Rs. 30.00
ISSN-0566-2257

UNIVERSITY NEWS

A Weekly Journal of Higher Education

Association of Indian Universities

Vol. 62 • No. 25 • June 17-23, 2024

SHRI VAISHNAV INSTITUTE OF TECHNOLOGY AND SCIENCE

B.Tech. (4 Years)
Agricultural Engineering/ Automobile Engineering/ EV (Electric Vehicle Engineering)/ Civil Engineering/ Electronics and Computer Science Engineering/ Electrical Engineering (Solar Energy-Tata Power)/ Electrical & Electronics Engineering/ Electrical Engineering/ Electronics and Communication Engineering/ EC (Internet of Things)/ Robotics and Artificial Intelligence/ Electrical Engineering and Computer Science/ Civil Engineering (Smart Cities and Generative AI)/ ME (Artificial Intelligence & Machine Learning)/ CE (Artificial Intelligence & Machine Learning)/ ECE (Artificial Intelligence & IoT)/ Electronics and Instrumentation Engineering/ Instrumentation & Control Engineering/ Mechanical Engineering/ Mechanical Engineering (Plant Engineering-Tata Power)/ Mechatronics/ Railway Engineering/ Robotics and Automation/ Electronics (VLSI Design & Technology)

M.Tech. (2 Years)
Civil (Geotechnical Engineering)/ Civil (Structural Engineering)/ Civil (Transportation Engineering)/ Civil (Water Resources Engineering)/ Digital Communication/ Digital Instrumentation/ Embedded System & VLSI design/ Industrial Engineering/ Mechanical (Thermal and Design Engineering)/ Power Electronics/ Power System/Renewable Energy/ Virtual Instrumentation/ Construction Technology & Management/ Automations Robotics

Diploma Programs (3 Years)
Automobile Engineering/ Civil Engineering/Electrical Engineering/ Electronics and Instrumentation Engineering/ Electronics Engineering/ Mechanical Engineering/ Mechatronics Engineering/ Solar Energy/ Integrated Circuit (IC) Manufacturing

SHRI VAISHNAV INSTITUTE OF INFORMATION TECHNOLOGY

B.Tech. (4 Years)
Computer Science Engineering/ Computer Science & Business Systems- (TCS)/ Computer & Communication Engineering/ CSE (Mobile Applications)-Apple (AATCE)/ CSE (Artificial Intelligence - IBM)/ CSE (Big Data and Cloud Engineering - Impetus) CSE (Data Science -IBM)/ CSE (Enterprise System - red hat)/ CSE (FullStack Development & Blockchain -IBM)/ CSE (Information and Cyber Security - NCSSS)/ CSE (Artificial Intelligence and Machine Learning-Microsoft)/ CSE (Internet of Things-IBM)/ Information Technology/ IT (Data Science - IBM)/ IT (FullStack Development & Blockchain-IBM)/ (CSE)-Machine Learning and Cloud Computing-Google Cloud India

M.Tech. (2 Years)
Computer Communication Engineering/ Computer Science Engineering/ Computer Science Engineering (Big Data Analytics)/ Information Security/ CSE-Data Science/ CSE-Artificial Intelligence

Dual Degree Programs

B.Tech. + M.Tech # (4+2 Years)
Computer Science Engineering/ Computer Science Engineering (Big Data Analytics)/ Computer Science Engineering (Cloud Computing)/ Computer Science Engineering (Cyber Forensic)/Information Communication Technology/Information Technology

B.Tech. + MBA# (4+2 Years)
Computer Science Engineering/ Information Technology

Diploma Programs
One-Year Post Graduate Diploma in Computer Applications (PGDCA)
Six-Months Diploma in Computer Hardware and Networking (DCHN)

SHRI VAISHNAV INSTITUTE OF TEXTILE TECHNOLOGY

B.Tech. (4 Years)
Garment & Fashion Technology/ Textile Engineering/ Technical Textiles

M.Tech. Textile Engineering/ Textile Chemistry (2 Years)
B.Sc. Fashion Design (3 Years)
B.Des. Fashion Design (4 Years)
Diploma Program Textile Engineering (3 Years)

SHRI VAISHNAV INSTITUTE OF HOME SCIENCE

M.Sc. Food & Nutrition (2 Years)

Dual Degree Program

B.Sc. + M.Sc.# Food & Nutrition (3+2 Years/4+1 years)

SHRI VAISHNAV SCHOOL OF FINE ARTS

BFA Painting/ Animation (4 Years)
MFA Painting/ Animation (2 Years)

SHRI VAISHNAV INSTITUTE OF LAW

LL.B (Hons.) (3 Years)
LL.M. Business Law/ Criminal Law (2 Years)
LL.M. (Business Law/ Criminal Law/Human Rights) (1 Year)

Integrated Programs

B.A.LL.B/B.B.A.LL.B/B.Com. LL.B (Hons.) (5 Years)

SHRI VAISHNAV INSTITUTE OF SOCIAL SCIENCES, HUMANITIES AND ARTS

B.A. (3 Years)
B.A. (Hons.) (4 Years)
Psychology/ Economics/ Public Administration/ English Literature/ Sociology/ Political Science/ Anthropology/ History/ Hindi Literature/ Sanskrit
B.S.W. (3 Years)
M.A./ M.Sc. (2 Years)
Psychology/ Applied Psychology/ Public Administration/ Clinical Psychology/ Counselling Psychology/ English Literature/ Sociology/ Economics/ Education/ Anthropology/ History/ Political Science/ Hindi Literature/ Sanskrit/ Psychology (Palliative Care)
M.S.W (2 Years)

Dual Degree Programs

B.S.W. + M.S.W.# (3+2 Years/ 4+1 Years)
B.Lib.I.Sc. + M.Lib.I.Sc.# (1+1 Year)
One-Year Advanced Diploma in French
Six-Months Certificate in Guidance and Counselling

SHRI VAISHNAV INSTITUTE OF PHARMACY

B.Pharma (4 Years)

SHRI VAISHNAV INSTITUTE OF PARAMEDICAL SCIENCES

Bachelor of Medical Lab. Technician (3 Years)
B.A./B.Sc. Yoga (3 Years)
M.A./M.Sc. Yoga (2 Years)

Diploma Programs
X ray Radiographer Technician/ Medical Lab. Technician/ Cath. Lab. Technician/ Dialysis Technician/ Optometric Refraction/ Optometrist Contact Lens/ Anesthesia Technician/ Yoga/ Naturopathy

SHRI VAISHNAV INSTITUTE OF COMPUTER APPLICATIONS

BCA Big Data Analytics-IBM (3 Years)
B.Sc. Data Science (3 Years)
M.Sc. Computer Science (2 Years)
MCA Banking Technology (2 Years)

Dual Degree Program

BCA+MCA# (3+2 Years/4+1 years)
BCA+MCA# Banking Technology (3+2 Years/4+1 years)

SHRI VAISHNAV INSTITUTE OF COMMERCE

B. Com (Plain / Hons.) (3 Years/ 4 Years)
Banking & Finance/ Business Administration/ Computer Application/ Entrepreneurship/ Tax Procedure
M.Com Plain / Financial Risk Management (2 Years)

Dual Degree Programs

B.Com+M.Com/B.Com+MBA# (3+2 Years/ 4+1 Years)

SHRI VAISHNAV INSTITUTE OF FORENSIC SCIENCE

B.Sc. (Hons.) Digital & Cyber Forensics (4 Years)
B.Sc. Forensic Science/ Forensic Psychology (3 Years)
M.Sc. Forensic Science/ Forensic Psychology/ Cyber Forensic (2 Years)
B.A./ B.Sc. Criminolgy (3 Years)
M.A./ M.Sc. Criminolgy (2 Years)

Dual Degree Program

B.Sc.+M.Sc.# (3+2 Years/ 4+1 Years)
Forensic Science/ Forensic Psychology

SHRI VAISHNAV INSTITUTE OF PLANNING

B.Plan (4 Years)
M.Plan (Urban Planning) (2 Years)

SHRI VAISHNAV INSTITUTE OF ARCHITECTURE

B.Arch. (5 Years)
B.Des. Interior Design / Graphics & Animation/ Product Design (4 Years)
M.Des. Interior Design (2 Years)

Dual Degree Program

B.Des. + M.Des.# (4+2 Years)
Interior Design/ Product Design/ Graphics & Animation

SHRI VAISHNAV SCHOOL OF MANAGEMENT

MBA (2 Years)
Engineering Management/ Family Business & Entrepreneurship/ International Business/ Media Management/ Agri-business/ Business Analytics/ Advertising and Public Relations/ Tourism/ Rural Management-MGNCRE/ Hospital & Healthcare Management/ Marketing/ Human Resource/ Fintech/ Finance
BBA (Hons.) (4 Years)
BBA (Plain / Fintech & Rural) (3 Years)

Dual Degree Program

BBA + MBA# (3+2 Years/ 4+1 Years)
Marketing/ HR/ Finance/ Operations/ Fintech/ Rural Management-MGNCRE
MBA (2 Years)
(Industrial Management)
Open to Engineering Graduates only.

SHRI VAISHNAV INSTITUTE OF JOURNALISM AND MASS COMMUNICATION

M.A. Journalism and Mass Communication/ Hindi Journalism (2 Years)

Dual Degree Programs

B.A.+M.A#
Journalism and Mass Communication (3+2 Years/4+1 Years)
M.A.+Ph.D# Journalism and Mass Communication

SHRI VAISHNAV INSTITUTE OF SCIENCE

B.Sc. (3 Years)
B.Sc. (Hons.) (4 Years)
Physics/ Chemistry/ Maths/ Computer Science/ Biotechnology/ Electronics/ Instrumentation/ Statistics/ Economics
M.Sc. (2 Years)
Physics/ Chemistry/ Maths/ Environmental Science/ Analytical Chemistry/ Biotechnolgy

Dual Degree Programs

B.Sc. + M.Sc.# (3+2 Years/4+1 years)
Physics/ Chemistry/ Maths/ Statistics

SHRI VAISHNAV INSTITUTE OF AGRICULTURE

B.Sc. (Hons.) Agriculture (4 Years)
M.Sc. Agriculture/ Horticulture (2 Years)
Genetics and Plant Breeding/ Entomology/ Plant Pathology/ Soil Science/ Agronomy/ Horticulture (Fruit Science)/ Horticulture (Vegetable Science)/Agricultural Economics/ Agricultural Extention Education/ Live Stock Production & Management/ Agrometeorology/ Molecular Biology and Biotechnology

FACULTY OF DOCTORAL STUDIES & RESEARCH (3 Years)

Management/ Physics/ Chemistry/ Maths/ Life Science/ Psychology/ Library Science/Computer Applications/ Computer Science/ Computer Engineering/ Environmental Science/ Electronics Engineering/ Electrical Engineering/ Mechanical Engineering/ Textile Technology/ Civil Engineering/ IT/ Forensic Science/ Criminology/ Home Science/ English/ Journalism and Mass Communication/ Biotechnology/ Fine Arts/ Agriculture/ Economics/ Political Science/ Commerce/ Sociology/Anthropology/ Public Administration/ Design/ Education/ Law/ Fashion Design/ History

City Office: Shri Vaishnav Vidya Parisar, 177 Jawahar Marg, South Rajmohalla, INDORE-2 • Campus: Indore-Ujjain State Highway, INDORE-453111, E-Mail: admission@svvv.edu.in • Mob.: 9303700163, 9303700164, 9303700165, 9303700166, 9303700167, 9303700168

SVET (Shri Vaishnav Entrance Test) June 2, 16, July 7, 21, August 4, 18, 2024
Teaching Assistanceship (TA) of ₹ 12,400 for all Gate Qualified Candidates in M.Tech Program*

SVET-2024
16th June 2024
Ph.D (all streams)

In the case of dual degrees, there is an option to exit the program after completion of first degree.

UNIVERSITY NEWS
Vol. 62 June 17-23
No. 25 2024
Price Rs. 30.00

A Weekly Journal of Higher Education Published by the Association of Indian Universities

In This Issue

Sustainable Environments and Student-friendly University Campuses

Neelima Gupta*

Universities and educational institutions serve as hubs of knowledge, innovation, and collaboration in the quest for environmental sustainability. By educating future leaders, conducting research, engaging with communities, promoting sustainable practices, and influencing policy, universities play a vital role in raising awareness about environmental issues and catalyzing positive change.

The context of Green Campus activities is becoming an integral part of the modern-day education system and educational institutions act as pioneers in promoting these principles within the society. In order to support a sustainable and climate-friendly environment, practices should involve the use of energy-efficient measures, comprehensive recycling and composting, and green landscaping on the campus.

Universities and Environmental Sustainability

Universities play a pivotal role in creating environmental awareness through education, research, community engagement, and modeling sustainable practices which can be considered as follows:

Education

Curriculum Development

Universities offer courses and degree programs in environmental science, sustainability, ecology, and related fields. These programmes equip students with knowledge about environmental issues, conservation techniques, and sustainable practices.

Interdisciplinary Learning

Many universities integrate environmental topics into various disciplines, promoting an understanding of how environmental issues intersect with economics, politics, engineering, health, and social sciences.

Workshops and Seminars

Universities organize workshops, seminars, and guest lectures by experts in environmental science and sustainability to educate students and staff about current environmental challenges and solutions.

Research

Innovative Solutions

Universities conduct cutting-edge research to address environmental problems, such as developing renewable energy technologies, studying climate change impacts, and creating sustainable agricultural practices.

**Vice Chancellor, Dr. Harisingh Gour Sagar Vishwavidyalaya, Sagar, Madhya Pradesh. E-mail: guptagrawal@rediffmail.com*

Policy and Advocacy

Research findings from universities can influence environmental policies and advocacy efforts, providing evidence-based recommendations for government and industry action.

Collaborative Projects

Universities often collaborate with other academic institutions, governments, NGOs, and businesses on research projects aimed at solving complex environmental issues.

Community Engagement

Public Outreach

Universities engage with local communities through outreach programmes that educate the public about environmental issues. This includes public lectures, community clean-up events, and educational campaigns.

Partnerships

Universities form partnerships with local governments, schools, and community organizations to promote sustainability initiatives and environmental stewardship.

Service Learning

Many universities incorporate service learning into their curricula, where students participate in community-based environmental projects as part of their education.

Campus Sustainability

Green Campus Initiatives

Universities implement sustainability initiatives on campus, such as reducing energy and water consumption, promoting recycling and waste reduction, and using renewable energy sources.

Sustainable Infrastructure

Many universities invest in green buildings and sustainable infrastructure, which serve as living laboratories for students and the community to learn about sustainable design and practices.

Student Involvement

Universities support student-led environmental organizations and initiatives, providing opportunities for students to actively participate in sustainability efforts and leadership.

Global Impact

International Collaboration

Universities collaborate with international institutions on environmental research and projects, contributing to global efforts to address climate change and environmental degradation.

Study Abroad Programmes

Environmental study abroad programs expose students to different environmental challenges and solutions around the world, fostering a global perspective on sustainability.

Global Conferences

Universities host and participate in global conferences and symposiums on environmental issues, facilitating knowledge exchange and collaboration among international experts.

Policy Influence

Expert Testimony

University researchers and faculty often serve as experts, providing testimony and advice to policymakers on environmental issues.

Publications and Media

Through academic publications, media appearances, and public statements, universities can disseminate important environmental research and raise public awareness about critical issues.

The universities can educate and empower the younger generation to take responsibility for the environment. It can cultivate environmental stewardship and inspire future leaders to prioritize sustainability. This encourages to produce a new generation of environmentally conscious citizens (World Wildlife Fund) (Yale Climate Connections).

The youth can play a critical role in spreading environmental education. Through programs, community workshops, and social media, they educate peers and the broader community about the importance of environmental stewardship and sustainable living practices (UN News).

Students can be engaged in environmental projects which help them to develop skills such as leadership, project management, and scientific research. These skills are crucial for their future careers and contribute to the broader environmental movement by equipping a new generation of environmental leaders (UN News).

Creating a healthy environment for student growth involves addressing various aspects of the university experience, including physical health, mental well-being, academic support, and a sustainable campus. The key components of a healthy environment for student growth are:

Sustainable Campus for Student Growth

A sustainable campus promotes student growth involving integrating environmentally friendly practices into all aspects of university life, from infrastructure and operations to education and community engagement. The following may be considered:

Green Infrastructure

Energy Efficiency: Invest in energy-efficient buildings with proper insulation, LED lighting, energy-efficient HVAC systems, and smart energy management systems. Implement renewable energy sources such as solar panels, wind turbines, and geothermal systems to reduce reliance on fossil fuels.

Sustainable Building Practices: Design new buildings and retrofit existing ones to meet green building standards like LEED (Leadership in Energy and Environmental Design). Use sustainable materials, water-saving fixtures, and low-impact development techniques.

Water Conservation

Efficient Water Use: Install low-flow faucets, toilets, and showerheads to reduce water consumption. Use drought-resistant landscaping and smart irrigation systems to minimize water use in maintaining campus grounds.

Water Recycling: Implement greywater recycling systems and rainwater harvesting to reduce dependence on municipal water supplies.

Waste Management

Reduce, Reuse, Recycle: Establish comprehensive recycling programs for paper, plastics, glass, and metals. Promote the use of reusable items and reduce single-use plastics on campus.

Composting: Implement composting programs for food waste from dining halls and organic waste from landscaping. Use the compost generated for campus gardens and landscaping.

Sustainable Transportation

Public Transit and Biking: Promote the use of public transportation, biking, and walking by providing safe bike paths, bike-sharing programs, and easy access to public transit.

Electric Vehicles: Provide charging stations for electric vehicles and encourage their use through incentives or campus policies.

Sustainable Food Practices

Local and Organic Food: Source food from local, sustainable farms and promote organic food options in campus dining facilities.

Plant-based Options: Increase the availability of plant-based meals to reduce the environmental impact of food consumption.

Environmental Education and Research

Curriculum Integration: Integrate sustainability into the curriculum across all disciplines. Offer courses and programs focused on environmental science, sustainability, and climate change.

Research Initiatives: Support research projects that focus on sustainability, renewable energy, and environmental conservation. Encourage interdisciplinary research to address complex environmental challenges.

Student and Community Engagement

Sustainability Organizations: Support student-led sustainability organizations and initiatives. Encourage students to participate in sustainability projects and events.

Community Outreach: Engage with the local community through sustainability workshops, public lectures, and collaborative projects. Foster partnerships with local governments, businesses, and NGOs to promote sustainability beyond campus.

Green Spaces and Biodiversity

Campus Green Spaces: Maintain and create green spaces such as parks, gardens, and nature trails on campus. These areas provide recreational spaces for students and support mental well-being.

Biodiversity Conservation: Implement landscaping practices that promote biodiversity, such as planting native species and creating habitats for local wildlife.

Policy and Governance

Sustainability Policies: Develop and implement campus-wide sustainability policies and action plans. Establish sustainability goals and regularly monitor progress.

Sustainability Office: Create a dedicated office or department for sustainability to oversee and coordinate sustainability initiatives and programs.

Health and Well-being

Healthy Building Design: Design buildings with natural lighting, good ventilation, and access to nature to promote a healthy indoor environment.

Wellness Programmes: Offer wellness programs that emphasize the connection between personal health and environmental sustainability, such as outdoor fitness classes and nature-based therapies.

Implementation Strategies

We, in the university system, are desirous to promote environment-friendly habits in our campuses. The following are suggestive of suitable implementation strategies:

Stakeholder Involvement: Engage students, faculty, staff, and the community in the planning and implementation of sustainability initiatives. Foster a sense of ownership and collective responsibility.

Continuous Improvement: Regularly assess and update sustainability practices to incorporate new technologies and respond to emerging environmental challenges.

Communication and Reporting: Transparently communicate sustainability goals, progress, and achievements to the campus community and stakeholders through reports, newsletters, and social media.

Policy and Administration: Develop and implement policies that prioritize student health, safety, and well-being. This includes creating a campus master plan that integrates these elements into the university's infrastructure and operations.

Feedback Mechanisms: Establish regular feedback mechanisms, such as surveys and focus groups, to understand students' needs and make data-driven improvements.

Collaborative Efforts: Engage faculty, staff, students, and the wider community in efforts to create and maintain a healthy campus environment.

By incorporating these strategies and addressing these components, universities can create a sustainable and holistic campus environment that not only supports the physical, mental, academic, and social well-being of students, fostering their overall growth and success but also prepares them to become environmentally conscious leaders in their communities and professions.

A student will definitely enjoy his campus life in a lush green environment, clean and green, pollution-free campus. By integrating education, research, community engagement, and sustainable practices, universities can play a comprehensive role in fostering environmental awareness and promoting actions that contribute to a more sustainable future and make our students more comfortable. The institutions should thus create awareness among students for environmental protection, make the campus eco-friendly, and sensitize the students towards responsible living by planting trees and conserving energy for a better future.

Let us try to develop our institutions into an environment-friendly institution. Let us try to keep it clean and pollution-free. Let us commit ourselves to the green movement and invest all efforts to maintain and beautify our campuses with lush green gardens all around. Let us aim to reduce energy consumption, ensure standard indoor air quality, and improve energy efficiency on campus through methods that are consistent with a safe, secure environment and involve the community within the campus. Let us look forward to a better tomorrow by adopting these practices.

❑

Accreditation of Higher Education Information System in the Transformative Age

H A Ranganath*

Accreditation of institutions started three decades back in India and is a potential instrument to promote quality in Higher Education Institutions (HEIs). It may be summed up as Accreditation = Assessment+Reformation of HEIs. Assessment of the performance of HEIs is done by drawing the criteria and benchmarks from the education policy of the country and also of the aspirations of the stakeholders. In a way, the social responsibility of accrediting agencies is to provide real-time data on HEIs to students, parents, employers, policymakers, and society at large to make a conscious decision. At the same time a wake-up call to HEIs reminding them of their requirements to deliver quality education blended with skills.

With Technological innovations, we have entered the Transformative Age. Much like the Industrial Revolution before it, one can expect fundamental shifts in how we live, work, etc. The Transformative Age will also change how we learn – and, along with it, the nature and role of the university. It has facilitated the concept of e-classrooms and e-universities. Now it is already labeled as a 'University in the age of Education 4.0'. The future of work will be radically different, driven largely by the machine economy, where robotics and machine learning take over repetitive and programmable human tasks and artificial intelligence augments human roles. When machines become workers, what will humans do? How will universities adapt to remain relevant for the future of work? The challenge before HEIs therefore is to remain relevant for future tasks so that their graduates will be 'work ready'. What will be the stakeholders' demands of our universities in the future? How will universities contribute to solving the challenges of the transformative age? HEIs would have to recalibrate their strategies across all the facets to remain relevant in the age of Education 4.0.

The ecosystem of higher education terrain of our country is extremely diverse with uneven hills and valleys of different shapes, heights, and areas. There exists a strong divide between HEIs of rural and urban domains of the ecology. The demography of HEIs ranges from just born to one hundred twenty-five years. Also, institutions of a diverse nature with different missions and mandates, etc. have arrived. Further, there exists a wide difference between Centrally- and State-funded public institutions. The need of the hour is a differential instrument to accredit and facilitate the advancement of diversified, specialized HEIs that have different missions and mandates. The Quality barometer is different for different categories of HEIs. The entry of private institutions has added yet another competitive player and dimension to the ecosystem. There is a strong possibility of the arrival of campuses of foreign universities. When the ecosystem of higher education has changed so much, should not measures of evaluation change? When institutions of a diverse nature with different missions, mandates, etc have arrived, should not the process of reviewing institutions also undergo transformation? Since Higher Education is evolving, and the expectations of stakeholders are also changing, the diagnostic tools also need to be innovative.

Now the strategy has to be to impose robust requirements to be eligible and also succeed in getting the accreditation. For instance, the eligibility criteria have to consider that during the previous 3 years a) the leadership position such as Vice Chancellor/Director/Principal should not be vacant not more than three months; and b) at any one time, 75% of the required faculty positions should have been filled up by permanent faculty. Of course, these prerequisites have to be addressed by the central and state governments to make sure that the institutions under their jurisdiction become eligible for accreditation. For affiliating universities, its role in mentoring the affiliating colleges needs due consideration. Other issues that deserve to be included for certification are programme-wise faculty with relevant expertise and infrastructure, programmes with inter, multi-, and trans disciplinary teaching and research with an emphasis on skills of

* *Former Vice Chancellor, Bangalore University; and Former Director, National Assessment and Accreditation Council.*

contemporary interest, provisions for student and faculty mobility, participation in Academic Bank of Credits; benchmarking for research performance to include scientific information flow between industry and academia, the brain circulation patterns, National-International collaborations, context-based citation summary of research articles, the Research and innovation ecosystem with Start-ups, Unicorns, Innovation and Entrepreneur Cell, Incubators, Accelerators, and Co-work spaces, IPR Cell, Information management system, University Society Interaction, etc. With the arrival of Artificial Intelligence and ChatGPT, the accreditation benchmarks also have to be more innovative.

In light of the above narration, the Accreditation process has to be innovative by adapting technology and reimagining with National and International Perspectives and Benchmarks. Accreditation is not to predict the future but to offer multiple plausible "tomorrows" to stress-test new policies, strategies, and plans. It shows ways and means for the transformation of higher education. We must develop and equip HEIs to succeed in the coming decades. Futuristic! Accreditation, akin to the diagnostic process of health checkups, can contribute to the belief that Higher education has to survive today and also get ready for tomorrow's challenges.

Acknowledgments: I profusely thank Prof. P. S. Jayaramu. Retd. Professor of Bangalore University for critical review of the draft of the article.

❑

Challenges in Implementation of National Education Policy–2020 in Teacher Education Institutions

Ruma Roy*

The National Education Policy (NEP) 2020 initiates a transformative era in education, envisioning a future where learning surpasses boundaries and equips students with holistic development. This paper explores the implications of NEP 2020 within Teacher Education Institutions (TEIs), focusing on challenges and opportunities across multidisciplinary education, the Academic Bank of Credits, skill development, outcome-based education, and distance learning. Multidisciplinary education, facilitated through integrated B.Ed programmes and STEAM approaches, offers a comprehensive learning experience but requires collaborative curriculum development and enhanced pedagogical skills. The Academic Bank of Credits presents possibilities for flexible learning pathways but demands coordination and quality assurance. Skill development initiatives aim to prepare student teachers for the digital age but face challenges in technology integration and assessment. Integrating the Indian Knowledge System enriches learning experiences but requires cultural sensitivity and curriculum alignment. Outcome-Based Education emphasizes holistic development but necessitates pedagogical shifts and assessment redesign. Distance education necessitates pedagogical, technological, and administrative preparation for effective implementation. As TEIs navigate these challenges, they embrace innovation and adaptation, fostering collaboration and growth to realize NEP 2020's transformative vision in teacher education.

In the ever-evolving landscape of education, the National Education Policy (NEP) 2020 stands as a transformative blueprint that envisions a future where learning transcends boundaries and empowers students with a holistic set of skills. As this visionary policy ripples through the educational fabric of our nation, its implications are particularly striking within Teacher Education Institutions (TEIs), where the guiding lights of tomorrow's educators are nurtured. The challenges that arise in the implementation of NEP 2020 within TEIs are as diverse as they are captivating, spanning across domains like multidisciplinary learning, the Academic Bank of Credits, skill development, outcome-based education, and the realm of distance education. In this journey to reshape teacher education, we are in the process of discovering innovative solutions, and encountering the complex intersections of tradition and modernity. Let us explore into the challenges that await, uncovering the intricacies that arise as NEP 2020 envisages the transformation within Teacher Education Institutions.

* *Professor, Department of Education, St. Ann's College of Education, S D Road, Secunderabad, Telangana- 500003. E-mail: rumaroy2269@gmail.com*

Multidisciplinary Education

Multidisciplinary education is an innovative approach that seeks to bridge the gaps between traditional subject boundaries, providing students with a holistic understanding of various concepts. One avenue through which this approach is realized is the integrated B.Ed (Bachelor of Education) programme, which combines diverse subjects to create a more comprehensive learning experience. This approach has both exciting possibilities and significant challenges.

In the realm of education, the STEAM-based approach stands out as a powerful tool. STEAM, an acronym for Science, Technology, Engineering, Arts, and Mathematics, encourages students to explore the interconnectedness of these subjects. By integrating these disciplines, students are equipped to solve real-world problems in creative and innovative ways. However, implementing STEAM can be challenging, as it requires educators to collaborate across disciplines and develop cross-curricular lesson plans.

Community engagement is another key aspect of multidisciplinary education. Connecting classroom learning with the local community can enhance students' understanding of how concepts apply to the real world. It fosters a sense of responsibility and empathy as students address community needs through their academic pursuits. However, this requires effective coordination between educators, students, and community stakeholders.

Enhanced pedagogical skills play a crucial role in this approach. Teachers must adapt their teaching methods to facilitate interdisciplinary learning effectively. This involves creating engaging activities that connect different subjects and encourage critical thinking. Professional development opportunities are vital to help teachers acquire the necessary skills and strategies for successful implementation.

Multidisciplinary education also embraces a research paradigm. It encourages students to explore topics from multiple angles, deepening their understanding and analytical abilities. By fostering curiosity and exploration, this approach cultivates a lifelong love for learning. However, striking a balance between breadth and depth of knowledge can be a challenge, as students need to develop expertise while maintaining a holistic perspective.

Assessment strategies in multidisciplinary education need to evolve. Traditional exams may not accurately reflect the students' grasp of interconnected concepts. Alternative assessment methods, such as project-based evaluations and presentations, allow students to showcase their comprehensive understanding and problem-solving skills. Yet, these methods require careful design and evaluation to ensure fairness and reliability.

Thus, multidisciplinary education through integrated B.Ed programmes, STEAM-based approaches, community engagement, enhanced pedagogical skills, research paradigms, and innovative assessment strategies offers a dynamic and holistic learning experience. While it holds great potential for preparing students for the complexities of the modern world, educators and institutions must overcome challenges in curriculum development, teacher training, and assessment design to fully realize its benefits.

Academic Bank of Credit

The concept of an Academic Bank of Credits (ABC) presents a revolutionary shift in the education landscape, offering both exciting possibilities and substantial challenges. This system revolves around a uniform credit structure that enables students to accumulate credits from various institutions and use them to attain degrees, fostering a more flexible and personalized learning experience.

One of the key possibilities of the ABC system is the implementation of a uniform credit structure. This standardization allows for seamless credit transfer between institutions, enabling students to build their academic journey across diverse learning environments. However, establishing and maintaining this uniformity requires collaboration and coordination among educational institutions and accrediting bodies.

Another aspect is the modalities of multiple entry and exit. Students can enter and exit educational programs at different stages, acquiring certificates or diplomas along the way. This facilitates lifelong learning, providing learners with recognized credentials even before completing a full degree. Yet, managing the logistics and ensuring the coherence of curricula at various exit points is a challenge that institutions must address.

The concept of joint degrees and credit transfer is another significant opportunity presented by ABC. Collaborative efforts between institutions can lead to the creation of specialized joint degree programs. However, harmonizing curricula, assessment methods, and administrative procedures across different institutions demands careful planning and communication.

Credits for Massive Open Online Courses (MOOCs) within the ABC framework is an innovative way to recognize non-traditional learning experiences. Students can earn credits for completing MOOCs, supplementing their formal education with specialized courses. However, ensuring the quality and rigor of such courses, as well as their alignment with academic programs, poses a challenge.

International collaboration is a remarkable possibility under the ABC system. Students can accrue credits from institutions around the world, fostering cross-cultural exposure and enriching their educational journey. However, dealing with differences in academic calendars, grading systems, and accreditation standards across countries requires robust mechanisms for quality assurance.

Strengthening internal assessments is a crucial facet of the ABC system. With a greater focus on continuous assessment and skill development, educators can provide more holistic evaluations of student progress. This aligns with the evolving needs

of the job market and society. However, creating effective assessment methods that cater to diverse learning paths and maintain academic rigor is a complex undertaking.

Thus, the Academic Bank of Credits presents a transformative approach to education, offering flexibility, recognition of diverse learning experiences, and international collaboration. While the system holds immense potential for revolutionizing education, challenges like ensuring uniformity, managing credit transfers, and maintaining quality standards must be carefully addressed. By striking a balance between innovation and quality assurance, the ABC system can contribute to a more inclusive and adaptable educational landscape.

Skill Development

Skill development for student teachers is a critical aspect of modern education, offering both promising possibilities and significant challenges. This endeavour focuses on equipping future educators with a diverse set of skills that extend beyond traditional teaching methods, catering to the evolving needs of 21st-century learners.

One of the exciting possibilities lies in developing technological skills among student teachers. With the integration of technology in education, educators must be proficient in using digital tools and platforms to enhance their teaching methods. Embracing technology enables dynamic and interactive classroom experiences, preparing students for the digital age. However, keeping up with the rapid pace of technological advancements and ensuring equitable access to technology for all students can be challenging.

Certificate courses are a valuable avenue for skill development. Offering specialized courses in areas such as classroom management, assessment strategies, and inclusive education can enhance the capabilities of student teachers. These certificates provide tangible recognition of expertise and enable educators to cater to diverse learning needs. Developing a curriculum that effectively addresses various skill gaps while accommodating the core curriculum can be a complex task.

Designing courses that emphasize experiential learning and practical application is another possibility. Student teachers benefit from hands-on experiences that simulate real-world teaching scenarios. This approach fosters adaptability, critical thinking, and problem-solving skills, ultimately enhancing their teaching effectiveness. However, crafting immersive and effective experiential learning opportunities demands careful planning and resource allocation.

Soft skills play a pivotal role in the skill development of student teachers. Effective communication, empathy, adaptability, and leadership skills are essential attributes for successful educators. Integrating soft skills training into teacher education programs can enable student teachers to create inclusive and nurturing classroom environments. Balancing the development of both soft and technical skills while maintaining academic rigor can be a challenge.

Online courses offer a flexible approach to skill enhancement. Student teachers can enrol in online courses that cater to their specific needs, allowing them to learn at their own pace. Online courses also facilitate continuous professional development throughout their careers. However, ensuring the quality of online courses and validating their authenticity can be challenging, as the online education landscape is vast and varied.

Thus, skill development for student teachers opens doors to innovative teaching practices and more effective classroom management. The possibilities of honing technological skills, pursuing certificate courses, designing experiential learning opportunities, enhancing soft skills, and embracing online courses are abundant. Nevertheless, addressing challenges such as staying updated in a rapidly evolving landscape, maintaining quality, and fostering a well-rounded skill set requires dedicated efforts from educational institutions and policymakers. By striking a balance between traditional teaching approaches and modern skill development, we can better prepare student teachers for the dynamic demands of contemporary education. The alignment of the course with the National Higher Education Qualification framework (NHEQF) can support skill development among the learners.

Indian Knowledge System

The integration of the Indian Knowledge System into education holds immense potential while presenting notable challenges. This approach

aims to infuse traditional Indian values, arts, music, and philosophy into the curriculum, fostering a more holistic and culturally rooted learning experience.

One of the exciting possibilities is value integration. Incorporating Indian ethos and values such as compassion, respect, and ethical conduct into education can nurture well-rounded individuals who contribute positively to society. This integration bridges the gap between traditional wisdom and modern knowledge, preparing students to navigate complex ethical dilemmas. However, aligning diverse values with an inclusive educational framework requires careful consideration of cultural variations and perspectives.

Art integration is another avenue that holds promise. Integrating traditional Indian art forms into subjects like science and mathematics enhances creativity and critical thinking. This approach fosters interdisciplinary connections and helps students appreciate the rich artistic heritage of India. Yet, ensuring that art integration is seamlessly woven into the curriculum without overshadowing core subjects can be a challenge.

Music & dance forms integration presents another exciting opportunity. Infusing Indian classical and folk music into education can improve cognitive abilities, emotional expression, and cultural awareness. However, offering a well-rounded musical education requires educators with a deep understanding of Indian music traditions and the means to incorporate them effectively.

Cultural studies projects offer a hands-on approach to learning about India's diverse heritage. Students can delve into projects that explore local cultures, festivals, and historical events, promoting a sense of identity and belonging. The challenge lies in ensuring that these projects are inclusive and accurately represent the multifaceted nature of Indian culture.

Integrating Indian philosophy into education cultivates critical thinking and encourages students to reflect on life's deeper questions. By introducing concepts from ancient texts like the Vedas, Upanishads, and Bhagavad Gita, students can develop a broader perspective on human existence and morality. However, balancing philosophical teachings with modern scientific knowledge can be complex.

Transacting the curriculum in local languages is another key aspect. Teaching in regional languages not only preserves linguistic diversity but also enhances comprehension and engagement among students. However, this requires the development of quality educational resources and the training of teachers proficient in regional languages.

Therefore, the integration of the Indian Knowledge System into education offers a profound opportunity to enrich learning experiences and promote cultural understanding. The possibilities of value integration, art and music integration, cultural studies projects, Indian philosophy, and curriculum transaction in local languages are vast. Overcoming challenges related to diverse values, curriculum integration, teacher training, and resources is essential to fully realize the benefits of this approach. By finding a balance between modern educational goals and the preservation of India's rich cultural heritage, we can create a more holistic and culturally aware education system

Outcome Based Education

Outcome-Based Education (OBE) is a transformative approach that offers promising possibilities and notable challenges. This educational philosophy centers on defining desired learning outcomes and designing curricula, pedagogies, and assessments to align with those outcomes, focusing on students' holistic development.

Curriculum alignment is a pivotal possibility in OBE. By mapping learning objectives and outcomes with the curriculum, educators can ensure that every component of the educational journey contributes to desired student learning. This approach fosters coherence, consistency, and relevance in teaching materials. However, the challenge lies in aligning various elements of the curriculum seamlessly while maintaining academic rigor.

Pedagogical approaches in OBE shift from traditional teacher-centric methods to student-centered learning experiences. This empowers students to actively engage in their education, enhancing critical thinking, problem-solving, and collaboration skills. However, adopting student-centered approaches necessitates a shift in teaching paradigms and professional development for educators.

Aligning internal assessment with OBE principles is an exciting possibility. Assessments

should measure not only cognitive knowledge but also skills and attitudes. This approach provides a more comprehensive view of student capabilities. The challenge here is designing assessments that authentically gauge desired outcomes while ensuring fairness and reliability.

Redesigning internship programs is another avenue in OBE. By aligning internships with learning outcomes, students gain practical exposure that complements theoretical learning. However, securing quality internship opportunities, tracking learning outcomes, and facilitating reflective practice during internships require careful management.

Assessment for holistic development is a key possibility of OBE. Beyond academic achievements, educators assess students' personal and interpersonal skills, ethics, and values. This approach prepares students for well-rounded success in their careers and personal lives. Yet, the challenge lies in developing assessment tools that accurately measure these qualities and provide constructive feedback.

Mapping with program outcomes is crucial in OBE. Program outcomes define the overarching goals of an educational program, ensuring that all learning experiences contribute to these goals. This aligns with the broader vision of education institutions. However, mapping can be complex, requiring collaboration among faculty, administrators, and stakeholders to ensure a comprehensive and cohesive educational journey.

Thus, Outcome-Based Education presents transformative possibilities in curriculum alignment, pedagogical approaches, internal assessment, internship redesign, holistic assessment, and program outcome mapping. Embracing these possibilities can lead to a more student-centered, relevant, and holistic education. Challenges such as maintaining rigor, training educators, designing effective assessments, and managing logistics must be addressed to fully harness the benefits of OBE. By striking a balance between educational ideals and practical implementation, institutions can create a dynamic and purposeful learning environment.

Distance Education

Preparing teachers to effectively teach through distance mode requires a comprehensive approach that addresses various pedagogical, technological, and administrative aspects. Here are important aspects to consider when preparing teachers for distance education:

Pedagogical Training

- Understanding Distance Learning: Educators need to grasp the fundamental principles of distance education, including asynchronous communication, self-paced learning, and online engagement.
- Online Pedagogy: Teachers should be trained in designing online courses that facilitate active learning, collaboration, and meaningful interactions.
- Differentiated Instruction: Teachers must learn to adapt their instructional methods to cater to diverse learning styles and student needs in a virtual environment.

Technology Proficiency

- Digital Literacy: Teachers need to be comfortable with technology tools, platforms, and applications commonly used in distance education.
- Virtual Classroom Tools: Training on using virtual classroom platforms, video conferencing software, and learning management systems is essential.
- Multimedia Integration: Teachers should learn to integrate multimedia elements such as videos, interactive simulations, and online quizzes to enhance learning.

Course Design and Content Development

- Learning Objectives: Teachers must learn how to set clear learning objectives that align with the course outcomes and engage students effectively.
- Content Creation: Training on creating engaging and accessible online content, including text, multimedia, and interactive elements, is crucial.
- Assessment Strategies: Teachers should be trained to design fair and meaningful assessments, including online quizzes, assignments, and discussions.

Student Engagement and Interaction

- Facilitation Techniques: Educators should learn strategies to promote student engagement, active participation, and peer interaction in an online setting.
- Discussion Facilitation: Training on moderating online discussions, encouraging critical thinking,

and guiding meaningful conversations is important.

- Providing Timely Feedback: Teachers need to understand how to provide constructive feedback to students to support their learning journey.

Assessment and Evaluation

- Authentic Assessment: Educators need to develop strategies for assessing student understanding that align with the nature of distance learning.
- Providing Constructive Feedback: Training on giving feedback that supports students' learning and growth is essential.

Accessibility and Inclusivity

- Universal Design for Learning (UDL): Teachers should be aware of UDL principles to ensure course materials and activities are accessible to all students.
- Accommodations: Training on providing accommodations for students with disabilities or different learning needs is important.

Preparing teachers to teach through distance mode requires a combination of pedagogical expertise, technological proficiency, and a deep understanding of online learning dynamics. A holistic approach that addresses these aspects ensures that educators are well-equipped to provide quality education in a virtual environment.

Conclusion

In the road map of education, the National Education Policy 2020 emerges as a vibrant narrative of innovation, inclusion, and transformation. As we reflect upon the challenges and possibilities that NEP 2020 brings to the realm of Teacher Education Institutions (TEIs), we are reminded that the journey toward educational excellence is neither linear nor without its share of complexities. The multifaceted challenges that NEP 2020 poses in TEIs, encompassing multidisciplinary learning, the Academic Bank of Credits, skill development, outcome-based education, and distance learning, are a testament to the policy's far-reaching aspirations. In the face of these challenges, TEIs stand at a crossroads of tradition and modernity, where adaptation becomes the cornerstone of progress. As educators and institutions grapple with multidisciplinary integration, credit frameworks, and pedagogical shifts, they simultaneously embark on a voyage of innovation and renewal. It is within these challenges that opportunities for growth, collaboration, and imagination flourish.

References

1. Government of India (2020). National Education Policy 2020, Ministry of Education, Government of India, New Delhi. Retrieved from *https://www.education.gov.in/sites/upload_files/mhrd/files/NEP_Final_English_0.pdf* ❑

Development of Scientific Attitudes in Children: Concepts and Measures

Md Ashique Husain* and Aerum Khan**

The modern age is called the scientific age. At no point in the history of mankind has science dominated human life so powerfully and so complexly as it does today. All this has become possible due to the great efforts of man in the field of science. But scientific progress is both preceded and followed more vigorously by the formation of appropriate attitudes. Such an attitude is called a scientific attitude. The most important and valuable objective of science education at the school level is to develop scientific attitude in the new generation and train them scientifically to deal with the problems of daily life. Attitude is the disposition of an individual's mental predisposition toward objects or events of people's objections. A scientific attitude is a set of attitudes and values an individual has that is commonly used in solving problems in a scientific manner. It is an attitude towards life.

Scientific attitude refers to being open-minded, having a desire for accurate knowledge, trusting the scientific method of obtaining knowledge and assuming that the solution to the problem will come from the application of verified knowledge.

Scientific attitudes are one of the most important outcomes of modern science education. Although some view scientific behavior as a product of science education, the majority of people consider it as important as the scientific aspect. Science should be taught directly and systematically because science has many characteristics that promote scientific attitudes that distinguish it from other types of attitudes.

Scientific attitude is considered a universal goal of learning science. Learning science always develops interests, values, attitudes, and skills. In this age of change due to science and technology, all children should not only acquire knowledge of science, but also acquire a favorable attitude towards it and show interest in it.

Scientific attitude is related to science, education and scientific methods, their concept and curriculum should be organized in the same context, which will create interest in science among children. The term scientific attitude is a state of mind that defines a belief in empirical evidence, intellectual curiosity, passion for truth, sensitivity to evidence, and the need for open communication in science. A scientific attitude is an open-minded approach to phenomena or events. There is a strong desire for accurate knowledge, belief in the scientific method, seeking knowledge and solving problems using verified sources of knowledge.

A scientific attitude is a state of mind regarding a psychological object or concept in the field of science education. According to Sekar, P. and Mani, S. (2013), "Scientific behavior is generally associated with our mental processes. These habits are important in everyone's daily life."

According to Aikin and Aikin (1969), "Scientific attitude is defined as following scientific methods and displaying a scientific mindset. Scientific attitude, open-mindedness, skepticism, observation, objectivity, honesty, intellectual Integrity is to suspend judgment pending the acquisition of evidence."

Scientific attitudes are the characteristics of a person or individual state of mind that not only outwardly behaves in a way expected of a scientific concept or phenomenon, but also understands why they act in a certain way. According to the National Society for the Study of Education (NSSE), "scientific attitudes can be defined as open-mindedness, a desire for accurate knowledge, confidence in the methods of acquiring knowledge, and an expectation that the problem will be solved." The solution will come from using his proven knowledge." It is a state of mind characterized by the willingness to change one's

** Research Scholar, Department of Teacher Training and Non-formal Education (Institute of Advanced Studies in Education), Faculty of Education, Jamia Millia Islamia, New Delhi- 110025. E-mail: ashiquerazzaque88@gmail.com*

***Associate Professor, Department of Teacher Training and Non-formal Education (Institute of Advanced Studies in Education), Faculty of Education, Jamia Millia Islamia, New Delhi- 110025 E-mail: akhan26@jmi.ac.in*

opinion based on new evidence, to look for truth and bias, to look for cause and effect relationships, to distinguish between fact and theory.

A person with a scientific attitude reflects the following characteristics and attitudes while dealing with everyday situations**.**

Objectivity

It refers to the unbiased attitude of an individual.

Belief in Cause and Effect Relationship

People with a scientific attitude believe that there is always a perfect natural explanation for everything. The belief that every effect has a cause is the most important part of the scientific attitude. It affects one's response to certain problems.

Finding a Rational Explanation

Science and technology began to develop rapidly when people put aside their individual and collective superstitious beliefs and began to vigorously search for true explanations.

Rational and Logical Thinking

Rational and logical thinking refers to the decision and action taken by an individual based on some objective and logical thinking that can be explained and justified.

Empiricism

This means that opinions must be based on evidence and observation, especially self-observation.

Skepticism

The belief that nothing is final and permanent, alternatives are available and there is always room for innovation and discovery.

Empathy for the Human Condition

It means putting yourself in other people's shoes and taking care of the needs of those around you.

Critical Thinking

It refers to analyzing and evaluating to find strengths and weaknesses with a view to making improvements.

Suspended Judgment

The results are generalized only when it is proven by various methods including experiments and observations. This is an attempt to follow the best hypothesis.

Open Mindedness

Open mindedness refers to the ability to face facts as they are, regardless of what one may have previously thought. It also includes the ability to accept new and sometimes offensive ideas. One should expect failures and be willing to try again. Human understanding is always less than perfect. The mind cannot be made once and for all. New knowledge can change thought processes and direction. Often what is accepted as truth is relative, it happens, not exactly. A scientific truth offers an explanation that is acceptable only in light of what is known at a particular time.

Respect Others' Views

Different people's views should be listened to with patience because no one knows whose point of view will be touching and important. It's easier when these thoughts are your own. The difficulty arises when other individual views differ and are not acceptable. Ideas, that are completely new or foreign, can also be difficult to accept.

The Belief that Problems have Solutions

This aspect of scientific attitude makes man believe that there is no problem in the world that cannot be solved. If there is a problem, there is a solution.

Parsimony

It is an appeal to simplicity, or in other words, a preference for simple explanations over complex processes or concepts.

If a person has these sets of attitudes, values and beliefs, he can be called a person with scientific attitude. These attitudes should be reflected in his behavior when dealing with people or solving problems in the personal, social, or scientific field. A science teacher should practice these attitudes, set himself as an example to the students and develop these qualities in the students.

Measures to Develop Scientific Attitude in Children

Role of Family

Educationists say that a child's first madrasa is the lap of his parents and the first teacher is his mother and thus the first madrasa is the family. Parents need to have positive values towards science so that children can be interested in science from the beginning because they can play their role in choosing science for their children, observe children's work and see how they do it. Interested in the activity? How to ask? Give appropriate answers to their questions, direct their activities, and give appropriate advice at the right times. They are anxious to know it and fulfilling their curiosity will develop a scientific attitude in them. Express your joy in your children's achievements.

Role of Society

From the earliest stages of development, social structures provide the scaffolding upon which individuals construct their understanding of the world. Education, as one of the basic pillars of society, provides not only knowledge but also the tools of inquiry and critical thinking necessary for scientific research. Cultural norms and values, deeply embedded in the fabric of society, shape attitudes toward curiosity, skepticism, and the pursuit of evidence-based truths. Access to resources, whether in the form of laboratories, libraries or patronage, serves as fertile soil in which the seeds of scientific curiosity can take root and flourish. Throughout this journey, society offers guidance in the form of role models—scientists and science communicators whose efforts inspire and guide aspiring minds toward the pursuit of scientific inquiry. Media and communication media within society act as media, disseminating scientific knowledge and shaping public perception of science. Furthermore, social support for research and innovation, manifested through funding mechanisms and policy frameworks, provides the necessary infrastructure to promote scientific development. Within a complex web of social interactions, peer influence reinforces the value of scientific curiosity and collaboration, fostering a culture where inquiry is celebrated and knowledge is shared. Among these interconnected threads, society also creates a sense of moral responsibility, ensuring that scientific endeavors are conducted with integrity and respect for human values. Thus, society plays an integral role in fostering the scientific attitude, providing the fertile ground on which the seeds of inquiry can germinate and the wings of curiosity can be raised, thereby enriching individual lives and the collective human being. Experience strengthens both.

Role of School

Schools serve as primary institutions for the development of scientific attitudes among students, providing the foundation for a lifelong appreciation of inquiry, evidence, and critical thinking. At the heart of this role is a carefully crafted curriculum, designed to introduce students to the wonders of science from an early age. Through a rich tapestry of subjects such as physics, chemistry, biology, and others, students are immersed in the exciting world of scientific inquiry. Beyond textbooks and lectures, schools provide invaluable opportunities for learning. Laboratory experiments, field trips, and interactive activities invite students to explore scientific concepts on their own, sparking their curiosity and deepening their understanding. In these dynamic environments, students not only absorb facts but also learn essential skills of observation, experimentation and analysis. Central to the cultivation of a scientific attitude is the encouragement of curiosity. Teachers play an important role in fostering this trait, creating classrooms where questions are welcome. Through engaging discussions and thought-provoking experiments, educators encourage students to ask why and how, instilling the sense of wonder that drives scientific inquiry. Moreover, science education provides an important lens through which students view the world. By teaching them to evaluate evidence and question assumptions, schools empower students to distinguish between fact and fiction, science and pseudoscience—

Role of Curriculum

The curriculum serves as a blueprint for the formation of students' scientific attitudes. In essence, the curriculum is a carefully designed tapestry woven with threads of scientific knowledge, inquiry, and critical thinking. The curriculum introduces students to the basic concepts of science. It invites them on a journey of discovery, guiding them through the wonders of biology, chemistry, physics, and other scientific disciplines. Learning

opportunities embedded in the curriculum, where students directly engage with scientific phenomena through laboratory experiments, field studies, and interactive projects. These amazing experiences not only deepen students' understanding of scientific concepts but also foster their curiosity and spirit of discovery. Moreover, the curriculum fosters a spirit of inquiry by encouraging students to ask questions, seek answers and challenge assumptions. It provides a framework for scientific inquiry, teaching students how to formulate hypotheses, design experiments, and analyze data. Through these processes, students develop the thinking skills necessary to navigate the complexities of the modern world. In addition to acquiring knowledge and skills, the curriculum instills a sense of wonder and appreciation for the natural world. It exposes students to the amazing beauty and complexity of the universe, igniting a lifelong curiosity that drives their scientific pursuits. The curriculum promotes scientific literacy by emphasizing the importance of evidence-based reasoning and skepticism. It equips students with the tools to critically evaluate information, distinguish between reliable scientific evidence and pseudoscience, and make informed decisions in an increasingly data-driven society. Ethical considerations are also woven into the fabric of the curriculum, urging students to consider the wider social implications of scientific discoveries and technological advances. Through discussions about responsible research methods and the ethical dimensions of scientific inquiry, students develop a deeper understanding of the ethical responsibilities involved in the pursuit of knowledge. The curriculum would pave the way for scientific understanding and enlightenment. Through its rich tapestry of knowledge, inquiry, critical thinking, and moral reflection, the curriculum empowers students to develop a scientific attitude.

Role of Teachers

The role of teachers is key in the development of scientific attitude in children, their role cannot be ignored, the science teacher should work for students' knowledge acquisition and development of their scientific attitude. A teacher should have a scientific attitude himself because the scientific attitude of the students mainly depends on the science teacher. Development of scientific attitude on the part of the teacher is not a difficult task. It will be helpful in promoting scientific attitudes. It is not that only science teachers can develop scientific attitude, but teachers of other subjects can also develop scientific attitude. Scientists' lives influence children's attitudes towards subjects. A successful means of inculcating scientific attitude, an effective method of communication, a pleasant atmosphere, also inculcates scientific attitude. The teacher should be enthusiastic, lively and enjoy the material so that they can bring life to the classroom. The teacher should teach science as practically as possible. Superstition to the teacher You should also avoid it yourself and keep your students away from it, and neither believe what you hear nor let the students know about it. A teacher should treat his children in a rational way as well as with love and compassion and should give them the right direction.

Role of Environment

The environment, which includes the natural world and the social contexts in which individuals live and learn, strongly influences the development of scientific attitudes. From the majestic landscapes of forests and oceans to the bustling streets of urban centers, the environment provides a rich tapestry of experiences that shape how people perceive and interact with the world around them. In natural environments, such as forests, mountains, and water bodies, individuals are surrounded by the wonders of the natural world. Here, they encounter the complex workings of ecosystems, witness the cycles of life and death, and marvel at the diversity of flora and fauna. These experiences create a sense of curiosity and wonder, prompting people to ask questions about the mechanisms underlying natural phenomena. The natural environment acts as a living laboratory, providing opportunities for hands-on exploration and experimentation. Whether collecting specimens, conducting field studies, or simply observing wildlife, individuals hone their observation skills and deepen their understanding of the natural world, scientific inquiry in its purest form. I am engaged. Apart from the natural environment, the social context also plays an important role in shaping scientific attitudes. Communities that value education, intellectual curiosity, and critical thinking provide the foundation for the development of a scientific mindset. In such an environment, individuals are encouraged to question assumptions, seek evidence, and engage in reasoned

debate. Promotes a holistic approach to scientific inquiry. By recognizing the interconnectedness of knowledge across disciplines and cultural traditions, individuals develop a more sophisticated understanding of the complex issues facing society. Within the social environment, institutions such as schools, universities, research centers, and science museums serve as centers of scientific learning and discovery. Here, individuals have access to resources, mentoring, and collaborative opportunities that further their scientific development. Media and communication channels in the social environment shape public perception of science, disseminate scientific knowledge, and shape attitudes toward scientific inquiry. Accurate and accessible science communication promotes a culture of scientific literacy and encourages individuals to engage critically with scientific information.

Conclusion

Scientific attitudes are one of the most important outcomes of modern science education. Although some view scientific behavior as a product of science education, the majority of people consider it as important as the scientific aspect. Science should be taught directly and systematically because science has many characteristics that promote scientific attitudes that distinguish it from other types of attitudes. If a person has some peculiar sets of attitudes, values and beliefs, he/she can be called a person with a scientific attitude. These attitudes should be reflected in his/her behavior when dealing with people or solving problems in the personal, social, or scientific field. A science teacher should practice these attitudes discussed in this paper, set himself/herself as an example to the students and develop these qualities in the students.

References and Readings

1. Prachagool, V. (2021). Scientific Attitude of Young Children through Literature and Project-based Learning Organization, *Journal of Educational Issues*, November 11, *7*(2), 217. *https://doi.org/10.5296/jei.v7i2.19054*
2. Balaji, G. (2017). Role of Science Teacher in Developing Scientific Attitude among Secondary School Students, *Scholarly Research Journal for Interdisciplinary Studies*, December 30, *4*(37).
3. Ahmed (2014). *Teaching of Biological Sciences* (second edition) [English], PHI Learning Private Limited, July.
4. Murugan (2019). A Study on Scientific Attitude of Elementary Teacher Education Students, *Psychology and Behavioral Science International Journal*, March 25, *11*(1), 1–6. *https://doi.org/10.19080/PBSIJ.2019.11.555805*
5. Bettaswamy, H., B., and Sharath Kumar, C., R. (2022). A Study on Relationship between Scientific Attitude and Achievement in Science among Secondary School Students in Mysore City Karnataka, *International Journal of Novel Research and Development*, May, *7*(5), 344–378. *https://www.ijnrd.org/papers/IJNRD2205037.pdf*
6. Singh, Y. and Bai, C. (2017). A Study of Scientific Attitude of Secondary School Students in West Tripura District, *International Journal of Informative & Futuristic Research*, January, *4*(5), 6231–6237. *https://www.researchgate.net/publication/338108360_A_Study_of_Scientific_Attitude_of_Secondary_School_Students_in_West_Tripura_District/link/5e46a9a9458515072d9c5cfe/download*
7. Rajendran and Anandarasu (2020). Study on Scientific Attitude of B.Ed., Trainees in Perambalur District, *Shanlax International Journal of Education*, January, *9*8(4), 105–110. *https://doi.org/10.34293/education.v8i4.3251*
8. Khan, A. (2015). "Development of Scientific Literacy at Elementary Level", *Awadh International Journal of Information Technology and Education (AIJITE)*, Alfa Publications: New Delhi, Volume 4, Issue 1, pp. 25-31, ISSN: 2277-8985.
9. Khan, A. (2018). Science, Scientific Literacy and Scientific Temper in the Curricular Documents, Voices of Teachers and Teacher Educators, ISSN 2455-1376, Vol. 6, Issue-II, February, pp.38-49, NCERT, New Delhi.
10. Küçükaydın. (2021). Examination of Elementary School Students' Scientific Attitudes and Intellectual Risk-Taking Behaviors, *Science Education International*, May 19, *32*(2), 149–158. *https://doi.org/10.33828/sei.v32.i2.8*

❑

Embracing Change and Lifelong Learning: Inspiring the Youth of Today

Narendra Damodardas Modi, Hon'ble Prime Minister of India delivered the Convocation Address at the 38th Convocation Ceremony of the Bharathidasan University, Tiruchirapalli, Tamil Nadu on January 02, 2024. He said, "I am confident in the ability of young people to make the years till 2047 the most important in our history. You are stepping into the world at a time when everyone is looking at you with new hope in every sector. Youth means energy. It means the ability to work with speed, skill, and scale. In the last few years, we have worked to match you in speed and scale, so that we can benefit you. In the spirit of constant learning, it is important to proactively work on un-learning, reskilling, and up-skilling. Because, in a rapidly transforming world, either you drive change or change drives you." Excerpts

Being here at the 38th Convocation ceremony of the Bharathidasan University is special for me. This is my first public interaction in 2024. I am happy to be in the beautiful state of Tamil Nadu and among young people. I am also glad to learn that I am the first Prime Minister to have the privilege of coming to a convocation here. I congratulate the graduating students, their parents and teachers on this important occasion.

Often, the creation of a university is a legislative process. An Act is passed and a university comes into being. Later, colleges are started under it. Then the university grows and matures into a hub of excellence. However, with Bharathidasan University, the case is slightly different. When it was created in 1982, many existing and prestigious colleges were brought under your university. Some of these colleges already had a track record of producing great people. So, Bharathidasan University started on a strong and mature foundation. This maturity has made your university impactful in many domains. Whether it is humanities, languages, science or even satellites, your university makes a unique mark!

Our nation and civilization have always been centred around knowledge. Some of the ancient universities such as Nalanda and Vikramashila are well known. Similarly, there are references of places like Kanchipuram housing great universities. Kanchipuram and Madurai were also great seats of learning. Students from across the world used to come to these places. Similarly, even the concept of a convocation is very ancient and well-known to us. For example, take the ancient Tamil Sangam meeting of poets and intellectuals. In Sangams, poetry and literature were presented for the analysis of others. After analysis, the poet and their work were recognised by the larger society. This is the same logic used in academia and higher education even today! So, my young friends, you are part of a great historical tradition of knowledge. Universities play a crucial role in giving direction to any nation. When our universities were vibrant, our nation and civilisation were vibrant too. When our nation was attacked, our knowledge systems were targeted immediately. In the early part of the 20th century, people like Mahatma Gandhi, Pandit Madan Mohan Malaviya and Sir Annamalai Chettiar started universities. These were hubs of knowledge and nationalism during the freedom struggle.

Similarly, one of the factors behind the rise of India today is the rise of our universities. India is setting records in economic growth as the fastest-growing major economy. At the same time, our universities are also entering global rankings in record numbers. Your university has awarded degrees to many of you today. Your teachers, family, friends, everyone is happy for you. In fact, if you are seen outside wearing your graduation gown, people will congratulate you even if they don't know you. This must make you think deeply about the purpose of education and how society looks at you with hope.

Gurudev Rabindranath Tagore said that the highest education does not give us just information. But it helps us to live in harmony with all existence. The whole of society, including the poorest of the poor, played a role in bringing you to this important day. Therefore, giving back to them, creating a better society and country is the true purpose of education. The science you learnt can help a farmer in your village. The technology you learnt can help solve

complex problems. The business management you learned can help run businesses and ensure income growth for others. The economics you learned can help work on reducing poverty. The languages and history you learnt can help work on strengthening culture. In a way, every graduate here can help contribute to creating a developed India by 2047!

I am confident in the ability of young people to make the years till 2047 the most important in our history. Great poet Bharathidasan said, "पुदियदोर उलगम् सेय्वोम्." This is also your university's motto. This means let us create a brave new world. Indian youth are already creating such a world. Young scientists helped us ship vaccines to the world during COVID-19. Indian science is on the world map through missions like Chandrayaan. Our innovators took the number of patents from around 4,000 in 2014 to almost 50,000 now! Our humanities scholars are showcasing the Indian story to the world like never before. Our musicians and artists are continuously bringing international awards to our country. Our athletes won a record number of medals in Asian Games, Asian Para Games and other tournaments. You are stepping into the world at a time when everyone is looking at you with new hope in every sector. Youth means energy. It means the ability to work with speed, skill and scale. In the last few years, we have worked to match you in speed and scale, so that we can benefit you.

In the last 10 years, the number of airports has doubled from 74 to nearly 150! Tamil Nadu Has a vibrant coastline. So, you would be happy to know that the total cargo handling capacity of major ports in India has doubled since 2014. The speed of road and highway construction in the country has almost doubled in the last 10 years. The number of registered start-ups in the country has grown to almost 1 lakh. This was less than one hundred in 2014. India has also sealed a number of trade deals with important economies. These deals will open up new markets for our goods and services. They also create countless new opportunities for our youth. Whether it is strengthening institutions like the G20, fighting climate change, or playing a bigger role in the global supply chain, India is being welcomed as a part of every global solution. In many ways, due to local and global factors, this is the best time to be a young Indian. Make the most of this time and take our country to new heights.

Some of you may be thinking that today is the end of university life for you. That may be true, but it is not the end of learning. You will not be taught by your professors any more but life will become your teacher. In the spirit of constant learning, it is important to proactively work on un-learning, reskilling, and up-skilling. Because, in a rapidly transforming world, either you drive change or change drives you. Once again, I congratulate the young people graduating here today.

I wish you all the best for a bright future! ❑

CAMPUS NEWS

National Seminar on Exploration of Historical Sites

A two-day National Seminar on 'Exploration of Historical Sites: Indian Knowledge Tradition (In the Context of Eastern Uttar Pradesh)' was organised by the Department of Ancient History, Ramji Sahai P G College, Rudrapur, Deoria, recently. The event was sponsored by the Indian Council of Historical Research (ICHR), New Delhi. The event focused on exploring the archeological, social, cultural, literary, educational, religious, spiritual, geographical and economic importance of historical sites located in Eastern Uttar Pradesh. Moreover, the issues of conservation, development and management of such sites were also discussed both extensively and intensively. The possibilities of development of surrounding areas through tourism were also investigated. A key outcome of the seminar was the release of an ISBN book entitled '*Purvi Uttar Pradesh*: *Itihaas aur Sanskriti'* jointly edited by Prof. Brijesh Kumar Pandey and Dr Ashutosh Kumar Singh. The book is a collection of research papers presented on the theme and sub-themes of the seminar.

The Inaugural Session was presided over by Prof Poonam Tandon, Vice Chancellor, Deen Dayal Upadhyaya Gorakhpur University, Gorakhpur. Dr Balmukund Pandey, Organising Secretary, *Bhartiya Itihaas Sankalan Yojana* was the Chief Guest. Prof. O P Srivastava, Central University, Prayagraj, Dr. Om Jee Upadhyay, Director, Research and Administration, ICHR and Prof Rajwant Rao, DDU Gorakhpur University graced the dais as Guests of Honour.

In his Welcome Speech, Prof. Brijesh Kumar Pandey emphasised the need for continuous research on historical sites from one generation to other, so that the horizon of knowledge keeps on getting expanded and the ambiguities removed. This, according to him would enable learners to have a proper sense of the history of their motherland, which is vital for progress.

Dr. Om Jee Upadhyay said that we have countless reasons to be proud of our heritage and that there is a need for fresh research so that once again India emerges as a '*Viswa Guru'*. He further underscored that history is never a final report, but an interim report, liable to changes as per new findings.

Prof. O P Srivastava warned that it is necessary to understand the implications behind history so that history is rescued from being a discourse or narrative. He further suggested that only big claims about the glories of the past will not serve our purpose; we must produce books based on objective research. He agreed that though there is a need for rewriting history, the same should not be done along party lines, but based on scientific evaluation of evidence.

Prof Rajwant Rao described the historical and cultural richness of the local area between the *Saryu* and *Gandak* rivers. According to him, Rudrapur (in Deoria district) and surrounding Kachhranchal have been the confluence point of Indian and Iranian civilizations. Noting that there has been large-scale migration, both inward and outward, in this area, he suggested that such migration should be a topic for research for the new generation.

Dr. Balmukund Pandey called for rejecting the colonial and leftist descriptions of Indian History and advocated for adopting a nationalist approach to history writing. He emphasized that a proper evaluation of Indian history is possible only when our vision is Indian. Responding to Prof. O P Srivastava's challenge, he expressed confidence that the process of producing books, based on new evidence and studies, is in full swing.

Prof Poonam Tandon, in her presidential speech, congratulated the college for hosting such a seminar and called for other colleges, affiliated with DDU Gorakhpur University to follow suit, to build a better and progressive academic atmosphere in the region that is capable of promoting and fostering quality research in all walks of life.

A total of four parallel technical sessions were conducted on eight subthemes of the even in which as many as forty papers were presented.

The Valedictory Session was presided over by Mr. Rajesh Srivastava, while Prof Vipula Dubey, former Head, Department of Ancient History, Archeology and Culture, DDU Gorakhpur University was the Chief Guest. The session had Dr. Diwakar Prasad Tiwari, former Principal, Deenanath Pandey Government P G College, Deoria and Dr. Prabhakar Upadhyay of

the Department of Ancient History, Archeology and Culture at Banaras Hindu University as the Guests of Honour.

Dr Prabhakar Upadhyay shared an interesting observation that while the Vedic culture was a militant, war-loving culture, the one that developed in the regions between Kashi and Koshal had truth and non-violence as major cultural pillars.

Dr. Diwakar Prasad Tiwari spoke about the recent trend of rejecting the middle age of Indian history and said that what remains of this age in Indian history is something that remains to be seen.

Prof Vipula Dubey emphasized that history is a subject that every individual needs to be aware of, to have a proper perspective of oneself, and to make progress in the right direction. She highlighted that the history of a place is inherent in its name itself. She also shared her observation that Purvanchal (eastern UP) has been the confluence of both Vedic and Non-vedic streams.

In his Presidential Address, Rajesh Kumar Srivastava suggested that there should be more and more research on historical sites in and around Rudrapur. Dr Ashutosh Kumar Singh was the Convenor of the event while Dheeraj Gupta was the Co-convener of the event. The Vote of Thanks was proposed by the Organising Secretary, Mr. Manish Kumar.

International Conference on Tribal Livelihood Patterns, Issues and Strategies

A two-day International Conference on 'Tribal Livelihood Patterns, Issues and Strategies for Empowerment' is being organized by the Department of Political Science, Dr. B.R. Ambedkar Open University Hyderabad, Telangana State from August 08-09, 2024. The event aims to address the challenges faced by tribal communities worldwide and explore effective strategies to empower them. It delves into various aspects including socio-economic disparities, cultural preservation, land rights, education, healthcare, and political representation; Historical and contemporary challenges faced by tribal communities, such as marginalization, discrimination, and loss of land and resources; The importance of cultural preservation and indigenous knowledge in fostering resilience and identity; Strategies for promoting socio-economic development and improving livelihood within tribal communities, including sustainable resource management and income generation initiatives; Advocacy for land rights and legal frameworks to protect indigenous territories and natural resources; Enhancing access to quality education, healthcare, and social services for tribal populations; Empowering tribal leadership and fostering participatory decision-making processes; Building alliances and partnerships between tribal communities, governments, NGOs, and other stakeholders to address common challenges. Overall, it serves as a platform for dialogue, exchange of ideas, and collective action towards advancing the rights and well-being of tribal peoples. The Subthemes of the Event are:

- Community Development and Economic Empowerment.
- Cultural Preservation and Revitalization.
- Historical Context and Indigenous Rights.
- Programmes and Policies for Tribal Development
- Explore of Issues, Challenges, and Impediments of Tribal Development.
- Democratization in Tribal Areas and Challenges.
- Land Rights Movements – Land Alienation in Tribal Areas.
- Education among Tribes – Problems, Policies and Perspectives.
- Livelihood Issues – Displacement, Relocation and Rehabilitation of Project Affected Tribes.
- Forest Policy and Tribal's.
- Land Rights and Environmental Justice.
- Impact of Globalization on Tribal Communities.
- Political Empowerment and Self-governance.

For further details, contact Conference Director, Prof. Gunti Ravinder, Department of Political Science, Dr. B.R. Ambedkar Open University Hyderabad, Telangana State-500033, Mobile No: 09440009191, E-mail: *drbraoupoliticalscience@gmail.com*. For updates, log on to: *www.braou.ac.in/events/*

Capacity Building Programme on Academic Research and Teaching

A ten-day Capacity Building Programme on 'Academic Research and Teaching for Young Faculty Members in Social Sciences/Commerce and Management' is being organized by the Department of Architecture and Planning, MANIT Bhopal from July 13-22, 2024. The Event is sponsored by

The Indian Council of Social Science Research (ICSSR), New Delhi. Its primary objective is to equip young faculty members with the essential skills and knowledge required to excel in their academic research pursuits and make substantial contributions to social sciences. The event may enable young faculty members to enhance their readiness for rigorous research endeavors, successfully publish their findings in esteemed academic journals, and play a significant role in advancing knowledge within their respective fields. Additionally, it will foster the creation of a dynamic academic community, promoting collaboration among peers and elevating the overall quality of research within the realm of social sciences/architecture/planning.

Eligibility Requirements for Participants

The course welcomes individuals who are currently pursuing M. Phil/PhD /PDF or Young Faculty Members in the field of Social Sciences /Architecture / Planning and related disciplines at a UGC -recognized Indian University, Deemed University, College, Institute of National Importance, or ICSSR Research Institutes. Additionally, those who are actively engaged in economic/Management/Commerce and Social Science research or have plans to embark on such research endeavors are eligible to apply. The topics to be explored encompass:

- Introduction to Quantitative and Qualitative Methods
- Understanding Theory and Theoretical Contribution, Including Theory Building.
- Formulation of Research Design.
- Review of Literature.
- Construction of Questionnaires and Data Collection.
- Tools and Procedures for Data Collection and Data Cleaning.
- Sciences, Architecture and Planning Research.
- Case Study Method.
- The Journal Article Writing Process.
- Common Mistakes in Article Writing.
- The Editorial Process and Peer Review.
- Thesis Writing.
- Ethics in Academic Writing.
- Reference Management Software, with a Hands-on Session.
- Proof Reading and Editing.
- Journal Selection/Sending for Publication.
- How to Respond to the Review Comments.

For further details, contact Course Director, Dr. Kavita Dehalwar, Department of Architecture and Planning, MANIT, Link Road Number 3, Bhopal, Madhya Pradesh – 462003, Mobile No: 09039845833. For updates, Log on to: *www.mnit.ac.in/events/*

International Conference on Psychology Learning and Teaching

A three-day International Conference on 'Psychology Learning and Teaching' is being organized by the Department of Psychology, CHRIST (Deemed-to-be University), Bengaluru in association with the Society for the Teaching of Psychology (STP), Division 2 of the American Psychology Association (APA) and the International Council of Psychology Educators Incorporated (ICOPE Inc). from August 01-03, 2024.

Psychology is a growing discipline with new fields and branches in the past decade. Global changes, including the pandemic, technology, and globalisation, directly impact psychology teaching and learning. The specific issues of a community, location, or nation place demand on psychologists to respond with sensitivity to the community's culture, ethnicity, and needs. Hence, psychology education is pushed to innovate and develop competent training and teaching models. The discipline requires pedagogies and assessment models to teach and assess students' knowledge, skills, values, and attitudes. The need to build foundational competencies and foster personal and professional development places a huge emphasis on the need for trained faculty. There are no formal educator training programmes for faculty in higher education. Most faculty members develop their skills through experience and experimentation within their careers. Psychology educators apply principles of psychology and education to their teaching, learning, and assessment practices. There is a growing need to document, test, and validate these practices and create evidence-based and culturally competent models that are replicable and sustainable. Psychology teaching covers teaching-learning practices in high schools to doctoral-level programmes. The Themes and Tracks of the event are:

Teaching-Learning and Assessment Models in Psychology

- Teaching Models, Supervision, Mentoring, Competency-based Model.
- Signature Pedagogies- Research-informed Teaching, Case-based Teaching, Experiential Learning, Participative Learning, and Problem-solving Methodologies.
- Evaluation and Feedback Methods -Use of Rubrics and Open-book Exams, Designing Assessments.
- Curriculum Design and Development.

Teaching Psychology at Different Levels (High School-Doctoral Level)

Teaching Introductory Psychology, Research Methods, Foundational Knowledge, Attitude and Competencies. Domain/course-Specific Methods -Counsellor Education, Developmental, Social, Organisational, Clinical, Cognitive, Neuropsychology, Health, Educational Psychology, Experimental Psychology, Research Methods, and Assessments.

Psychology Educators' Experience, Perceptions and Challenges

- Challenges to Psychology Education.
- Training and Professional Development for Educators.
- Community of Practice.
- Personal and Professional Development.
- Educator Mental Health and Well-being.

Psychology Student's Engagement and Experiences

- Internship, Apprenticeship, Service Learning, Professional Development.
- Student Mental Health and Well-being.
- Positive and Challenging Experiences in Classrooms.

Leadership, Governance and Policies in Psychology Education

- Policies and Programmes, Benchmarking, Internationalization.
- Licensure and Certification, Role of International and Local Organizations.
- Ethical Practice in Teaching and Learning.

Current Trends and Future Directions in Teaching Psychology

- Decolonolising Psychology Education, Indigenous Psychology.
- Cultural Perspectives, Psychological Literacy.
- Teaching for Sustainability, Peace, Inclusivity.
- Role of Artificial Intelligence and Technology.

For further details, contact Conference Chair, Dr Aneesh Kumar, Department of Psychology, CHRIST (Deemed-to-be University), Hosur Road, Bengaluru-560029, Karnataka, E-mail: *iplat.conference@christuniversity.in*. For updates, log on to: *https://icplt.christuniversity.in/*

AIU News

Faculty Development Programme on the Role of Artificial Intelligence

A five-day Faculty Development Programme on the 'Role of Artificial Intelligence in Viksit Bharat @2047' was organized by the Association of Indian Universities (AIU)─Academic and Administrative Development Centre (AADC) in collaboration with Viksit Bharat Cell@2047, Guru Gobind Singh Indraprastha University (GGSIU), New Delhi from March 11-15, 2024 through online mode. Over 140 participants from various institutes and colleges across India gained valuable insights from the exceptional sessions offered during the event. Through curriculum development, pedagogical training, research capacity building, ethical considerations, industry collaboration, policy advocacy, evaluation, and community building, the event aims to foster a culture of AI-driven innovation, responsible development, and interdisciplinary collaboration among educators, researchers, and industry stakeholders, contributing to the nation's sustainable development and societal well-being in the AI era.

The programme commenced with Inaugural Session led by Dr. Anshul Bhatia, Assistant Professor, University School of Automation and Robotics, GGSIPU through Cisco Webex platform. She extended a warm welcome to all participants and dignitaries. She discussed the significance of AI in

shaping *Viksit Bharat@2047*. Following her, Nodal Officer, Prof. Arvinder Kaur, AADC, delivered the welcome address and greeted all participants, stressing the pivotal role of Artificial Intelligence in advancing *Viksit Bharat@2047*. Afterwards, Prof. Anuj Kumar Vaksha, Director, AADC shared his valuable insights on the objectives and perspective of *Viksit Bharat@2047*. Further, Dr. Anuradha Chug delivered the orientation of FDP as well as introduced the participants to the objectives and purpose of the event. She also educated the participants about the attendance and assessment criteria and the overall conduct of the online event. At the closing of the Inaugural Function, Dr. Anuradha Chug concluded the ceremony with a Vote of Thanks to all the dignitaries and participants.

The technical session was led by Dr. Sanjay Kumar Singh, Assistant Professor, GGSIPU focusing on 'Tech Powered India: Generative AI'. Dr. Singh shared insights into the practical applications of Generative AI in daily life, including the Indian government's initiative, 'INDIAai'. He discussed applications, challenges, and tools associated with Generative AI. In conclusion, Dr. Anshul Bhatia expressed gratitude to Dr. Sanjay Kumar Singh for his enlightening discourse on Generative AI and its potential contributions to achieving the goals of *Viksit Bharat@2047.*

Dr. Amrit Pal Singh welcomed Dr. Sanjay Kumar Batish, Head, Computer Centre, Punjab Engineering College, Chandigarh with his brief introduction. Thereafter, the session was started by Dr. Sanjay Kumar Batish focusing on the role of the Internet of Things (IoT) in the development of smart cities. He emphasized how IoT technology can transform urban areas by integrating various devices and sensors to gather data and improve efficiency in areas such as transportation, energy management, and public services. Dr. Batis highlighted the potential of IoT to enhance citizen experiences, optimize resource utilization, and contribute to sustainable urban development. Through his session, attendees gained insights into the pivotal role of IoT in building smarter, more efficient cities that cater to the needs of citizens while promoting technological advancement and innovation in India. At the end of the session, Dr. Anuradha Chug conveyed appreciation to Dr. Sanjay Kumar Batish for his insightful discussion on 'Tech Powered India: IoT on Smart City' and its significant contributions toward realizing the objectives of *Viksit Bharat.*

Dr. Upma Gautam, Associate Professor, University School of Law and Legal Studies (USLLS), GGSIPU was welcomed by Dr. Amar Arora along with a brief introduction of Dr. Gautam. Thereafter, the session was started by Dr. Upma Gautam by explaining the role and importance of conceiving and shaping safe public spaces in achieving the target of *Viksit Bharat@2047*. She also explained the ways to create safe places for the women and how new laws like *Bhartiya Nyaya Sanhita* plays an important role in the same. During the discussion, she beautifully explained the way community services can be a game changer in improving the punishment mechanism and can be a big step in the right direction. In the end, Dr. Anuradha Chugh also proposed her Vote of Thanks to Dr. Upma for her wonderful insights into criminal law and how things can be made better to achieve the target of *Viksit Bharat@2047.*

The next session commenced with Dr. Anshul Bhatia extending a warm welcome to Dr. Deepak Kumar, Senior Digital Forensic Expert, Indian Cyber Crime Coordination Centre (I4C), Ministry of Home Affairs, New Delhi providing a brief introduction of the esteemed guest. Following this introduction, Dr. Deepak Kumar initiated the session by offering insightful perspectives on the responsible application of AI to bolster India's technology sector. He proceeded to demonstrate various Generative AI tools and their practical implications. Throughout his presentation, Dr. Kumar shared valuable insights into harnessing AI's potential effectively, underscoring the significance of ethical usage for societal advancement. Moreover, he presented several case studies of cyber fraud and underscored the National Cyber Cell's initiatives aimed at promoting awareness about such cybercrimes. This comprehensive overview aimed to inspire the audience to embrace AI technology with integrity and responsibility. Dr. Anuradha Chugh expressed her appreciation to Dr. Deepak Kumar for his invaluable insights into advocating for the responsible use of AI to empower India and further the objectives of *Viksit Bharat@2047*.

Dr. Anshul Bhatia welcomed CA Anshul Gupta, introducing him as the distinguished speaker for the next session. After the introduction, CA Anshul Gupta commenced the session by presenting insightful perspectives on '*Viksit Bharat*: Roadmap from Developing to Developed for All'. Leveraging his extensive experience and expertise, he delved

into key strategies and transformative measures essential for *Viksit Bharat's* developmental journey, addressing critical economic, social, and cultural aspects. With his engaging presentation style, CA Anshul Gupta captivated the audience's attention, instilling a sense of enthusiasm and inspiration for the future trajectory. In conclusion, Dr. Anuradha Chugh expressed her gratitude to CA Anshul Gupta for generously sharing his invaluable insights, thus significantly contributing to the realization of *Viksit Bharat's* vision for 2047.

Further, the participants were directed to attempt the assessment exam within the stipulated time and submit the feedback. An evaluation quiz comprising MCQs was prepared covering all the sessions, to assess the knowledge gathered by the participants. The efforts of both the speakers and the organizing committee were acknowledged and praised by the participants, as evidenced by the overwhelmingly positive feedback received.

Faculty Development Programme on Hands-on Training on Data Analysis Demystified

A five-day National Level Hands-on Training on 'Data Analysis Demystified' was organised by the Association of Indian Universities (AIU)—Academic and Administrative Development Centre (AADC), Chitkara University, Himachal Pradesh in collaboration with Internal Quality Assurance Cell (IQAC) from March 18-22, 2024. Spearheaded by luminaries like Dr. Ashok K Chitkara, Chancellor, Chitkara University, and Dr. Madhu Chitkara, Pro-Chancellor, alongside Dr. Rajnish Sharma, Vice Chancellor, Central University of Himachal Pradesh and Dr. Meenu Khurana, Pro-Vice Chancellor, Central University of Himachal Pradesh, the initiative aimed at augmenting capacities within academia. AIU Officials, Dr. (Mrs.) Pankaj Mittal, Secretary General and Dr. Amarendra Pani, Joint Director and Director (I/c), Research Division graced the event. The programme was coordinated by Former Assistant Director (Research), AIU, Dr. Usha Rai Negi, Consultant, Research Division, AIU. The event witnessed proactive involvement from a dedicated organizing team, led by Dr. Abhishek as the Nodal Officer, Dr. Pradeepta Sarangi as the Programme Coordinator, and Dr. Monika Parmar, contributing significantly to its success. The Excerpts, Dr. Monika Parmar, Dr. Sapna Saxena, and Mr. Gulshan Matta led the session providing participants with hands-on learning experiences, bridging theoretical concepts with practical applications, and fostering a profound comprehension of data analysis methodologies and techniques.

During the Inaugural Session, Dr. Rajnish Sharma emphasized the significance of advanced technical tools in data analysis. Subsequently, participants engaged in hands-on exercises, guided by Dr. Monika Parmar, Dr. Sapna Saxena, and Mr. Gulshan Matta, covering fundamental concepts such as cell referencing, functions, and formatting cells.

Dr. Monika Parmar, Dr. Sapna Saxena, and Mr. Gulshan Matta discussed advanced data analysis techniques, including conditional functions, data validations, and macro- operations. Attendees actively created Excel sheets for student data and analyzed academic performance using conditional functions.

The session focused on 'Data Visualization and Manipulation Techniques' led by Dr. Monika Parmar, Dr. Sapna Saxena, and Mr. Gulshan Matta. Participants learned to create visually appealing charts, filter and sort data efficiently, and apply conditional formatting rules.

The next session on 'Advanced Analytical Techniques', with Dr. Monika Parmar, Dr. Sapna Saxena, and Mr. Gulshan Matta guided participants through pivot tables and charts, WhatIf analysis, and error handling. The concluding day, featured sessions on 'Creating Dashboards and Exploring AI Applications in Data Analysis' led by Dr. Monika Parmar, Dr. Sapna Saxena, and Mr. Gulshan Matta. Practical exercises involved analyzing car sales data and grading based on predefined criteria. The participants brought diverse perspectives and expertise to the table, contributing to the enriching discussions and collaborative learning environment during the sessions.

Dr. Meenu Khurana delivered closing remarks during the Valedictory Session, expressing gratitude to all stakeholders and highlighting the importance of continuous skill enhancement. Throughout the five-day event, participants from various academic institutions engaged in hands-on learning experiences, combining theoretical concepts with practical applications to enhance their proficiency in data analysis tools and techniques.

❑

THESES OF THE MONTH

SCIENCE & TECHNOLOGY
A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of April-May, 2024)

AGRICULTURAL & VETERINARY SCIENCES

Agronomy

1. Pooja. **Studies on conservation tillage and NPK levels in Soybean-Gobhi Sarsoan cropping system**. (Dr. Janardan Singh), Department of Agronomy, CSK Himachal Pradesh Krishi Vishvavidyalaya, Palampur.

Food Science & Technology

1. Arora, Himanshu. **Development of botanical formulations for managing fungal phytopathogens in capsicum annuum L**. (Prof. Satyawati Sharma and Prof. Abhishek Sharma), Centre for Rural Development & Technology, Indian Institute of Technology Delhi, New Delhi.

Forestry

1. Wagmare, Balraju. **Dendro-chemical analysis of selected tree species in Mizoram, North-East India**. (Prof. S K Tripathi), Department of Forestry, Mizoram University, Aizawl.

BIOLOGICAL SCIENCES

Botany

1. Ayesha, A Attar. **Ecological and phytochemical studies on certain lentic water bodies of Channagiri, Davanagere District, Karnataka**. (Dr. Parameswara Naik T), Department of Botany, Kuvempu University, Shankaraghatta.

Life Science

1. Farooq, Sadaqat. **Endohyphal bacteria in plant associated fungi; elucidating their role in host fungal biology**. (Dr. Sayed Riyaz), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
2. Firdos. **Investigations on glucose-stimulated insulin secretion and its possible role in pathology of viral-infection-triggered type 1 diabetes**. (Prof. Aditya Mittal), Kusuma School of Biological Sciences, Indian Institute of Technology Delhi, New Delhi.
3. Ghosh, Dipannita. **Investigation of classical and non classical mechanism underlying antimicrobial resistance and virulence in bacteria**. (Prof. V Perumal), Kusuma School of Biological Sciences, Indian Institute of Technology Delhi, New Delhi.
4. Mandal,Kalicharan.**Inventorisation,documentation and assessment of pollution resistance species in mining and industrial areas of Odisha with special reference to floral diversity**. (Nabin Kumar Dhal), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
5. Mathew, Doniya Elze. **Studies on associated bacterial flora from industrially important alga *Gracilaria dura***. (Dr. Vaibhav Mantri), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
6. Mudhol, Seema. **Development of nanoformulations for in situ delivery of phytochemicals to efficiently convert white to brown adipose tissue**. (Dr. S P Muthukumar), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
7. Prakash Kumar. **Processing, utilization, and management of high-throughput sequencing data for enriched information dispersal**. (Dr. Ravi Shankar), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
8. Ray, Arati. **Resource recovery from phosphate fertilizer industry wastewater for recycling**. (Dr. Manish Kumar), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
9. Sengupta, Antara. **Studying impact of telomeres in non-telomeric functions: Telomerase regulation as a case study**. (Dr. Shantanu Chowdhury), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
10. Singh, Jyoti. **Mechanism of action of insecticidal proteins in whitefly (*Bemisia tabaci*)**. (Dr. P K Singh), Faculty of Biological Sciences, Academy of Scientific and Innovative Research, Ghaziabad.
11. Thakur, Shweta. **Identification of bioactive peptides from *Picrorhiza kurroa* and therapeutic evaluation**

in experimental models. (Dr. Rajiv Kumar), Faculty of Life Science, Academy of Scientific and Innovative Research, Ghaziabad.

Microbiology

1. Bhargavi, S. **Evaluation of antibacterial and antibiofilm potential of selected plant extracts against drug resistant pathogens**. (Prof. B Sreelatha), Department of Microbiology, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.
2. Reddy, E Manoj Kumar. **Exploration of counter action mechanisms offered by microorganisms on exposure to synthetic compounds**. (Prof. B.S Anuradha), Department of Microbiology, Chaitanya(Deemed To Be University), Himayatnagar, Hyderabad.
3. Revathi, D. **Studies on isolation and screening of anti- biofilm metabolites from some selected medicinal plants of Mahabubnagar District, Telangana State**. (Prof. B S Anuradha), Department of Microbiology, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

Zoology

1. Lone, Azhar Rashid. **Bioinformatics tool using COI datasets to assess phylogenetic systematics and genetics diversity in Annelida (Cliitellata: Ologochaeta) from "Biodiversity hotspots'" of India**. (Prof. Shweta Yadav), Department of Zoology, Dr Harisingh Gour Vishwavidyalaya, Sagar.
2. Namdev, Narendra. **Role of Ashwagandha and Quercetin in amelioration of cypermethrin induced thyroid toxicity in albino mice**. (Dr. Payal Mahobiya), Department of Zoology, Dr Harisingh Gour Vishwavidyalaya, Sagar.
3. Sharma, Harshita. **Investigating insecticide efficacy and development of resistance in Spodoptera Frugiperda Smith, 1797 (LEPIDOPTERA: NOCTUIDAE)**. (Prof. Dolly Kumar Dr. Priyanka Mathur), Department of Zoology, M S University of Baroda, Vadodara.

EARTH SYSTEM SCIENCES

Geology

1. Shukla, Satyam. **Petrography and petrogenesis of granitoids and ultramafic enclaves around Kunwarpur, Ajaygarh District Panna Madhya Pradesh**. (Prof. H Thomas), Department of Applied Geology, Dr Harisingh Gour Vishwavidyalaya, Sagar.

ENGINEERING SCIENCES

Biochemical Engineering

1. Rajpal, Soumya. **Rational design and molecular engineering of synthetic receptors for biomarkers-based pathogen detection**. (Prof. Prashant Mishra), Department of Biochemical Engineering and Biotechnology, Indian Institute of Technology Delhi, New Delhi.
2. Seyad Shefrin, N. **Mechanistic insights into the bioactivity and bioavailability of natural compounds against cancer**. (Prof. D Sundar), Department of Biochemical Engineering and Biotechnology, Indian Institute of Technology Delhi, New Delhi.

Chemical Engineering

1. Mishra, Deepti. **Investigating the role of support porosity, acidity, and promoters effect for Mo/HZSM-5catalystinmethanedehydroaromatization reaction**. (Prof. Kamal Kishore Pant, Prof. Muxina Konaraova and Prof. George Zhao), UQ-IITD Academy of Research, Indian Institute of Technology Delhi, New Delhi.

Civil Engineering

1. Garg, Chinar. **Optimization of water resources system for flood management and flood risk assessment**. (Dr. Anand Babu K), Department of Civil Engineering, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore.
2. Goel, Pankaj. **Performance enhancement of pavement concrete by hybrid fiber inclusion vis-a-vis solo fiber**. (Prof. Bishwajit Bhattacharjee), Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi.
3. Mamillapalli, Rajasekhar. **Challenges for implementation of lean construction concepts in Indian Small Real Estate Projects**. (Dr. Dillip Kumar Bera and Dr. Venkatesan Renganaaidu), Department of Civil Engineering, Kalinga Institute of Industrial Technology, Bhubaneswar.
4. Mohanty, Sanjeeb Kumar. **Performance evaluation of fiber reinforced cement stabilized fly ash and stone aggregate mixture as structural layer of pavement**. (Dr. Benu Gopal Mohapatra and Dr. Dipti Ranjan Biswal), Department of Civil Engineering, Kalinga Institute of Industrial Technology, Bhubaneswar.
5. Rao, D Gopala. **Impact of various types of sulphates on hydration phase assemblage setting behaviour and strength development of cements**. (Prof.

Shashank Bishnoi), Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi.

6. Rathi, Mayur. **Design and Development of privacy preserving data model for data publishing**. (Dr. Anand Rajavat), Department of Civil Engineering, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore.

7. Sur, Arnab. **Prediction of free field ground vibration due to underground moving trains: In-situ measurements and numerical modelling**. (Prof. Bappaditya Manna and Prof. J T Shahu), Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi.

8. Vijayan, Chinju. **Experimental and numerical studies on response of tapered piles under combined vertical compression and lateral loading**. (Prof. R Ayothiraman), Department of Civil Engineering, Indian Institute of Technology Delhi, New Delhi.

Computer Science & Engineering

1. Nirmal Singh. **Design & implementation of the smart IOT based system for improving the efficiency of warehouse**. (Dr. Vikas Somani and Dr. Sunil Kumar), Department of Computer Science & Engineering, Sangam University, Bhilwara.

2. Rathi, Mayur. **Design & development of privacy preserving data model for data publishing**. (Dr. Anand Rajavat), Department of Computer Science & Engineering, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore.

3. Sathishkumar, G. **Designing of data security encryption algorithm using hybridization of traditional encryption methods in cloud environment**. (Prof. A Ramesh Babu), Department of Computer Science, Chaitanya(Deemed To Be University), Himayatnagar, Hyderabad.

Electrical & Electronics Engineering

1. Beigh, Nadeem Tariq. **Development of dual piezoelectric/triboelectric nanocomposites for sensing and energy harvesting application**. (Prof. Dhiman Mallick), Department of Electrical Engineering, Indian Institute of Technology Delhi, New Delhi.

2. Choudhary, Pooja. **Leak detection in smart water distribution networks using machine learning techniques**. (Dr. B A Botre), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

3. Husain, Shiraz. **Investigation of Fault Tolerant Aspects of Nano-Scale Digital Devices using Quantum-dot Cellular Automata (QCA) to Design Reliable System.** (Dr. Namit Gupta), Department of Electrical Engineering, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore.

4. Jain, Chandra Prakash. **Artificial neural network based performance enhancement of grid connected PV system**. (Dr. Vinesh Agarwal), Department of Eelectrical Engineering, Gujarat University, Ahmedabad.

5. Mahato, Gopal Chandra. **Impact analysis of flexible power point tracking on grid connected PV systems for reliability enhancement**. (Dr. Byamakesh Nayak and Dr. Tanmoy Roy Choudhury), Department of Electrical & Engineering, Kalinga Institute of Industrial Technology, Bhubaneswar.

6. Mohd Khalid. **Control of renewable based grid interactive electric vehicle charging infrastructure**. (Prof. B K Panigrahi), Department of Electrical Engineering, Indian Institute of Technology Delhi, New Delhi.

Electronics & Communication Engineering

1. Annavarapu, Sarath Kumar. **Design and analysis of antennas for wireless underground propagation**. (Prof. L Lolit Kumar Singh and Prof. Sudipta Chattopadhyay), Department of Electronics & Communication Engineering, Mizoram University, Aizawl.

Material Science and Engineering

1. Hakkim, N Lukkumanul. **Polymer grafting potential and reinforcing efficiency of nitrone and nitroxide functionalized green silica derived from rice husk ash**. (Prof. Leena Nebhani), Department of Materials Science and Engineering, Indian Institute of Technology Delhi, New Delhi.

Mechanical Engineering

1. Shrivastava, Archit. **Investigations on deep drawing of high strength steel sheets using textured dies**. (Dr. Ravi Kumar), Department of Mechanical Engineering, Indian Institute of Technology Delhi, New Delhi.

2. Dhanuskar, Sagarkumar Yogesh. **Development of green process for production of second and third generation derivatives from castor oil**. (Prof. N K Naik and Prof. K K pant), Centre for Rural Development & Technology, Indian Institute of Technology Delhi, New Delhi.

3. Harish Kumar. **Microfabrication of rotationally symmetric components through dry micro electric discharge turning**. (Prof. Sunil Jha), Department

of Mechanical Engineering, Indian Institute of Technology Delhi, New Delhi.

4. Peddada, Siva Heramb. **Numerical modeling of propagation and energy-decay mechanisms of near-intertial waves**. (Prof. Vamsi Chalamalla), Department of Applied Mechanics, Indian Institute of Technology Delhi, New Delhi.

5. Prabhakar, Srijan. **Multi-axial forging of AA6082/ B_4C_p nanocomposite developed through ultrasonic assisted stir casting**. (Prof. S Aravindan and Prof. D Ravi Kumar), Department of Mechanical Engineering, Indian Institute of Technology Delhi, New Delhi.

Mineral Engineering

1. Chaudhary, Bishnu. **Proton conducting electrolyte materials for low/intermediate temperature operation of solid oxide fuel cells**. (Dr. Shahid Anwar), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

2. Das, Surya Kanta. **Advanced separation methods for the recovery of ultrafine tungsten values from gold mine tailings: Fundamentals and practical aspects**. (Dr. Shivakumar I Agandi), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

3. Deependra Singh. **Alternative approach to recover strategic and industrial placer heavy minerals from Bramhagiri Coastal Area**. (Dr. Suddhasatwa Basu), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

4. Mandal, Shuvam. **L10 ordering in equiatomic FeNi alloy prepared by mechanical alloying, high pressure torsion and laser melting**. (Dr. Suddhasatwa Basu), Faculty of Engineering Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

Textile & Fiber Design

1. Nandi, Parna. **Studies on fibrous biocomposites prepared with nettle (*Girardinia diversifolia*) yarn and fabric reinforcements in poly (lactic acid) matrix**. (Prof. Dipayan Das), Department of Textile and Fiber Engineering, Indian Institute of Technology Delhi, New Delhi.

MATHEMATICAL SCIENCES

Mathematics

1. Choudhary, Aakash. **Existence of primitive normal elements with some properties in finite fields**. (Prof. R K Sharma), Department of Mathematics, Indian Institute of Technology Delhi, New Delhi.

2. Netula, Ashok. **Numerical treatment of convective heat and mass transfer of non-Newtonian fluid flow**. (Prof. M Sunder Ram), Department of Mathematics and Statistics, Chaitanya(Deemed To Be University), Himayatnagar, Hyderabad.

3. Sharma, Yogita. **A Study on fixed point of contractive mappings in abstract spaces**. (Dr. Shishir Jain), Department of Mathematics, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore.

4. Shravani, Kasarla. **An analytical study on magneto non Newtonian fluid flow**. (Prof. M Sunder Ram), Department of Mathematics and Statistics, Chaitanya(Deemed To Be University), Himayatnagar, Hyderabad.

5. Varagapriya, V. **Constrained Markov decision process under uncertain running costs and transition probabilities**. (Prof. Vikas Vikram Singh), Department of Mathematics, Indian Institute of Technology Delhi, New Delhi.

MEDICAL SCIENCES

Biotechnology

1. Jaskirat Kaur. **Studies on intracellular aptamers and their effect on cell models of different diseases**. (Prof. Ipsita Roy and), Department of Biotechnology, National Institute of Pharmaceutical Education and Research, Mohali.

Periodontics

1. Mehta, Tanvi Narendrabhai. **Evaluation of levels of Apelin in individuals having chronic priodontitis with and without type 2 diabetes mellitus: A study using enzyme-linked immunosorbent assay**. (Dr. Viral Patel), Department of Periodontics, Gujarat University, Ahmedabad.

Pharmaceutical Science

1. Shamandeep Kaur. **Amphiphilic carboxymethyl chitosan-bioflavonoids conjugated for oral delivery of paclitaxel**. (Prof. Abhay T Sangamwar), Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research, Mohali.

PHYSICAL SCIENCES

Chemistry

1. Chitra. **Recovery and investigation of polymeric layers from waste silicon solar modules**. (Dr. Sushil Kumar), Department of Chemical Science, Academy of Scientific and Innovative Research, Ghaziabad.

2. Chourasia, Karuna. **Synthesis, physico chemical characterization and biological studies of some**

new thiosemicarbazide derived ligands and their 3d transition metal-complexes. (Dr. Ritu Yadav), Department of Chemistry, Dr Harisingh Gour Vishwavidyalaya, Sagar.

3. Dutta, Dhiraj. **Design and synthesis of BODIPY- and aza-BODIPY-biotin conjugates for cancer imaging and therapy**. (Dr. Pranjal Gogoi), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

4. Goud, Gadela Karteek. **Synthetic strategies to functionalized indolines and amino acid derivatives**. (Dr. S Chandrasekhar), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

5. Khan, Afsar Ali. **Design and synthesis of novel β2,3-amino acids embedded cyclic tetrapeptides as anticancer agents and nitrophenyl (phenyl) su lfane derivatives as PCSK9 inhibitors**. (Dr. Dipankar Koley), Department of Chemical Science, Academy of Scientific and Innovative Research, Ghaziabad.

6. Nair, Anjali S. **Study of aerosol climatology over regions of Indo-Gangetic Plain**. (Dr. Kirti Soni), Department of Chemical Science, Academy of Scientific and Innovative Research, Ghaziabad.

7. Peddapyata, Prashanth Raja. **Synthesis and biological evaluation of nitrogen based heterocycles**. (Prof. E Jagadeesh Kumar), Department of Chemistry, Chaitanya (Deemed To Be University), Himayatnagar, Hyderabad.

8. Prabu, M. **Activation of C-H bond to oxygenates and ambient pressure CO2 hydrogenation using mixed metal oxides**. (Dr. T Raja), Department of Chemical Science, Academy of Scientific and Innovative Research, Ghaziabad.

9. Rai, Akansha. **Chemical characteristics and source apportionment of particulate matter (PM2.5 and PM10) at Darjeeling in Eastern Himalayas**. (Dr. Sudhir Kumar Sharma), Department of Chemical Science, Academy of Scientific and Innovative Research, Ghaziabad.

10. Shaikh, Samarin Salim. **Development of multifunctional catalysts for the valorization of lignocellulosic and marine biomass into value added products**. (Dr. V V Bokade), Faculty of Chemical Sciences, Academy of Scientific and Innovative Research, Ghaziabad.

11. Singh, Sanjay. **Recent advancement in organoctalyzed friedel-crafts reaction with detailed mechanistic investigation**. (Prof. Chinmoy Kumar Hazra), Department of Chemistry, Indian Institute of Technology Delhi, New Delhi.

12. Syeda, Arshiya Banu. **Design, synthesis and anti-cancer evaluation of some novel heterocyclic compounds**. (Dr. Bhaskar Juluru), Department of Chemistry, Chaitanya(Deemed To Be University), Himayatnagar, Hyderabad.

13. Tomar, Divya Rana. **Synthesis, electrochemical and pharmacological studies of some modified drugs**. (Dr. S Venkatesan Jaykumar), Department of Chemistry, Shri Vaishnav Vidyapeeth Vishwavidyalaya, Indore.

14. Waghmare, Aakash. **Synthesis and characterization of conducting polymer based nanocomposites for wastewater treatment**. (Prof. Archna Pandey and Dr. Vimlesh Chandra), Department of Chemistry, Dr Harisingh Gour Vishwavidyalaya, Sagar.

Physics

1. Arjun Kumar. **Gluon tomography and saturation at small-X in protons and pions**. (Prof. Folke Tobias Toll), Department of Physics, Indian Institute of Technology Delhi, New Delhi.

2. Chourasiya, Niharika. **Synthesis and studies of some physical properties of some doped chalcogenide materials**. (Prof. Ashish Verma), Department of Physics, Dr Harisingh Gour Vishwavidyalaya, Sagar.

3. Khan, Shadab Anwar. **Study of electrical and optical properties of oraganic and biomaterials for energy storage devices**. (Dr. Sandhya Patel), Department of Physics, Dr Harisingh Gour Vishwavidyalaya, Sagar.

4. Nivedan, Anand. **Photo-seebeck effect, magnetotransport and ultrafast THz photocurrent studies on Bi_2Te_3 and Bi_2Se_3 topological insulators**. (Prof. Sunil Kumar), Department of Physics, Indian Institute of Technology Delhi, New Delhi.

5. Sharma, B Somanadha. **A study on radiation induced modification of physical chemical properties of some polymer based material and their stabilization aspects**. (Prof. Amireddy Raju), Department of Physics, Chaitanya(Deemed To Be University), Himayatnagar, Hyderabad. ❑

SHRI SHARDA BHAVAN EDUCATION SOCIETY, NANDED

WANTED

Applications are invited from the eligible candidates for the post of **Principal** to be filled in Shri Sharda Bhavan Education Society's **College of Education, Nanded (Permanent Non-Grant).** 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 post (Designation)	No. of Posts	Reservation
01	**Principal**	01	Unreserved

Educational Qualification:

1. Post Graduate Degree in Arts/Science/Social sciences/Humanities/Commerce with at least 55% marks.
2. M.Ed. with minimum 55% Marks.
3. Ph.D. in Education or in Any Pedagogic subject offered in the Teacher Education Institution.
4. Ten years of teaching experience in a Secondary Teacher Education Institution.

Desirable: - Diploma/Degree in Educational Administration or Educational Leadership

Salary & Allowances: - Pay Scales as per the U.G.C., State Government & Swami Ramanand Teerth Marathwada University's 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 for attending the interview.
3. Eligible candidates those who are already in services should submit their applications through the proper channel.
4. All attested Xerox copies of certificates should be attached to the application.

Address for Correspondence: -
The Secretary,
Shri Sharda Bhavan Education Society,
I.T.M. Building, V.I.P. Road, Nanded -431602

President **Secretary**
Shri Sharda Bhavan Education Society, Nanded

SHRI SHARDA BHAVAN EDUCATION SOCIETY, NANDED

WANTED

Applications are invited from the eligible candidates for the post of **Principal** to be filled in Shri Sharda Bhavan Education Society's **Nanded Pharmacy College, Nanded (Permanent Non-Grant).** 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 post (Designation)	No. of Posts	FT/PT	Reservation
01	**Principal**	01	Full Time	Unreserved

Essential Educational Qualification & Experience: -

a. Ph. D Degree and First Class or equivalent at either Bachelor's or Master's level in the relevant branch.
b. At least two successful Ph.D. guided as supervisor or co-supervisor and minimum 8 research publication in SCI journals/ UGC/AICTE approved list of journals.
c. Minimum 15 years of experience in teaching / research/industry, out of which at least 3 years shall be at the post equivalent to that of Professor.

Note: - 1. This position shall be of contractual in nature for 5 years and can be extended for one more term depending upon the performance.
2. Performance assessment shall be carried out through a committee appointed by the affiliating university.
3. After completing the final term, the incumbent shall join back his/her parent organization in the previous designation from where he/she has proceeded with the designation as Professor/Senior Professor as the case may be.

Salary & Allowances: - Pay Scales as per the A.I.C.T.E. State Government & Swami Ramanand Teerth Marathwada University's rules from time to time.

Pay Scale: Level-14, Entry Pay 1,44,200/- with the special allowance of Rs. 6,750/- per month.
Note: - 1. No T.A. /D.A. will be paid for attending the interview. **2.** Eligible candidates should submit their applications through the proper channel. **3.** Self attested Xerox copies of Age proof, Degree certificates, Marks Memos, University Approval Letter/s, Experience Certificate/s character certificate, PhD notification copies of guided students etc. should be attached to the application. **4.** University approval letters claiming teaching experience **5.** Certificate of approval as a research guide from parent University with list of publication in National & International journals. **6.** The qualification and service conditions as notified by PCI, AICTE & adopted by State Govt. shall be applicable for non-grant technical institutions. **7.** A power point presentation on the day of interview will be highly appreciable.

Address for Correspondence: -
The Secretary, Shri Sharda Bhavan Education Society,
I.T.M. Building, V.I.P. Road, Nanded - 431602, Maharashtra

President **Secretary**
Shri Sharda Bhavan Education Society, Nanded

PUNYASHLOK AHILYADEVI HOLKAR SOLAPUR UNIVERSITY, SOLAPUR

[Under Maharashtra Public Universities Act, 2016]

Phone No.0217-2744770 Email: registrar@sus.ac.in

Ref.: Advertisement No: PAHSUS/Estt/2024/182, Dt. 06/03/2024.

NOTIFICATION

It is hereby notified to all the concerned that the last date of submission of application forms for the posts of **1). Finance and Accounts Officer, 2). Director, Innovation, Incubation and Linkages and 3). Director of Sports and Physical Education** as advertised vide above referred advertisement dated 06/03/2024 is hereby extended from 11/06/2024 to 25/06/2024 (upto 5.00 p.m.)

All are therefore, requested to note that the **last date of submission of form is Tuesday, 25/06/2024** (upto 5.00 p.m.). Further details can be downloaded from the University **website sus.ac.in.**

Ref. No.PAHSUS/ESTT/2024/191

Date : 11/06/2024

Sd/-
(Yogini Ghare)
Registrar

Licensed to post without prepayment under WPP No. U(C)-109/2024-26
Postal Regd. No. DL (C)-05/1241/2024-26
UNIVERSITY NEWS 62 (25) June 17-23, 2024
Regd. No. RNI-7180/1963
Published on Monday: 17-06-2024 No. of Page 36 including Covers
Posted at LPC Delhi RMS, Delhi-6 on Tuesday/Wednesday every week

ASSOCIATION OF INDIAN UNIVERSITIES

ADVERTISEMENT TARIFF : UNIVERSITY NEWS JOURNAL

W.E.F. APRIL 01, 2017

GST AT PRESENT RATE OF 5% IS PAYABLE FOR PUBLICATION OF ALL TYPES OF ADVERTISEMENTS IN ADDITION TO THE PAYABLE CHARGE AS MENTIONED BELOW
EFFECTIVE APRIL 01, 2020

A. FOR EDUCATIONAL INSTITUTIONS, GOVT. ORGANIZATIONS, PUBLISHERS, BOOK SELLERS & DISTRIBUTORS

DISPLAY **(Amount in Rupee)**

Categories of Advertisement	1 Insertion	4 Insertions	8 Insertions	12 Insertions
Full Page	15000	45000	85000	120000
Half Page	8000	28000	50000	68000
Quarter Page	5000	16000	28000	40000
Cover (Inside)	16000	55000	100000	144000
Cover (Back)	20000	65000	120000	165000

B. TARIFF FOR SPECIAL NATURE OF MATTERS/ITEMS (DOUBLE THE RATES)

TARIFF FOR SUPPLIERS OF COMPUTERS, COMPUTER STATIONERY & PERIPHERALS, SCIENTIFIC & SURGICAL INSTRUMENTS, SPORTS GOODS AND OTHERS (*NOT COVERED IN ANY FORM OF THE TARIFF)* WILL BE AT DOUBLE THE RATES AND TARIFF CAN BE HAD ON REQUEST.

C. CONFESSIONAL TARIFF (For Publishers/Book Distributors- Exclusively for Books)

Per Square Cm (Display)	1 Insertion	4 Insertions	8 Insertions	12 Insertions
	30.00	28.00	26.00	24.00

MECHANICAL DATA OF JOURNAL

Size of Page 21 cms x 27 cms

PRINT AREA

Full Page	**23 cms (Height)**	**x 16.5 cms (Width)**
Half Page	**12 cms (Height)**	**x 16.5 cms (Width)**
Quarter Page	**11 cms (Height)**	**x 8 cms (Width)**

The Art Work/CRC IN PDF in High Resolution as per above Print Area (in BLACK & WHITE ONLY) or as an OPEN FILE in MS WORD may be sent positively at E-Mail IDs as shown below. *MATTER FOR ADVERTISEMENT MUST REACH SEVEN (07) DAYS IN ADVANCE FROM THE DATE OF PUBLICATION OF A PARTICULAR ISSUE OF UNIVERSITY NEWS*, WHICH IS PUBLISHED EVERY MONDAY.

ADVERTISEMENT AGENCIES (INS ACCREDITED) ARE ALLOWED 15% DISCOUNT.

Full advance payment must be sent directly to AIU Account using any of the Digital modes (i.e. NEFT/ RTGS/ Net Banking/BHIM/G-Pay/UPI, AIU Payment Web portal, etc.). The details of AIU Account are available in AIU Website (**www.aiu.ac.in**). The required data can be provided by mail on request.

***For further information write to* :-**

Publication & Sales Division
Association of Indian Universities
AIU House, 16, Comrade Indrajit Gupta Marg, New Delhi - 110 002
EPABX : 011-23230059 (Extn. 208) DIRECT LINE: 011 23213481
E-mail IDs : advtun@aiu.ac.in / publicationsales@aiu.ac.in; Website : http://www.aiu.ac.in

Edited, Printed and Published by Dr Sistla Rama Devi Pani, on behalf of the Association of Indian Universities, AIU House, 16 Comrade Indrajit Gupta Marg (Kotla Marg), New Delhi-110 002. Phones: 23230059 (6 Lines). Fax: 011-23232131, E-Mail : sgoffice@aiu.ac.in, advtun@aiu.ac.in, publicationsales@aiu.ac.in, subsun@aiu.ac.in (for subscription), unaiu89@gmail.com, universitynews@aiu.ac.in, Website: http://www.aiu.ac.in
Printed by Chandu Press, D-97, Shakarpur, Delhi-110 092 Phone: 42448841, chandupress@gmail.com