on 'Innovative Pedagogy for Improving the Teaching and Learning Process'. He said, "It's time to be innovative as there is a paradigm shift from teacher-centred learning to student-centred learning." He also suggested that enlivened classroom should be adopted as it makes the difference between hearing and listening. He also talked about innovative teaching methods.

Mr. Tuhin Kundu, Head of Governance Analytics at TCS spoke about context setting, technologies enabling change, reasons for non-adoption, tenets of digital learning, digital transformation across ecosystems besides, smart campuses, leveraging technology in the ecosystem, digital programs in our country, perceived ROI, platforms for digital education, and digital dexterity. He concluded with 'nothing can replace human touch and the physical environment'.

Dr. Rajeev Shukla, Professor, School of Management Studies, Indira Gandhi National Open University (IGNOU), New Delhi delivered a session on 'Blended Learning and Media Strategy'. He highlighted the importance of blended learning and the correlation between the concept and the practices. He said that one should adapt to have an impactful face-to-face learning environment. Blended learning has created an opportunity to rethink, plan, and design, how to deliver higher-quality content.

Dr. Maya Ingle, Professor, School of Computer Science and IT, DAVV, Indore presented a session on 'Strengthening Teaching and Learning by Up-Skilling the Workforce'. She highlighted that a stable T-L system with a perfect balance of opportunities and challenges can help to improve the quality of the teaching-learning process. She also said that quality teaching, quality tools for teaching and learning, and a quality environment are the three important pillars of quality education. She insisted on the incorporation of MOOCs in the higher education system.

Dr. Vineet Sahula, Professor, MNIT, Jaipur delivered his session on 'Design of Assessment on LMS-Canvas and Moodle'. He provided his insight on learning in the 21st century with MOOCs, and assessment design, along with a hands-on session on LMS and Moodle.

Dr. Santosh Dhar, Rector and Dean, Faculty of Doctoral Studies and Research, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore delivered a session on 'Challenges for Improving Teaching and Learning Process in Higher Education Institutions'. She said that innovative pedagogy needs to be adopted in content delivery to upgrade students' engagement. The institutions need to focus on three shifts: operational efficiency, agility, and workforce development.

Dr. Rishi Dubey, Professor and Principal, Indore Institute of Management and Research, Indore, delivered a session on 'Audio-Visual Effects: The Best Way of Using Technology for Teaching and Learning'. He discussed the Johari Window model to enhance the individual's perception of others.

Dr. Prasun Kumar, Scientific Officer, DBT-IOC, Bioenergy Research Centre, Faridabad delivered a session on 'Common Techniques and Software used to Communicate Academic Works'. He provided insight on research funding, finding journals for articles, manuscript preparation and submission, how to get

copyright permission from publishers, publication ethics and issues that can arise, submitting a manuscript to the journal, the review process, reasons for rejection, and post-publication. He suggested, "Think like an editor."

Dr. Ramesh Kothari, Professor, Saurashtra University, delivered a session on "Integration of ICT in Pedagogy". He talked about the extensive use of technology in teaching and learning, removing language barriers, increasing access for *Divyang* students, and educational planning and management. He said that physical, ethical, moral, and emotional development is not possible through a virtual laboratory system.

Dr. Manoj Kr. Tripathi, Professor, ICAR-Central Institute of Agriculture Engineering, Bhopal, delivered a session on 'A Guided Approach to Successful Research Grant Proposal Writing'. He spoke about writing research proposals, types of grants, and approaches to acquiring a grant. He suggested that Indians should focus on R&D as there is a lot of funding available, so a lot of opportunities.

Dr. Meenakshi Mahan, Former Head, Department of Foods and Nutrition at the Maharaja Sayajirao University of Baroda, Vadodara discussed how technology can be used to improve educational outcomes.

Dr. Rakesh L Shrivastava, Professor, The Institution of Engineers, and Indian Institution of Industrial Engineering delivered a session on 'Technological Interventions and Blended Learning in the Digitized World: An Opportunity to Excel'. He emphasized on shifting of teaching methods from traditional face-to-face to online and blended learning. He said, "E-learning is not just trendy but a necessity."

Dr. Vijay Singh Rathore, Professor and Director, Outreach, Jaipur Engineering College and Research Centre, Jaipur delivered a session on 'Challenges and Limitations in Teaching -learning Process through Technical Interventions'. He said that technology brings its outcome when it is pervasive, natural to use, effortless, and easy to use along with a security blanket.

Dr. Archana Ranka, Professor, School of Law, DAVV Indore delivered a session on 'Academic Integrity and Plagiarism UGC Regulation 2018'. She talked about intellectual theft, how to deal with it, and the laws and punishable offences applicable to intellectual theft.

Dr. Mona Purohit, Dean, Barkatullah University, Bhopal provided insight on 'Contemporary Teaching Methods and Challenges', the holistic purpose of education, and education and the future as per National Education Policy-2020.

Prof. M M Pant, Professor and Former Pro-Vice Chancellor, IGNOU, Bhopal talked on 'Artificial Intelligence and Education'. He suggested, "Don't wait for someone to teach, just learn on your own."

Dr. K N Guruprasad, Director, Shri Vaishnav Institute of Science, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore delivered a session on 'Technological Tools for Teaching Science'. He said, "Application of Science can be useful or harmful as the amount spent on defense systems is much higher than that of education systems."

Dr. D K Sharma, Vice Chancellor, SRM University, Lucknow delivered a session on 'Effective Teaching and Learning: A Management Approach'. He explained that effective teaching is one's approach or creativity that cannot be taught to a teacher by others.

The programme ended with the valedictory session. After welcoming the guests, Ms. Sukrati Agrawal, Coordinator, FDP, AIU-SVVV-AADC presented the report of the event. The welcome address was delivered by Dr. Upinder Dhar. The Chief Guest, Dr. Avinash C Pandey, Director, Inter-University Accelerator Centre (IUAC), New Delhi distributed the certificates to the participants.

Special Guest of the session, Dr. Amarendra Pani, Director I/c and Head, Research Division, Association of Indian Universities said that the higher education system has undergone a paradigm shift over the decades, which has led to significant changes in all areas such as instruction, pedagogy, assessment, and administration. He advocated that for continuous learning using R&D to develop the abilities necessary to deal with the paradigm shift, teachers need to be powerful knowledge repositories.

Chief Guest, Dr. Avinash C. Pandey, Director, Inter-University Accelerator Centre (IUAC), said that the 'train the trainer' method is not systematized in India, despite India having the world's third-largest higher education system. Further, he said, "To appreciate teaching, a teacher must always be a learner." Dr. Anand Rajavat proposed the vote of thanks. The session concluded with the National Anthem. □

THESES OF THE MONTH

SCIENCE & TECHNOLOGY

**A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of Dec 2022-Jan 2023)**

AGRICULTURAL & VETERINARY SCIENCES

Biotechnology

1. Gurpreet Kaur. **Tuber development in potato (*Solanum tuberosum* L): Molecular cloning, sequence analyses and expression patterns of some crucial genes.** (Dr. N Das), Department of Biotechnology, Thapar Institute of Engineering and Technology, Patiala.

BIOLOGICAL SCIENCES

Bio Sciences

1. Pattnaik, Falguni. **Valorization of invasive plant species to produce bio-chemicals and bioproducts through greener approaches.** (Prof. S.N. Naik, Prof. Vivek Kumar and Prof. Ajay K Dalal), Centre for Rural Development & Technology, Indian Institute of Technology Delhi, New Delhi.

Life Science

1. Mehta, Devanshu. **Study of dialysis-related B2-microglobulin amyloid fibrillation and its inhibition.** (Prof. Tapan K Chaudhuri), Kusuma School of Biological Sciences, Indian Institute of Technology Delhi, New Delhi.

2. Pandey, Ashutosh Kumar. **Network theory application for dynamical and higher dimensional analysis of biological data.** (Prof. James Gomes), Kusuma School of Biological Sciences, Indian Institute of Technology Delhi, New Delhi.

3. Sujithra, S. **Application of cell penetrating peptides in the management of anterior segment diseases of the eye.** (Prof. Archana Chugh), Kusuma School of Biological Sciences, Indian Institute of Technology Delhi, New Delhi.

EARTH SYSTEM SCIENCES

Atmospheric Science

1. Dash, Yajnaseni. **Prediction of Indian monsoon using machine learning.** (Prof. Saroj K. Mishra and Prof. Bijaya K. Panigrahi), Centre for Atmospheric Sciences, Indian Institute of Technology Delhi, New Delhi.

2. Sarita Kumari. **Land-atmosphere interactions numerical in spring wheat croplands of India: A**

numerical study using a coupled model. (Prof. Somnath Baidya Roy), Department of Atmospheric Science, Indian Institute of Technology Delhi, New Delhi.

Environmental Science

1. Mukherjee, Priya. **Microbial fuel cell improvisations for sustainable power generation.** (Prof. Saravanan Pichiah), Department of Environmental Science & Engineering, Indian Institute of Technology, Dhanbad.

Geology

1. Khanna, Rahul. **Bearing of geotechnical attributes on deformability of lesser Himalayan rock strata.** (Prof. Rajendra Kumar Dubey), Department of Applied Geology, Indian Institute of Technology, Dhanbad.

Geophysics

1. Chouhan, Avinash Kumar. **Lithospheric structure and geodynamic evolution of The Cambay Rift and adjoining region: Insights from gravity data.** (Prof. Sanjit Kumar Pal and Dr. Pallabee Choudhury), Department of Applied Geophysics, Indian Institute of Technology, Dhanbad.

2. Mamuni, Sucheta. **Seismic structure beneath the Indian Ocean and its seismogenic potential.** (Prof. Sanjit Kr Pal), Department of Applied Geophysics, Indian Institute of Technology, Dhanbad.

ENGINEERING SCIENCES

Aerospace Engineering

1. Thangavel, S. **Investigations on the control dynamics of small satellite for rendezvous and docking operation with uncertainties.** Department of Aeronautical Engineering, Hindustan Institute of Technology & Science, Chennai.

Biochemical Engineering

1. Manju. **Treatment of complex dyes and effluents using engineered laccase 1 of *Cyathus bulleri*.** (Prof. S. Mishra and Prof. Preeti Srivastava), Department of Biochemical Engineering and Biotechnology, Indian Institute of Technology Delhi, New Delhi.

Civil Engineering

1. Ali, Alraie. **Construction technology for integral bridges with basalt fiber reinforced polymer prestressing tendons.** (Prof. Vasant Matsagar), Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi.

2. Bansal, Ankur. **Service life modelling of biogenic sulphuric acid degradation of concrete in sewage environment.** (Prof. Shashank Bishnoi), Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi.

3. Bisht, Laxman Singh. **Safety effects of paved shoulders on intercity highways in India.** (Prof. Geetam Tiwari), Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi.

4. Goyal, Priya. **Health monitoring of GFRP repaired reinforced concrete and steel fiber reinforced concrete beams using acoustic emission techniques.** (Dr. Naveen Kwatra and Dr. Shruti Sharma), Department of Civil Engineering, Thapar Institute of Engineering and Technology, Patiala.

Computer Science & Engineering

1. Prakash, Vijay. **QoS-aware resource utilization all allocation in cloud computing.** (Dr. Seema Bawa and Dr. Lalit Garg), Department of Computer Science & Engineering, Thapar Institute of Engineering and Technology, Patiala.

2. Sanju Kumari. **Big data analytics for demand response in smart grid.** (Dr. Prashant Singh Rana and Dr. Neeraj Kumar), Department of Computer Science & Engineering, Thapar Institute of Engineering and Technology, Patiala.

3. Swati Kumari. **Post-quantum cryptography based improved security mechanism for resource-constrained IoT devices.** (Dr. Maninder Singh, Dr. Raman Singh and Dr. Hitesh Tewari), Department of Computer Science & Engineering, Thapar Institute of Engineering and Technology, Patiala.

Electrical & Electronics Engineering

1. Achlerkar, Pankaj Dilip. **Modelling, stability analysis, and decentralized control design of inverter interfaces.** (Prof. Bijaya Ketan Panigrahi), Department of Electrical Engineering, Indian Institute of Technology Delhi, New Delhi.

2. Barisal, Sunny. **Empirical studies in aesthetic responses.** (Prof. Jyoti Kumar), Centre for Sensors, Instrumentation & Cyber-Physical system Engineering, Indian Institute of Technology Delhi, New Delhi.

3. Bhagat, Santosh Kumar. **Studies on oscillator noise sensing and reduction in RF circuits.** (Prof. Ananjan Basu and Prof. Shibam K. Koul), Centre for Applied Research and Electronics, Indian Institute of Technology Delhi, New Delhi.

4. Chauhan, Shakti Singh. **Millimeter wave antennas for body area network.** (Prof. Mukesh P. Abegaonkar and Prof. Ananjan Basu), Centre for Applied Research and Electronics, Indian Institute of Technology Delhi, New Delhi.

5. De, Sriparna. **Novel dielectric loaded reconfigurable substrate integrated waveguide circuits.** (Prof. Shibam K. Koul Prof. Kamal Samanta), Centre for Applied Research and Electronics, Indian Institute of Technology Delhi, New Delhi.

6. Dhairya Singh. **Bistable mems/nems based switches for rugged embedded applications: Non-volatile memory.** (Prof. Pushparaj Singh), Centre for Applied Research and Electronics, Indian Institute of Technology Delhi, New Delhi.

7. Kalraiya, Sachin. **Development of polarization insensitive metamaterial absorber/raisorber structures for multiband and wideband applications.** (Prof. Raghvendra Kumar Chaudhary), Department of Electronic Engineering, Indian Institute of Technology, Dhanbad.

8. Kaurav, Priyansha. **Sub-terahertz sensing and imaging techniques for non-invasive glucose measurement and tumor margin assessment applications.** (Prof. Shibam K. Koul and Prof. Ananjan Basu), Centre for Applied Research and Electronics, Indian Institute of Technology Delhi, New Delhi.

9. Mallick, Pravakar. **Range enhancement of tracking radar in test range using cavity backed conformal dielectric resonator antenna and radar cross section augmentation.** (Prof. Raghvendra Kumar Chaudhary and Dr. Arun Kumar Ray), Department of Electronic Engineering, Indian Institute of Technology, Dhanbad.

10. Mapa, Swagata. **Modelling, analysis and implementation of a switched reluctance machine based wind energy conversion system.** (Prof. G. Bhuvaneswari and Prof. Anandarup Das), Department of Electrical Engineering, Indian Institute of Technology Delhi, New Delhi.

11. Prakash, Tarun. **Design of multifunctioning reconfigurable antennas.** (Prof. Raghvendra Kumar Chaudhary and Prof. Ravi Kr Gangwar), Department of Electronic Engineering, Indian Institute of Technology, Dhanbad.

12. Rakhi Kumari. **Gallium nitride based circuits for microwave signal generation.** (Prof. Ananjan Basu and Prof. Shibam K Koul), Centre for Applied Research and Electronics, Indian Institute of Technology Delhi, New Delhi.

13. Sahu, Upasana. **Spintronics-based neuromorphic computing: New devices and architectures.** (Prof. Debaranjan Bhowmik and Prof. Pranaba Kishor Muduli), Department of Electrical Engineering, Indian Institute of Technology Delhi, New Delhi.

14. Sonali. **Design and study of LDPC codes for free-space optical communication system.** (Prof. Abhishek Dixit and Prof. V.K. Jain), Department of Electrical Engineering, Indian Institute of Technology Delhi, New Delhi.

15. Swapna, S. **Pattern diversity antennas for wireless communication.** (Prof. Shibam Koul and Prof. Ananjan Basu), Centre for Applied Research in Electronics, Indian Institute of Technology Delhi, New Delhi.

Electronics & Communication Engineering

1. Sharma, Himanshu. **Fermi energy and temperature dependent performance analysis of MLG NR based VLSI Interconnects.** (Dr. Karmjit Singh Sandha), Department of Electronics & Communication Engineering, Thapar Institute of Engineering and Technology, Patiala.

Fuel & Mineral Engineering

1. Aich, Subhajit. **Combustion behaviour of reject coal, biomass, torrefied biomass and their blends.** (Prof. Barun Kumar Nandi), Department of Fuel, Minerals & Metallurgical Engineering, Indian Institute of Technology, Dhanbad.

Mechanical Engineering

1. Chanda, Amit. **Fracture, tribology, and conductivity of electric field-aligned CNF/EPOXY nanocomposites.** (Prof. Naresh V Datla and Prof. Sujeet K. Sinha), Department of Mechanical Engineering, Indian Institute of Technology Delhi, New Delhi.

2. Kushwaha, Prabhakar. **Performance analysis of an open-loop hydromotor drive system using active and passive control techniques.** (Prof. Kabir Dasgupta and Prof. Sanjoy K Ghoshal), Department of Mechanical Engineering, Indian Institute of Technology, Dhanbad.

3. Nag, Akash. **Critical investigation of selective disintegration of biomaterials using ultrasonic pulsating liquid jet for biomedical applications.** (Prof.

Amit Rai Dixit), Department of Mechanical Engineering, Indian Institute of Technology, Dhanbad.

4. Sreeharsha, Rowduru. **Design arrangement and position control of the steering cylinder of a Load Haul Dump (LHD) machine.** (Prof. Niranjan Kumar), Department of Mechanical Engineering, Indian Institute of Technology, Dhanbad.

Petroleum Engineering

1. Pal, Biswadeep. **Extraction of pour point depressant from fruits and its use for crude oil transportation.** (Prof. Tarun Kumar Naiya), Department of Petroleum Engineering, Indian Institute of Technology, Dhanbad.

Physical Engineering

1. Ritambhara. **Optoelectronic biosensing for point-of-care diagnostics.** (Prof. Satish Kumar Dubey), Centre For Sensors, Instrumentation & Cyber-Physical system Engineering, Indian Institute of Technology Delhi, New Delhi.

Telecommunication Engineering

1. Garg, Sukriti. **Design and development of dynamic bandwidth allocation algorithms for power efficient optical access networks.** (Prof. Abhishek Dixit), Bharti School of Telecommunication Technology and Management, Indian Institute of Technology Delhi, New Delhi.

2. Maheshwari, Jyoti. **Graph based analysis of functional brain networks.** (Prof. Tapan K. Gandhi and Prof. S.D. Joshi), Bharti School of Telecommunication Technology and Management, Indian Institute of Technology Delhi, New Delhi.

MATHEMATICAL SCIENCES

Mathematics

1. Abhishek Singh. **Improved estimation procedures under ranked set sampling.** (Prof. Gajendra Kr Vishwakarma), Department of Mathematics and Computing, Indian Institute of Technology, Dhanbad.

2. Goyal, Ashish. **On the probability that an automorphism of a group fixes an element of the group.** (Dr. Deepak Gumber and Dr. Hemant Kalra), School of Mathematics, Thapar Institute of Engineering and Technology, Patiala.

3. Goyal, Pooja. **Domination and its variations: Structural and algorithmic study.** (Prof. B S Panda), Department of Mathematics, Indian Institute of Technology Delhi, New Delhi.

4. Jain, Sanjoli. **Application of ecosystem models to preserve endangered species.** (Dr. Parimita Roy), School of Mathematics, Thapar Institute of Engineering and Technology, Patiala.

5. Mondal, Arnab. **Diffusion driven spatial patterns and traveling waves in neuronal systems.** (Prof. Ranjit Kr Upadhyay), Department of Mathematics and Computing, Indian Institute of Technology, Dhanbad.

6. Mondal, Nilay Kunmar. **Lee distance of certain class of linear codes over some finite chain rings with even characteristics.** (Prof. Pramod Kr Kewat), Department of Mathematics and Computing, Indian Institute of Technology, Dhanbad.

7. Shreeta Kumari. **Stoneley and shear waves in continuum composites with interfacial peculiarities.** (Prof. Sanjeev Anand Sahu), Department of Mathematics and Computing, Indian Institute of Technology, Dhanbad.

MEDICAL SCIENCES

Pharmaceutical Science

1. Radhika, C. **Pharmacological evaluation of Amaranthus Roxburghianus and Bombax Ceiba for their anti rheumatoid activity in albino wistar rats.** (Dr. K Saravanakumar and Dr. K B Chandra Sekhar), Department of Pharmaceutical Science, Jawaharlal Nehru Technological University Anantapur, Ananthapuramu.

PHYSICAL SCIENCES

Chemistry

1. Bhaduri, Kushanava. **Design of functionalised nanomaterials for bio-renewable glycerol upgradation and water pollutant removal reactions.** (Prof. Biswajit Chowdhury), Department of Chemistry and Chemical Biology, Indian Institute of Technology, Dhanbad.

2. Dharmendra Singh. **Ligand stabilized monochloro metallylenes: Synthesis and reactivities.** (Prof. S. Nagendran), Department of Chemistry, Indian Institute of Technology Delhi, New Delhi.

3. Kumaresan, M. **Photochemical and thermal rearrangements of allyl and propargyl ethers of vicinal hydroxynaphthophenones and scholl reaction**

in naphthol derivatives. Department of Chemistry, Hindustan Institute of Technology & Science, Chennai.

4. Neerja. **Bio-based production and downstream processing of lactic acid for application in polylactic acid synthesis.** (Prof. Sunil Kumar Khare), Department of Chemistry, Indian Institute of Technology Delhi, New Delhi.

5. Sharma, Surbhi. **Synthesis of metal oxide/sulfide monoliths for photocatalytic degradation of organic pollutants.** (Dr. Soumen Basu), School of Chemistry and Bio-Chemistry, Thapar Institute of Engineering and Technology, Patiala.

Physics

1. Kundu, Pallabi. **Structure and properties of liquid crystals in two dimensions: Statistical mechanical approach.** (Prof. Pankaj Mishra), Department of Physics, Indian Institute of Technology, Dhanbad.

2. Preetam Singh. **Defects mediated ferromagnetism in semiconducting materials.** (Prof. Santanu Ghosh and Prof. Pankaj Srivastava), Department of Physics, Indian Institute of Technology Delhi, New Delhi.

3. Punia, Tamanna. **Nanostructures based terahertz emission.** (Prof. H.K.Malik), Department of Physics, Indian Institute of Technology Delhi, New Delhi.

4. Punj, Shivani. **Bioactive properties of glasses/glass-ceramics synthesized from agricultural and food wastes.** (Dr. Kulvir Singh), School of Physics and Materials Science, Thapar Institute of Engineering and Technology, Patiala.

5. Singhal, Varun. **Wear Properties of Ilmenite/Sillimanite reinforced hyper eutectic Al-Si alloy matrix composites.** (Dr O P . Pandey), School of Physics and Materials Science, Thapar Institute of Engineering and Technology, Patiala.

Polymer Science

1. Bhatt, Bhaskaranand. **Replacement of phenolic resin by novel eco-friendly resins in copper-free brake pads.** (Prof. Jayashree Bijwe.), Centre for Automotive Research and Tribology, Indian Institute of Technology Delhi, New Delhi. □

WANTED

The posts of **Assistant Professors** are to be filled in our College, Applications are invited from eligible candidates for the following subjects purely on **Non-Grant basis** for BCA/B.Sc ECS/ BBA /M.Sc Computer Science Courses.

Sr. No.	Subject	No. of Posts
1	Computer Science	25 FT
2	Electronics	3 FT
3	English	1 FT
4	Mathematics	2 FT
5	Statistics	3 FT
6	Management	4 FT
7	Commerce & Accountancy	2 FT

NOTES:

1. Education Qualification & Experience are as per UGC norms, Govt. of Maharashtra & Purnyashlok Ahilyadevi Holkar Solapur University, Solapur rules issued by time to time.
2. Those who are already in service should apply through proper channel.
3. Apply giving full particulars **within 30 days** from the date of publication of this advertisement to the undersigned in prescribed form. Prescribed forms can be filling online our college website www.sangameshwarcollege.ac.in and form fee of **Rs.200/-** will be accepted by Challan or NEFT to our college Account Name: **Principal, Sangameshwar College, Solapur, A/C No. 0030041010011359 IFSC Code:- SBL50000001**. A Xerox copy of NEFT payment counterfoil should be attached with the application form, the application form and counterfoil copy should be **submitted in college office within 30 days** from date of publication of this advertisement.
4. No T.A./D.A. will be paid for attending interview.
5. The above mentioned posts will be filled up as per the availability of workload.
6. Any communication will disqualify the candidate. The right to fill up above mentioned posts is reserved.

Date : 17/02/2023

Principal
Sangameshwar College
Solapur

Secretary
Sangameshwar Education Society's
Solapur

**Kasegaon Education Society's
Rajarambapu Institute of Technology
(An Autonomous Institute Affiliated to Shivaji
University, Kolhapur)
NAAC A+, NBA Accreditation
Rajaramnagar Post, Sakharale, Tal. Walwa,
Dist. Sangli, PIN- 415 414 (Maharashtra)
Mob. 9970700700**

WANTED

Applications are invited from the eligible candidates for the following post:

Sl. No.	Name of Post	Vacant Post	Open Post
1	Director	01	01

For detailed information about post, qualifications and other terms and conditions, please visit University website: www.unishivaji.ac.in and www.ritindia.edu.

Sd/-
**Hon. Secretary
Kasegaon Education Society**

**Kasegaon Education Society's
Rajarambapu Institute of Technology
(Affiliated to Shivaji University, Kolhapur)
NAAC A+, NBA Accreditation
Rajaramnagar Post, Sakharale, Tal. Walwa,
Dist. Sangli, PIN- 415 414 (Maharashtra)
Mob. 9970700700**

WANTED

Applications are invited from the eligible candidates for the following post:

Sr. No.	Name of Post	Total Posts	Open Posts	Reserved Posts
A.	Assistant Professor for BBA			
1	Marketing Management	01	01	--
2	Human Resource Management	01	01	--

For detailed information about post, qualifications and other terms and conditions please visit University website: www.unishivaji.ac.in and www.ritindia.edu.

Feb. 2023

Sd/-
**Hon. Secretary
Kasegaon Education Society**

। राष्ट्रहिताय संस्कृतम् ।

KAVIKULAGURU KALIDAS SANSKRIT VISHVAVIDYALAYA, Ramtek



Ramtek Office - Administrative Building, Mouda Road, Ramtek,
Dist-Nagpur - 441106 (M.S.)

Waranga Office - 5th Floor, NIT Complex, Near Morbhavan,
Sitabuldi, Nagpur - 440012 (M.S.)

Established by Government of Maharashtra - NAAC Accredited with A+ Grade
No.KKSU/Estt/2023/207 Date : 23.2.2023

Advertisement for the Post of Vice-Chancellor

Applications are invited for the post of Vice-Chancellor of Kavikulaguru Kalidas Sanskrit University, Ramtek, Nagpur in prescribed format. Application form and other details / instructions are available on the website www.kksu.org.

Applications may be sent in the prescribed format in 5 hard copies as well as a soft copy (via E-mail) to the Nodal Officer of the search-cum-selection committee **Dr. Dashrath Jadav, Registrar, Shree Somnath Sanskrit University, Rajendra Bhuvan Road, Veraval, Gujarat - 362266,**

E-mail: registrar@sssu.ac.in.

Last date of receipt of application with all necessary enclosures is:

1) Soft copy - 25.03.2023 by E-mail: registrar@sssu.ac.in

2) Hard copy - 31.03.2023 (5 PM) by Registered/Speed post

Applications received after due date & time and sent to the address other than the prescribed one shall not be entertained.

Chairman,
Search-cum-selection Committee

**LOKMATA AHILYADEVI CHARITABLE TRUST
BRILLIANT MAHAVIDYALAYA (EVENING), LATUR**

WANTED

Applications are invited from the eligible candidates for the **Assistant Professor** posts to be filled in **Lokmata Ahilyadevi Charitable Trust - Brilliant Mahavidyalaya (Evening), Latur (Permanent Non- Grant)**. Eligible candidates should submit their applications alongwith all necessary documents **within Fifteen Days** from the date of publication of advertisement by **Registered Post Only**.

The Candidates of Reserve Category should submit one copy of their application to the Assistant Registrar (Special Cell), Swami Ramanand Teerth Marathwada University, Nanded by **Registered Post Only**.

Sr. No.	Subject	Name of the Post	No. of Post	Reservation
1	English	Asst. Professor	01	Open - 05, SC - 02, ST - 01, VJ - 01, NT-C - 01, OBC - 03, EWS-01
2	Marathi	Asst. Professor	01	
3	Hindi	Asst. Professor	02	
4	History	Asst. Professor	01	
5	Political Sci.	Asst. Professor	01	
6	Public Admi.	Asst. Professor	01	
7	Geography	Asst. Professor	02	
8	Commerce	Asst. Professor	03	
9	Director Physical Education	Asst. Professor	01	
10	Library	Librarian	01	

Permission as Per NOC No. JDHE Nanded/NOC/-2/2022-23/331 Dated 19/01/2023.

Note:-

For more detailed information about post qualifications, form, salary and other terms and conditions, please visit University website : www.srtmun.ac.in.

Address for correspondence: -

The President/Secretary

Shri C.A.Sarde S.S.

C/O Brilliant Mahavidhyala (Evening) Latur,

Mayurban Colony, Ambajogai Raod, Latur,

Latur-413512; Mob. No.9423347200

Place : Latur
Date : 17/02/2023

Sd/-
Secretary,
Lokmata Ahilyadevi Charitable Trust
Latur

**WANTED
2023-2024**

Applications are invited from the eligible candidates for the following posts to be filled in Dnyanopasak Arts, Commerce & Science, Parbhani (Granted) run by Dnyanopasak Shikshan Mandal, Parbhani. Eligible candidates should submit their application along with necessary documents **within fifteen days** from the date of publication of the advertisement by Registered Post Only. The candidates of Reserve Category should submit one copy of their application to the Assistant Registrar (Special Cell), Swami Ramanand Teerth Marathwada University, Nanded by Registered Post.

Sr. No	Subject	Post	No. of Posts	Reservation
1	Physics	Asst. Professor	01	Open -02, ST-01, OBC-02, NT-C-01, EWS-01
2	Chemistry	Asst. Professor	01	
3	Botany	Asst. Professor	01	
4	Zoology	Asst. Professor	01	
5	Computer Science	Asst. Professor	01	
6	English	Asst. Professor	01	
7	Urdu	Asst. Professor	01	

Permission as per NOC No. JDHENanded/NOC/2019/20 dated 8.2.2023.

Note : For more detailed information about post qualifications, form, salary and other terms and conditions, please visit University website : www.srtmu.ac.in

Address for correspondence:

To

The President

Dnyanopasak Shikshan Mandal, Parbhani

P.B. No. 54, Parbhani - 431 401(M.S)

President
Dnyanopasak Shikshan Mandal, Parbhani

Secretary
Dnyanopasak Shikshan Mandal, Parbhani

Bahuuddeshiya Samajik Gramin & Shaikshnik Sanstha, Vinchure's
SWAMI INSTITUTE OF PHARMACY, ABHONA
 (Permanent Non-Grantable)
 At Gat No. 72, Abhona, Tal. Kalwan, Dist. Nashik
 E-mail: siopbph19@gmail.com URI: www.bsgsv.com; Contact: 02592-240971
 (Affiliated to Dr. Babasaheb Ambedkar Technological University, Lonere 402103)

RECRUITMENT

Applications are invited from eligible candidates for the following Permanent Non-Grantable positions:

COURSE: B. PHARMACY

Sl. No.	Subject/Department	Professor	Associate Professor	Assistant Professor
1	Principal	01	--	--
2	Pharmaceutics	02	02	05
3	Pharmaceutical Chemistry		02	07
4	Pharmacognosy		01	04
5	Pharmacology		01	02
6	Librarian		--	--
Total		03	06	19

The Reservation for above post is as follows :-

Designation of the Position	Total Vacancies	SC	ST	VJ	NT-B	NT-C	NT-D	SBC	EWS	OBC	OPEN
Principal	01										01
Professor	02				01						01
Associate Professor	06	01			01			01		01	02
Assistant Professor Librarian	19	02	01	01	01	01	After NT-B alternately NT-D/SBC		02	04	07
Total	28										

Conditions:

- Educational Qualifications, Experience, Pay Scale etc. applicable for the post is as per the norms specified by AICTE/PCI/COA, Govt. of Maharashtra & Dr. Babasaheb Ambedkar Technological University, Lonere, District Raigad & as modified from time to time.
- Those who are in service should apply through proper channel.
- In case of the post of Principal, the appointment is on tenure basis for a period of five years or date of superannuation, whichever may be earlier, and may be extended by one more year.
- Application received after the last date will not be considered. The College will not be responsible for any delay including postal delay, if any, incomplete applications or applications without the attested copies of supporting document will not be entertained.
- No T.A., D.A., will be paid for attending the interview.
- The applications giving full particulars and attested copies of all the supporting documents should reach to undersigned **within 21 days** from the date of publication of this advertisement.



Government of India
Ministry of Education
Department of Higher Education
Technical Section - I

Invitation of Applications for the post of Director, IIT Goa

Applications are invited for appointment to the post of Director of Indian Institute of Technology (IIT) Goa. The Director of an IIT is the academic and administrative head of the Institution. He/she is expected to have a minimum of 5 years' administrative experience and leadership qualities to head an Institute of National importance. The candidate/person should be a Ph.D. with first class or equivalent at the preceding degree, preferably in a branch of Engineering. In exceptional cases, candidates with Science, Mathematics or Management degrees may be considered. He/she should have an outstanding academic record throughout and a minimum of 10 years teaching experience as a Professor in a reputed Engineering or Technology Institute or University and should have guided Ph.D. students. The applicant should preferably be less than 60 years of age on the last date of receipt of the applications. The post carries a fixed pay of Rs. 2,25,000/-(Revised) per month, with allowances as per rules.

2 Interested individuals may apply giving their detailed resume in the prescribed format clearly bringing out research, teaching, industry-academia collaborations and administrative achievements, alongwith a two-page justification in support of their candidature, a two-page vision statement for the institution and contact details of at least two distinguished individuals well acquainted with their work. The application typed in the prescribed format along with enclosures may be sent by Registered/Speed Post to **The Under Secretary (TS.1), Department of Higher Education, Ministry of Education, Room No. 428 "C" Wing, Shastri Bhawan, New Delhi-110001** so as to reach the Ministry **on or before 31st March, 2023**. The detailed advertisement and the format of application is available on the website. URL https://www.education.gov.in/sites/upload_files/mhrd/files/advertisement/IIT_Goa_Adv.pdf

WANTED

POWERED BY
Mr. RAMDASJI ATHAWALE VICHARMANCH
RAMDAS ATHAWALE ARTS & COMMERCE COLLEGE, NILANGA,
TQ. NILANGA, DIST. LATUR

Applications are invited for the post of Principal to be filled in **RAMDAS ATHAWALE ARTS & COMMERCE COLLEGE, NILANGA, Tq. Nilanga, Dist. Latur** (Permanent Non-Granted) (MAHARASHTRA). Eligible candidates should submit their application along with all necessary documents **within Fifteen days** from the date of publication of the Advertisement by **Registered Post** only.

Sr. No.	Name of the Post (Designation)	No. of Post	Reservation
1	PRINCIPAL	One (01)	Unreserved

Educational Qualification:

A. Eligibility:-

1. A Masters degree with at least 55% marks (or an equivalent grade a point scale wherever grading system is followed) by a recognized University.
2. A Ph.D. Degree in concerned / allied /relevant discipline (S) in the institution concerned with evidence of published work and research guidance.
3. Professor / Associate Professor with a total experience of fifteen years of teaching /research/ administration in Universities, College and other institution of higher education.
4. A minimum of 10 research publication in peer reviewed or UGC listed journals.
5. A minimum of 110 research score as per Appendix II, Table 2 of UGC regulations 2018.
6. **Academic Eligibility and other rules Regulations as per UGC Regulation 18 July 2018 and Govt. Resolution No. Misc-2018/C.R.56/UNI- 1 Dated 08 March 2019.**

B. Tenure:-

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

Salary & Allowances :-

Pay scale as per the UGC, State Government & Swami Ramanand Teerth Marathwada University Rules from time to time.

7th Pay scale :- Academic Level – 13 A (131400-217100)

Note :-

1. Prescribed application form is available on the University website : (www.srtmun.in).
2. No T. A. D. A. will be paid to attend the interview.
3. Eligible candidate those who are already in services should submit their application through proper channel.
4. All attested Xerox Copies of certificates and other relevant documents should be attached with the application form.
5. The vacant post is being filled under the decision of Hon. High Court, Aurangabad Bench Petition No.12051/2015.

Correspondence Address :

The President, MR. RAMDASJI ATHAWALE VICHARMANCH
C/o RAMDAS ATHAWALE ARTS & COMMERCE COLLEGE
BANK COLONY ROAD, NILANGA, DIST. LATUR

PRESIDENT
MR. RAMDASJI ATHAWALE VICHARMANCH,
VIKRAM NAGAR, LATUR

**DHARMABAD SHIKSHAN SANSTHA'S,
LAL BHADUR SHASTRI MAHAVIDYALAYA, DHARMABAD, DIST. NANDED [Maharashtra]
[Affiliated to S.R.T.M. University, Nanded]
[Permanently Granted]**

WANTED

Applications are invited from the Eligible candidates for the following posts in LAL BHADUR SHASTRI MAHAVIDYALAYA, DHARMABAD, DIST NANDED run by DHARMABAD SHIKSHAN SANSTHA, DHARMABAD. **The applications duly completed should reach the following address within 15 days by post only from the date of advertisement. The Candidates of reserve category should submit one copy of their application to The Assistant Registrar, Special Cell, S.R.T.M.U, Nanded.**

Sr. No.	Subject	No. of Vacancy	Reservation
1	Computer Science	01	OBC-01

Permission as Per NOC No. : JDHENanded/NOC/2019/18 Dt. 17.01.2023.

Educational Qualification: (Assistant Professor)

- 1) Minimum educational qualification for the Post of Assistant Professor will be as per Regulations of UGC (2018), G.R. of Govt. of Maharashtra Dt. 08 March 2019.
- 2) A Master's degree with 55% marks (or an equivalent grade in a point-scale wherever the grading system is followed) in a concerned/ relevant/allied subject from an Indian University, or an equivalent degree from an accredited foreign university.
- 3) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC or the CSIR, or a similar test accredited by the UGC, like SET or who are or have been awarded a Ph. D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M .Phil/Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time as the case may be exempted from NET/SET.

Provided the candidates registered for the Ph.D. programme prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances / Bye-laws/Regulations of the Institution awarding the degree and such Ph.D. candidates shall be exempted from the requirement of NET/ SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities / Colleges / Institutions subject to the fulfilment of the following **Conditions**:

- a) The Ph.D. degree of the candidate has been awarded in regular mode only;
- b) The Ph.D. thesis has been evaluated by at least two examiners;
- c) An open Ph.D. viva voce of the candidate has been conducted;
- d) The candidate has published two research papers from his/her Ph.D. work, out of which at least one is in a refereed journal, and
- e) The candidate has presented at least two papers, based on his/her Ph.D. work in conferences/seminars, sponsored/funded/supported by the UGC/ICSSR/CSIR or any similar agency.

Note:

- 1) The fulfilment of these conditions is to be certified by the Registrar or the Dean (Academic Affairs) of the University concerned.
- 2) NET/SET shall also not be required for such Masters Programmes in disciplines for which NET/SET is not conducted. However, Ph.D. degree shall remain the minimum eligibility for appointment of Assistant Professor in such disciplines.

OR

- B. The Ph.D. degree has been obtained from a foreign university/institution with a ranking among top 500 in the World University Ranking (at any time) by any one of the following:
- i. Quacquarelli Symonds (QS);
 - ii. the Times Higher Education (THE) or
 - iii. the Academic Ranking of World Universities (ARWU) of the Shanghai.

Note:

The Academic score as specified in Appendix II (Table 34) for Universities, Appendix II (Table 3B) for Colleges, shall be considered for short-listing of the candidates for interview only, and the selections shall be based only on the performance in the interview.

Salary & Allowances:

Pay Scale as per UGC, State Govt. & S.R.T.M. University, Nanded rules from time to time.

Note:

1. Prescribed application form is available on the University website: www.srtmun.ac.in
2. No. T.A./D.A. will be paid to attend the interview.
3. Eligible candidates those who are already in service should submit their applications through proper channel.
4. All attested Xerox copies of certificates & other relevant documents should be attached with the application form.
5. According to Govt. rules, 30% and 3% seats will be reserved for women and differently abled persons respectively.
6. Relaxation of 5% marks at P.G. level for SC/ST candidates only.
7. The vacancies of Assistant Professors will be filled subject to condition of the decision in Writ Petition No. 12051/2015 pending in Hon'ble High Court of Judicature of Bombay, Bench at Aurangabad.

Corresponding Address:

The Secretary, Dharmabad Shikshan Sanstha, Dharmabad
C/o Lal Bahadur Shastri Mahavidyalaya, Dharmabad, Dist. Nanded -431809.

Secretary
Dharmabad Shikshan Sanstha, Dharmabad

President
Dharmabad Shikshan Sanstha, Dharmabad

WANTED

Application are invited for the eligible candidates for the following full time posts in **Ramdas Athawale College, Nilanga** (Permanent Non-grant), Dist. Latur run by Hon'ble Ramdasji Athwale Vicharmanch, Latur. The application duly completed in all respect should reach on the following address **within 15 days**. The candidates of reserved category should send one copy of application to the Assistant Registrar, Special Cell, S.R.T.M. University, Nanded.

Sr. No.	Subject	Total Posts	Reservation
1	Hindi, Economics, Music, Psychology, Military Science, Library & Information Science, Mathematics, Pali, Political Science, Librarian, Director of Physical Education	16	Open 05, SC 01, ST 02, VJ (A) 01, NT-B 01, OBC 04, EWS 02

1) Assistant Professor/Librarian/Director of Physical Education

Eligibility (A or B)

- A.
- i) A Master's Degree with 55% marks (or an equivalent grade in a point-scale wherever the grading system is followed) in a concerned/relevant/allied subject from an Indian University, or equivalent degree from an accredited foreign university.
 - ii) Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC or the CSIR, or a similar test accredited by the UGC, like SET or who are or have been awarded a Ph.D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil/Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time as the case may be exempted from NET/SET.

Provided the candidates registered for the Ph.D. programme prior to July 11, 2009, shall be governed by the provisions of the then existing Ordinances/Bye-laws/Regulation of the Institution awarding the degree and such Ph.D. candidates shall be exempted from the requirement of NET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/ College/Institutions subject to the fulfillment of the following conditions:

- a) The Ph.D. degree of the candidates has been awarded in regular mode only;
- b) The Ph.D. thesis has been evaluated by at least two examiners;
- c) An Open Ph.D. viva voce of the candidate has been conducted;
- d) The candidate has published two research papers from his/her Ph.D. work, out of which at least one is in a referred journal; and
- e) The candidate has presented at least two papers, based on his/her Ph.D. work in conference/seminars, sponsored/ funded/supported by the UGC/ICSSR/CSIR or any similar agency.

Note

- 1) The fulfillment of these conditions is to be certified by the Registrar or the Dean (Academic affairs) of the University concerned.
- 2) NET/SET shall also not be required for such Masters Programmes in disciplines for which NET/SET is not conducted. However, Ph.D. degree shall remain the minimum eligibility for appointment of Assistant Professor in such disciplines.

OR

B.

The Ph.D. degree has been obtained from a foreign university/institution with a ranking among top 500 in the World University Ranking (at any time) by any one of the following:

- (i) Quacquarelli Symonds (QS);
- (ii) The Times Higher Education (THE) or
- (iii) The Academic Ranking of World Universities (ARWU) of the Shanghai Jiao Tong University (Shanghai).

Note : The Academic score as specified in Appendix-II (Table 3A) for Universities, and Appendix II (Table 3B) for Colleges, shall be considered for short-listing of the candidates for interviews only, and the selections shall be based only on the performance in the interview.

Correspondence Address : President, Hon'ble Ramdasji Athwale Vicharmanch, Latur, C/o Ramdas Athwale Arts & Commerce College, Krishi Utpanna Bajar Samittee Building, 2nd Floor, Adat Line, Nilanga, Tq. Nilanga, Dist.Latur-413521 (M.S.); Contact : 07263829878.

President

Godavari Shikshan Prasarak Mandals
B. Raghunath Arts, Commerce and Science College,
Parbhani, Dist. Parbhani - 431401

WANTED

Applications are invited from the eligible candidates for the following **Assistant Professors** posts to be filled in **B.Raghunath Arts, Commerce and Science College, Parbhani, Dist. Parbhani (Granted)** run by **Godavari Shikshan Prasarak Mandals, Parbhani**. Eligible candidates should submit their applications along with all necessary documents **within fifteen days** from the date of publication of the advertisement by **Registered Post** only. The candidates of Reserve Category should submit one copy of their application to the Assistant Registrar (Special Cell), Swami Ramanand Teerth Marathwada University, Nanded by **Registered Post** only.

Sr. No.	Subject	Number of Post	Reservation
1	Mathematics	01	ST-01 OBC-02
2	Physics	01	
3	Botany	01	
Total		03	

Permission as per NOC No. JDHE Nanded/NOC/2019/19 Dated 25/01/2023.

Educational Qualification:- (A or B)

Minimum educational qualification for the post of Assistant Professor will be as per Regulations of UGC (2018) and G. R. of Govt. of Maharashtra dated 08 March 2019.

A. 1. A Master's degree with 55% marks (or on equivalent grade in a point-scale wherever the grading system is followed) in a concerned/relevant/allied subject from an Indian University, or an equivalent degree from an accredited foreign University.

2. Besides fulfilling the above qualifications, the candidate must have cleared the National Eligibility Test (NET) conducted by the UGC or the CSIR, or a similar test accredited by the UGC, like SET OR who are or have been awarded a Ph.D. Degree in accordance with the University Grants Commission (Minimum Standards and Procedure for Award of M.Phil./ Ph.D. Degree) Regulations, 2009 or 2016 and their amendments from time to time as the case may be exempted from NET/SET:

Provided the candidates registered for the Ph.D. Programme prior to July11, 2009, shall be governed by the provisions of the then existing Ordinances/Bye-laws/Regulations of the institution awarding the degree and such Ph.D. candidates shall be exempted from the requirement of NET/SET for recruitment and appointment of Assistant Professor or equivalent positions in Universities/Colleges/Institutions subject to the fulfillment of the following conditions:

- a) The Ph.D. Degree of the candidate has been awarded in regular mode only;
- b) The Ph.D. thesis has been evaluated by at least two examiners;
- c) An open Ph.D. viva-voce of the candidate has been conducted;
- d) The candidate has published two research papers from his/her Ph.D. work, out of which at least one is in a refereed journal, and
- e) The candidate has presented at least two papers, based on his/her Ph.D. work in conferences/seminars, sponsored/ funded/supported by the UGC/ICSSR/CSIR or any similar agency.

Note :

1) The fulfillment of these conditions is to be certified by the Registrar or the Dean (Academic affairs) of the University concerned.

2) NET/SET Shall also not required for such Masters Programmes in disciplines for which NET/SET shall also not conducted. However, Ph.D. degree shall remain the minimum eligibility for appointment of Assistant Professor in such disciplines.

B. The Ph.D. degree has been obtained from a foreign university/Institution with a ranking among top 500 in the World University Ranking (at any time) by any one of the following:

- (i) Quacquarelli Symonds (QS),
- (ii) The Times Higher Education (THE) or
- (iii) The Academic Ranking of World Universities (ARWU) of the Shanghai.

(cont'd. to page 50)

(cont'd. from page 49)

Note : The Academic score as specified in Appendix II (Table 3A) for Universities, and Appendix II (Table 3B) for colleges shall be considered for short-listing of the candidates for interview only, and the selections shall be based only on the performance in the interview.

Salary & Allowances: Pay Scale as per UGC, State Govt. of Maharashtra and S.R.T.M. University, Nanded. rules from time to time.

Note :

1. Prescribed application form is available on the University **website: www.srtmun.ac.in**.
2. No. T.A./D.A. will be paid to attend the interview.
3. Eligible candidates those who are already in service should submit their applications through proper channel.
4. All attested Xerox copies of certificates and other relevant documents should be attached with the application form.
5. According to Govt. Rules, 30% and 3% seats will be reserved for women and differently abled persons respectively.
6. Relaxation of 5% marks at P.G. level for SC/ST candidates only.
7. The vacancies of Assistant Professors will be filled subject to conditions of the decision in Writ Petition No. 12051/2015 Pending in Hon'ble High Court of Judicature of Bombay, Bench at Aurangabad.

Address for correspondence:

The President/ Secretary,

C/o B. Raghunath Arts, Commerce and Science College, Parbhani,
Dhanlaxmi Nagar, Jintur Road, Parbhani, Tq. and Dist. Parbhani, Maharashtra- 431401

Sd/-
Adv. Ashok Soni
President

Sd/-
Shri Subhash Shingvi
Vice-President

Sd/-
Shri O. J. Daga
Secretary

Sd/-
Shri Anil Haral
Co-secretary

Dr. Kishor Mantri
Treasurer

Dr. Vilas Sonawane
Principal

Koyana Education Society, Patan
BALASAHEB DESAI COLLEGE, PATAN
Tal. Patan, Dist. Satara – 415206 (MS)
(Affiliated to Shivaji University, Kolhapur)
(Permanently Granted)

WANTED

Applications are invited from eligible candidates for the following post :

Sr. No.	Subject of Post/ Subject	Subject wise Vacant Posts	Total Number of Vacant Posts	Reservation
Assistant Professor			6	ST – 1, NT(C) – 1, OBC – 3, EWS - 1
1	Chemistry	2		
2	Physics	1		
3	Zoology	1		
4	History	1		
5	Economics	1		

Note :- For detailed information about post, qualifications and other terms and conditions, please visit university **website: www.unishivaji.ac.in**

Place : PATAN

Date : 27/2/2023

Principal
B. D. College, Patan
Tal. Patan, Dist. Satara

General Secretary
Koyana Education Society, Patan
Tal. Patan, Dist. Satara

ASSOCIATION OF INDIAN UNIVERSITIES

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SHAHID BHAGATSINGH MAHAVIDHYALAYA
KILLARI, TQ. AUSA, DIST. LATUR**

WANTED

Applications are invited for the post of Principal (Granted) to be filled in SAMAJ PRABODHAN AKADAMI, LATUR SHAHID BHAGATSINGH MAHAVIDHYALAYA, KILLARI, TQ. AUSA, DIST. LATUR. The eligible candidates should submit their application along with all necessary documents **within fifteen days** from the date of publication of advertisement by registered post only.

Sr. No.	Name of the Post (Designation)	Number of Post	Full Time	Reservation
1	Principal	01	Full Time	Unreserved

Educational Qualification

A. Eligibility :-

1. A Master Degree with at least 55% mark (or an equivalent grade a point scale wherever grading system is followed) by recognized University.
2. A Ph.D. Degree in concerned/allied/relevant discipline(s) in the institution concerned with evidence of published work and research guidance.
3. Professor/Associate Professor with a total experience of fifteen years of teaching/ research in Universities, College and other Institution of Higher Education.
4. A minimum of 10 research publication in reputed peer reviewed and UGC listed journals.
5. A minimum of 110 research score as per Appendix II, Table 2 of UGC regulation 2018.
6. Academic eligibility and other rules regulation as per UGC Regulation 18 July 2018 and Govt. Resolution No. Misc-2018/C.R.56/UNI-1 Dated 08 March 2019.

B. Tenure :-

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

Salary & Allowances :-

Pay Scales as per the UGC, State Government of Maharashtra and Swami Ramanand Teerth Marathwada University, Nanded rules from time to time.

Note :-

1. Prescribed application form is available on the University **website (www.srtmun.ac.in)**.
2. No. T.A.D.A. will be paid to attend the interview.
3. Eligible candidates those who are already in service should submit their application through proper channel.
4. All attached Xerox copies of certificates and other relevant documents should be attached with the application form.
5. The original certificates must be provided at the time of interview.

Address for correspondence :-

The Secretary, Samaj Prabodhan Akadami,
C/O. Shahid Bhagatsingh Mahavidyalaya, Killari,
Tq. Ausa, Dist. Latur- 413516

President

Secretary