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Maharaja Krishnakumarsinhji
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Inviting online applications for the post of Vice-Chancellor, Maharaja Krishnakumarsinhji Bhavnagar University, Bhavnagar.

The Education Department, Government of Gujarat, has constituted a Search Committee to recommend a panel of names for the post of Vice-Chancellor of the Maharaja Krishnakumarsinhji Bhavnagar University as per the provision of the Gujarat Public Universities Act 2023. The Committee now invites applications/nominations for the appointment of Vice-Chancellor along with the detailed biodata. A person with the highest level of competence, integrity, morals and institutional commitment will be appointed as Vice-Chancellor. The person to be appointed as a Vice Chancellor should be a distinguished academician with a minimum of ten years of experience as a Professor in a University system or ten years of experience in a reputed research and/or academic administrative organization with proof of having demonstrated academic leadership can apply or be nominated.

Present and former Vice-Chancellor, Directors, Heads of Institutions of Higher learning/Research Institutions and an eminent scholarly person are invited to nominate the distinguished person. The Search Committee reserves the right to consider a person of eminence outside the list of such applications/nominations. In accordance with the procedure suggested by the Committee, nominees would be short-listed based on the agreed parameters and as per the provision of Gujarat Public Universities Act 2023 and UGC Notifications from time to time in this regard.

The person should have a well-rounded personality and should have contributed significantly to the development of higher education. Apart from being a good researcher, a candidate should possess adequate administrative experience. Preference will be given to individuals who have demonstrated outstanding academic performance, have experience with the Higher Education system both domestically and internationally, and possess sufficient academic and administrative governance expertise. The selected candidate can hold the office for a period of five years, or she/he attains the age of sixty-five years, whichever is the earliest. Candidates are required to submit their application online via the provided link on http://mkbhavuni.edu.in before 11:59 PM (midnight) on December 31, 2023. The online portal link will accept application from Dec.02, 2023, 11:00 A.M. onwards.

Additionally, a print copy of the complete application, downloaded from the application portal after successful submission of online form, with attached document and certificates, should be sent via speed post/registered AD/courier in a sealed envelope marked "Application/ Nomination for Vice-Chancellor Position" addressed to The Chairman Search Committee for appointment of Vice-Chancellor, C/o The Registrar, Maharaja Krishnakumarsinhji Bhavnagar University, Gaurishanker Lake, Road, Bhavnagar-364002 Dist. Bhavnagar- Gujarat. The Hard copy must reach the specified address on or before December 31, 2023.

Date: 01/12/2023
Bhavnagar

I/c Registrar

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In This Issue

Open Universities in India: The Concerns of Quality

Anirban Ghosh*

Quality assurance in education means the practice of managing the way education is provided to make sure that it always maintains a high standard and meets social needs. Quality has become the defining element of education in the 21st Century in the context of the ever-changing needs of the workplace and also for the holistic and all-round development of the next generations. The Millennium Development Goals of the United Nations (MDGs, 2002) consider knowledge as the prime mover of development in the new millennium and the Sustainable Development Goals-4 (SDG-4, 2015) ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. The National Education Policy 2020 of India gives due importance to Lifelong Learning (Ch. 21) which is aligned with SDG-4. The NEP document also includes provisions for digital learning (Ch.23) and technology in education (Ch. 24). Without the use of technology in education the objective of providing lifelong learning cannot be fulfilled. The open and distance learning (ODL) system with its inherent features addresses the issue of accessibility in higher education.

The first open university was established in Andhra Pradesh namely, Dr. B.R. Ambedkar Open University in 1982. The national open university, Indira Gandhi National Open University (IGNOU) was established in 1985. Considering the importance of an open education system, different state governments of the country have established Open Universities (OUs) through their respective state legislature to impart higher education in their regional language with the objective of reaching the unreached at affordable costs. Currently, there are seventeen state-open universities, and over one hundred dual-mode universities are offering academic programmes through open and distance learning modes.

As per the report, the enrolment in the ODL system in the country is about 11.1% of total enrolment in higher education of which 44.5% are female (Annual Report 2021-22, Ministry of Education, (MoE), Govt. of India. The share of distance education in the GER in India is about 22-23%. Open and distance learning system plays a pivotal role in the higher education system in India because of their major contribution to enhancing the gross enrolment ratio and democratization of education to large sections of the population particularly to reach out to the unreached and to meet the demands of lifelong learning. The success of ODL in the country is due to its flexibility and accessibility. The New Education Policy 2020 has set a target to achieve 50% GER by 2035. This mammoth task can only be accomplished through an open and distance learning system with

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the integration of information and communication technology in teaching-learning as envisaged in the NEP- 2020. The open and distance learning system is perhaps the only system that has been designed and developed in such a way that it is able to cater to all those who desire to seek higher education though they are in a disadvantageous position due to social, economic, and other reasons. The flexibilities in terms of age, entry qualification, duration of course completion, etc., are embedded to make the ODL system learner-friendly. Thus, the system can cater to large numbers and reduce social exclusion by widening accessibility. Open universities in India have been a remarkable development of the 20th century that have introduced the learner-centric approach with its unique features of flexibility as opposed to the century-old traditional on-campus teacher-centric approach. Distance learning as a mode of education has seen phenomenal growth over the years in terms of its popularity, especially during the last decade. The system has not only democratized higher education among larger segments of the population but also facilitated inclusive growth by including the excluded particularly the disadvantaged people. As highlighted in the National Education Policy 2020, the need for continuous and lifelong education and the challenges in the diversification of education through flexible modes of delivery also led to the popularity of ODL as a preferred mode of education in the country. However, there have been serious challenges as well. The biggest drawback of distance education is that it does not offer the on-campus learning experience and environment that are made available to students in a conventional University. No one asks about the quality of the traditional on-campus system of education, because we assume that the hallmark of quality is the face-to-face interaction within the campus i.e. the quality can only be ensured when the curriculum is delivered within the campus. However, in the ODL system, there are various possibilities of communication with the students viz. face-to-face interaction, synchronous and asynchronous interaction, self-learning materials (print and digital versions), virtual discussion forums, and so on though we very often raise the questions of quality of the open universities about their academic programmes and curriculum delivery mechanism.

How to provide quality education to large numbers at affordable costs is the primary concern for open universities. Can thousands of students pursue their education in such Higher Education Institutions (HEIs) where the possibility of face-to-face interaction is limited? It is important for an institution to set its own quality parameters which can integrate the requirements of external scrutiny with internal review processes to maintain the quality benchmarks and to enhance the quality as an ongoing process because quality assurance is a continuous process whose journey never ends rather it is a culture which is required to be developed by the institution to remain competitive in the higher education sector. It is essential that quality assurance is embedded in the quality framework within which the institution's core activities are carried out. An efficient academic and administrative management is necessary to i) frame the syllabus of a subject suited to meet the demands of the job market, ii) recruit duly qualified faculties, iii) have the up-to-date and relevant academic content, iv) use of multimedia package, v) conduct examinations through an efficient mechanism, vi) publish the error-free results in time, and vii) analyze the feedback from the stakeholders for making improvement in the system.

Quality is simply fitness for purpose at minimum cost to the society i.e., it means customers satisfaction with a product or its fitness for its particular purpose. Quality assurance is a continuing process for maintaining and improving quality. In the ODL system, both the product and service are involved. Quality in distance education is both visible and invisible. The criteria for a quality product and quality service are distinct in their objectives because service is often invisible and cannot be stored. Therefore, maintenance of quality is a major requirement in ODL systems to have the confidence of all the stakeholders. We must ensure better quality at each of the academic-related services like course curriculum, quality of teacher, teaching methodology, evaluation process and ICT-based services. The non-academic support services include the distribution of Self-learning Material (SLMs), timely holding the examinations and publication of results, etc. The quality can be seen to meet the stakeholders' expectations. In the ODL system, well-prepared self-learning material and well-designed student support services may meet the learner's expectation whereas for an employer the emphasis may be on skills learned and knowledge gained during the course of study, which are to be used by the learners in their works of life and at the workplace.

The open universities can only offer degree programmes provided they are approved by the UGC-Distance Education Bureau. To get approval from UGC, a detailed process is required to follow as delineated in the UGC Regulations. Since, the degrees awarded by the open universities are the same as that of conventional universities, according to the University Grants Commission (Open and Distance Learning Programmes and Online Programmes) Regulations, 2020, it is mandatory for universities offering programmes in ODL mode to comply with University Grants Commission (Mandatory Assessment and Accreditation of Higher Educational Institutions) Regulations, 2012 and must have been accredited by the NAAC within the time frame set by the UGC. Presently, the open universities (16 state open universities) are regulated by the University Grants Commission-Distance Education Bureau (UGC-DEB) through UGC (ODL Programmes and Online Programmes) Regulations 2020 and guided by the accreditation agency i.e., the National Assessment and Accreditation Council (NAAC) of India to maintain the quality of education offered by the OUs. The UGC regulations lay down the minimum standards of instruction for the grant of degrees at undergraduate and postgraduate levels through ODL. The UGC has made it mandatory for open universities to submit compliance reports annually under these regulations. Though the programmes have been offered under the ODL system since 1982, there was no quality assurance system or mechanism for monitoring the ODL programmes as well as to ensure the quality of services that the open universities used to provide. The National Assessment and Accreditation Council (NAAC) of India introduced an assessment and accreditation framework for open universities and dual-mode universities in 2019. Accreditation ensures the quality of education and services that a HEI provides which in turn creates credibility of the institution and builds public confidence. The main aim of accreditation is the improvement of the quality and accountability of the institution. The NAAC has been given the responsibilities for performance evaluation, accreditation, and quality up-gradation of the higher education institutions including open universities of the country. The system of assessment is based on qualitative (QlM) and quantitative (QnM) indicators. In the case of both types of universities, the quantitative metrics are evaluated and validated by a third party as the qualitative metrics are evaluated by a duly constituted peer team through on-site visit.

Table 1: Weightage Distribution of Criteria

Criteria	Weightage for Open Universities	Weightage for Traditional University
Criterion 1: Curricular Aspects	150	150
Criterion 2: Teaching-Learning and Evaluation	250	200
Criterion 3: Research, Innovations and Extension	200	250
Criterion 4: Infrastructure and Learning Resources	100	100
Criterion 5: Student Support and Progression	100	100
Criterion 6: Governance, Leadership and Management	100	100
Criterion 7: Institutional Values and Best Practices	100	100
Total weightage	**1000**	**1000**

Source: NAAC Website

The validation of the self-study report (SSR) and subsequent assessment led to an overall institutional grade and detailed qualitative report highlighting the strengths and weaknesses of the institution under various criteria. The assessment criteria also include feedback from different stakeholders viz. students, alumni, faculties, subject experts, employers, parents, etc. The feedback from the students carries maximum weightage. All the criteria for A&A of conventional HEIs have been adopted for the OUs by NAAC with the same weightage with minor variations in criteria 2 and 3 (Table-1). However, the number of metrics is higher in the case of open universities in comparison to conventional universities. It means the assessment and accreditation process for open universities is more rigorous than that of conventional universities without changing the overall weightage and the four-point scale of grading in order to maintain parity with the conventional system.

The NAAC evaluates the institutions for their conformation to the standards of quality in terms of their performance related to the educational processes and outcomes, curriculum coverage, teaching-learning processes, faculty, research, infrastructure, learning resources, governance, financial well-

Table 2: Distribution of Metrics

Types of HEIs	Open University		Traditional University	
	Metrics	Weightage	Metrics	Weightage
Criteria	7	1000	7	1000
Key Indicators (KIs)	32	--	34	-
Qualitative Metrics (Q_lM)	42	33%	32	37%
Quantitative Metrics (Q_nM)	86	67%	55	63%
Total Metrics ($Q_lM + Q_nM$)	128	-	87	-

Source: NAAC Website

being, and student services. To address the concern of quality in higher education, many countries have developed assessment and accreditation systems. The methodology for Assessment and Accreditation of NAAC is very much aligned with the Quality Assurance (QA) agencies across the world and consists of self-assessment by the institution along with external peer assessment. The criteria-based assessment on both quantity and quality parameters forms the backbone of the Assessment and Accreditation (A & A) process of NAAC for both types of universities. Presently, open universities in India must follow the guidelines as laid down by the UGC Regulations 2020 and the NAAC quality framework to offer the ODL programme. The academic and administrative audit of the institution is based on self-assessment and site visits by the peer team as is followed in the case of conventional universities. The entire process focuses on the key areas of teaching and learning, research, governance, infrastructure, finance, and the adequacy of the institution's quality assurance mechanism, etc.

The role of HEIs is significant in human resource development and capacity building of individuals, and to cater to the needs of the economy, society, and the country thereby, contributing to the development of the Nation. Ensuring equity, and increasing access to higher education are a few ways by which open universities can contribute to national development. NAAC's accreditation process has helped the OUs to know their strength, weaknesses, opportunities, and challenges. The manual, standard operation procedures (SOP), and Self Study Report (SSR) published by the NAAC are the comprehensive documents for the A & A process of open universities in India. The accreditation process is a learning experience for all the open universities as there was no such system of academic audit mechanism prior to 2019. It is realized that unless we open the educational opportunities to the deprived unless we remove the structural rigidities in our educational system, and unless we integrate communication technology with the education system, we cannot make available education to the masses and cater to the diverse needs of the education that the 21st-century learners demand. The OU system also gives a person an opportunity to earn the degree while working without disturbing his/ her workplace or to remain relevant in the ever-changing job market through lifelong learning. The ODL has been popularized tremendously in India because of its unique features of flexibility, accessibility, and affordability, etc. To overcome the deficiencies of the conventional system and to increase the accessibility of higher education, the open university system is a good solution provided it maintains a desired level of quality parameters as set by the NAAC.

The open universities are much ahead of the traditional universities in using information and communication technology. They have integrated ICT tools in the pedagogy as well as in the course delivery system very effectively. They use the technology judiciously to reach the thousands of students. It has been observed that all the open universities maintain the quality of their services including the teaching-learning system at a given level of quality benchmark to the satisfaction of all stakeholders. They have incorporated the ICT components into the university system and judiciously used the ICT to scale up their academic and administrative activities with quality benchmarks. Out of the total of seventeen State Open Universities in India, twelve universities are already accredited ranging from the highest 'grade A++' to the 'grade B+' in the four-point scale. The OUs in India maintain both the qualitative and quantitative parameters to reach the benchmark as set by the accreditation agency (NAAC) in the four-point grading system. The conventional universities are also assessed and accredited with the same scale and weightage. The OUs in India fulfill the standards and

Table 3: Statues of Accreditation

Sl. No.	Name of the University	Year of Establishment	NAAC Grade
1	Indira Gandhi National Open University	1985 (Central university)	A++
2	Dr. B.R. Ambedkar Open University	1982 (Andhra Pradesh)	B++
3	Nalanda Open University	1987 (Bihar)	#
4	Vardhaman Mahavir Open University	1987 (Rajasthan)	A
5	Yashwantrao Chavan Maharashtra Open University	1989 (Maharashtra)	A
6	MP Bhoj Open University	1991 (Madhya Pradesh)	A
7	Dr. Babasaheb Ambedkar Open University	1994 (Gujarat)	A++
8	Karnataka State Open University	1996 (Karnataka)	A+
9	Netaji Subhas Open University	1997 (West Bengal)	A
10	UP Rajarshi Tandon Open University	1999 (Uttar Pradesh)	B+
11	Tamil Nadu Open University	2002 (Tamil Nadu)	A+
12	Pandit Sundarlal Saharma Open University	2005 (Chhattisgarh)	A+
13	Uttarakhand Open University	2005 (Uttarakhand)	B++
14	Krishna Kanta Handiqui State Open University	2006 (Assam)	B+
15	Odisha State Open University	2015 (Odisha)	#
16	Jagat Guru Nanak Dev Punjab State Open University	2019 (Punjab)	##
17	Sreenarayanaguru Open University	2020 (Kerala)	##
18	Jharkhand State Open University	2021 (Jharkhand)	##

#Not yet accredited; ## Not Eligible

quality benchmark to provide quality education and services so far as the grade is concerned and overall improvement has been witnessed in all the seven criteria as delineated in the SSR of NAAC. Netaji Subhas Open University (in West Bengal) is the first State open university in India to get a 'grade A' in 2021.

In conclusion, there is no doubt that open universities in India are offering qualitative academic programmes under the supervision of UGC (regulatory authority) and guidance of NAAC (accreditation authority) to fulfill the dream of thousands of people to pursue higher education promoting lifelong learning in one hand and, contributing to GER on the other hand without compromising the quality and standards of education with huge enrolment. The stakeholders (learners, guardians, employees, etc.) may be rest assured about the acceptability and credibility of the degrees awarded by the open universities across India. In the open and distance learning system, where lakhs of students are enrolled, the quality of academic and administrative performance is given the highest priority and open to assessment and evaluation all year round through the annual quality assessment report. As per UGC Regulations, the Centre for Internal Quality Assurance has been set up in each open university to ensure that the learner's interest is not jeopardized in the entire journey from admission to result publication. If we are to reach the goals of NEP- 2020, quality assurance is to be given due priority whether it is a conventional university or an open university.

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Website

www.naac.gov.in
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Transformative Trends in Higher Education: Adapting to a Changing Landscape in a Disruptive World

Hamis Juma* and G S Patel**

Higher education is the place that countries use to prepare the nation's workforce by equipping learners with the required skills (Vincent-Lancrin, 2022). Ashour, et. al., (2021) detailed that the country's roadmap of economies determines the number of higher education programs and funding allocation to a specific time and most of them are funded by the public and few are privately funded. In such cases, any crisis be it war or another social crisis like COVID-19 outbreak affect education delivery.

Goldstein (2006) explained how early 2000 research was done to see how the future of education is and how a university can work in changing the world to adapt to competition from other universities, demographic issues, and technology changes.

COVID-19 disrupted the delivery of higher education and provided proof of a system's need to restrict education delivery which necessitates new approaches to thinking about the future of higher education (Aldosari, 2020). Veletsianos et al., (2021) found out that faculty believed that the COVID-19 pandemic affected education and brought a major impact on educational provision compared to how it was before the COVID-19 outbreak.

University as a Hub for Knowledge

Further, for generations, universities have been providing knowledge and skills to individuals to be well-fitted for society. Anderson, et. al., (2012) discussed how universities as hubs for knowledge have been evolving through the ages of the industrial revolution from the printing press, telegraph, telephone, radio, and television to the computer. All these technologies are enabling smooth delivery where it is evident now knowledge is not necessarily associated with physical college (The Economist, 2008).

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COVID and Higher Education

Ashour, et. al., (2021) discussed how transformations and new technologies helped universities to navigate through the COVID-19 pandemic. Students and teachers continued the interaction through online means and opened a new chance to think if the same can work post-COVID-19 and its efficiency compared to traditional classrooms.

Strengthening Higher Education

Moreover, UNESCO-IESALC (2021) stressed that the government and organizations work toward a broader objective of leaving no one behind by ensuring the education provided is reducing the digital divide specifically after COVID-19 and that technology is well integrated into all aspects of higher education. Also, Laia, et. al., (2018) discussed how higher education is affected by digital technologies. This suggests that the exploration into new technologies will bring more affordance to learners compared to before as has been evidenced during the pandemic.

Experimentation and Innovation

Innovation is at the center of all changes in universities adopting new technologies. However, Anderson, et. al., (2012) suggested that these changes are not one-day events and that the universities will not radically change, and (Goldstein, 2006) mentioned resistance to change as the most threatening aspect in many universities in adopting new practices, policies, or technology. The colleges are adopting new pedagogical practices and new learning platform that allows for hybrid learning which was not possible before the COVID-19 pandemic. The knowledge is now obtained by learners from distant locations where they can access learning and course material for their convenience.

Discussion

The field of higher education is undergoing significant changes driven by technological advancements, global challenges, and shifts in

the job market. This paper explores key findings from recent literature to shed light on the evolving landscape of higher education. By analyzing the impact of the COVID-19 pandemic, the changing nature of jobs, technology integration, and ethical considerations, this paper seeks to provide insights and recommendations for institutions to adapt and thrive in a rapidly changing world.

Disruption and Technology Transformation in Education

The COVID-19 Impact on Higher Education

The outbreak of the COVID-19 pandemic in early 2020 brought unprecedented disruptions to traditional educational practices (Aldosari, 2020 and Veletsianos, et. al., 2021). Educational institutions worldwide were compelled to pivot swiftly towards online and hybrid learning models to ensure educational continuity (Ashour, et. al., 2021). The pandemic acted as a catalyst for change, showcasing the potential of technology to expand educational accessibility and flexibility (Goodwin University, 2022). As institutions embraced technology-driven approaches, they discovered new opportunities for engaging students and delivering content effectively in the digital realm (Goodwin University, 2022).

The Changing Nature of Jobs and Learner-centered Approaches

The dynamic and unpredictable nature of the job market demands that higher education institutions adapt their curricula to equip learners with diverse and future-ready skills (Raetzsch, et. al., 2021). A growing body of research emphasizes the significance of learner-centered approaches, where educational practices revolve around students' needs and preferences (OECD, 2018).

To succeed in the future job market, graduates need not only domain-specific knowledge but also a broader set of skills such as critical thinking, problem-solving, adaptability, and creativity (Raetzsch, et. al., 2021). Institutions that can successfully prepare competent graduates for the employment sector will undoubtedly attract more students, leading to competition among universities to be innovative and market-ready (Laia, et. al., 2018).

To Maximize Tech-related Efficiency

Raetzsch, et. al., (2021) discussed how new technology is integrated into higher education institutions trying to enhance the learning and teaching experience such as Artificial intelligence and virtual and Augmented reality. These technologies are helping universities to make students more engaged and motivated to learn. Such technologies are being integrated into flipped classrooms and MOOCs to support students with cost-effective technologies. Moreover, The Economist (2008) insisted that for education to be future-ready technology will shape learning and contribute to the whole pedagogical activities in higher education.

Moreover, Aldosari (2020) described the potential advantage that technology can bring to education such as a global classroom where all learners are learning in the same content despite being in different geographical spaces, improving how administrative tasks are done and easily corresponding to academic-related issues, provide the administrator with more flexible and readily available analytics data for evaluation of programs, and to some extent AI tutoring to some of the lessons which are also supported by Veletsianos, et. al., (2021) in the study that most faculty are impressed with the technology integration and its impact on how education is delivered and its impact to learners.

The Traditional Student-lecturer Relationship is Changing

Technology integration in higher education has shown promise in enhancing the learning and teaching experience (Raetzsch, et. al., 2021). Emerging technologies, such as Artificial Intelligence (AI), Virtual and Augmented Reality (VR/AR), and blended learning models, are being leveraged to create engaging and motivating learning environments (Raetzsch, et. al., 2021; The Economist, 2008). Institutions are implementing flipped classrooms and Massive Open Online Courses (MOOCs) to support students with cost-effective learning opportunities (The Economist, 2008).

Moreover, technology allows for a global classroom, where learners from different geographical locations access the same content, promoting international collaboration and cross-cultural understanding (Aldosari, 2020). Faculty members have also expressed appreciation for technology integration, recognizing its positive impact on education delivery and student learning outcomes (Veletsianos, et. al., 2021).

Responding to Population Growth and Short-term Impact on Access Issues

Moreover, with learners' population is growing rapidly and by estimates, more than 500 million students will be enrolled in higher education worldwide(Vincent-Lancrin, 2022). China has started working on the issue through a projection of building new universities, and the UK is experiencing an influx of learners from Asia (Raetzsch, et. al., 2021), all these require a solution that is integral in ensuring the quality of higher education remains the same and prepare the learners for life. Also, more demand for short-term programmes has increased during post COVID-19 pandemic from corporations where higher education needs to provide the programs and at the same time have normal learners for long-term programs (UNESCO-IESALC, 2021).

The traditional curricula can no longer serve the increase the number of higher students and match with the relevant skills needed for the world of work. According to Vincent-Lancrin (2022), many colleges shut down during the pandemic and could not be opened again. After the pandemic, everything changed and the traditional curricula could no longer suit the learners. Institutions can work with community members to create more impactful curricula that can provide specialized skillsets of employers ready to work for their community.

To work on curricula and incorporate the needed changes, the institutions need more funding to stay competitive and innovative which since 2000 (Goldstein, 2006) universities have been lacking when needing to conduct research in their fields. According to Raetzsch, et. al., (2021), there were increasing research activities to add more innovative approaches to curricula and allow the staff to focus on research and digital learning. Also, without a doubt, the pandemic caused curricula to change by highlighting how the curricula were not ready for any major challenge. On the same, Goodwin University (2022) suggested that institutions come up with adaptive curricula that are flexible for students and make education accessible. Moreover, educational institutions must be responsive to these shifts in demand while ensuring the availability of long-term program offerings for traditional students (UNESCO-IESALC, 2021).

Challenges of Technology-driven Approaches in Higher Education

This paper primarily emphasizes the positive aspects of technology integration in higher education. However, it is crucial to acknowledge and address potential challenges and criticisms related to technology-driven approaches to education. Several scholars and researchers have raised concerns regarding the overreliance on technology and its potential drawbacks in the educational context. One key concern is the 'digital divide' (OECD, 2018), which refers to unequal access to technology and the internet among different socio-economic groups. While technology has the potential to enhance learning experiences, not all students have equal access to the necessary resources. This can lead to disparities in educational outcomes, widening the existing achievement gap between privileged and disadvantaged students (OECD, 2018).

Moreover, critics argue that excessive use of technology might lead to "technocentrism" in education (Selwyn, 2014), wherein the focus shifts more toward the tools and technology themselves rather than the learning objectives. Overemphasis on technology may neglect the importance of critical thinking, creativity, and other essential cognitive skills that are crucial for students' holistic development (Selwyn, 2014). Additionally, technology-driven approaches could lead to "algorithmic bias" (Diakopoulos, 2016), where automated systems and algorithms used in education might perpetuate existing inequalities and reinforce stereotypes. For example, algorithms used for grading or student recommendations may inadvertently favor certain demographics or learning styles, leading to an unequal distribution of educational opportunities.

Another criticism is the potential for "technological determinism" (Friesen, 2013) in educational practices, wherein educators and institutions might adopt technology without thoroughly considering its impact on pedagogy and learning outcomes. It is essential to recognize that technology is a tool and not a solution in itself; its successful integration requires careful planning, training, and alignment with educational goals (Friesen, 2013). Furthermore, the rapid advancement of technology in education has raised ethical concerns regarding data privacy and student

surveillance (Williamson, 2020). The collection and use of vast amounts of student data for personalized learning or performance tracking may compromise students' privacy rights and raise questions about the responsible use of data in educational settings (Williamson, 2020).

To address these challenges, educational institutions must adopt a balanced and critical approach to technology integration. It is essential to weigh the benefits against potential risks and drawbacks. By recognizing the limitations and pitfalls of technology-driven approaches, educators and policymakers can develop more thoughtful strategies that harness technology's potential while safeguarding against its negative implications.

Overall, acknowledging and engaging with contrasting views on technology in education is vital for fostering a nuanced understanding of its impact on higher education. By doing so, stakeholders can work towards a more inclusive, equitable, and effective learning environment that maximizes the benefits of technology while mitigating its potential downsides.

Ethical Challenges in Technology and Data Use in Education

In the context of integrating technology and data use in education, ethical considerations play a crucial role in safeguarding the rights and well-being of students, educators, and stakeholders. This section discusses potential ethical challenges associated with the subject matter and proposes ways to address them, ensuring responsible and equitable use of technology in educational settings. One primary ethical concern is data privacy (Williamson, 2020). Educational technologies often collect vast amounts of student data, ranging from personal information to learning analytics. It is essential to ensure that data collection is carried out with informed consent from all parties involved, particularly students and their guardians (Williamson, 2020). Institutions must be transparent about data collection practices, explaining how the data will be used and protected. Additionally, they should implement robust security measures to safeguard sensitive information.

The integration of algorithms and AI in education can raise ethical questions related to bias and fairness (Diakopoulos, 2016). Algorithms used for grading, admissions, or personalized learning might inadvertently perpetuate biases present in historical data. To address this, developers and educators should regularly audit algorithms for potential biases and take necessary steps to mitigate them (Diakopoulos, 2016). Additionally, institutions must strive to diversify the data used to train algorithms to ensure fair representation. Further, ethical considerations should also focus on ensuring equitable access to technology and digital resources (OECD, 2019). The 'digital divide' can exacerbate existing educational inequalities, disadvantaging students without access to technology. Policymakers and educational institutions should work towards bridging this divide, providing equal opportunities for all learners (OECD, 201 9). Initiatives such as subsidized devices, internet access, and digital literacy programs can help create a more inclusive learning environment.

Moreover, Ethical guidelines should emphasize the responsible use of student data. Educators and institutions should use student data solely for educational purposes and avoid any commercial exploitation (Williamson, 2020). Student data should not be shared with third parties without explicit consent, and it should be anonymized whenever possible to protect individual identities. To address ethical challenges effectively, educators need adequate training in the responsible use of technology and data in education (Williamson, 2020). Digital literacy should be an integral part of professional development programs, empowering educators to navigate ethical dilemmas and make informed decisions.

Addressing ethical challenges is paramount to ensure that technology and data use in education benefit all stakeholders without compromising privacy, equity, and fairness. By adhering to principles of data privacy, fairness, and responsible use, educational institutions can harness the potential of technology while upholding ethical standards, ultimately creating a positive and inclusive learning environment.

Additionally, It is important to strike a balance between embracing technology's potential and understanding its limitations. While technology can undoubtedly enhance learning experiences, it should be employed thoughtfully, with a focus on pedagogy and learning outcomes. Educators and policymakers

should recognize that technology is not a substitute for effective teaching and meaningful interactions between students and educators. Instead, it should complement and enhance these traditional elements of education.

Conclusion

The COVID-19 pandemic has accelerated the transformation of higher education, making technology integration and ethical considerations more critical than ever. By embracing innovation, prioritizing learner-centered approaches, and addressing ethical challenges, educational institutions can prepare learners to thrive in an unpredictable world and meet the demands of the future job market. The COVID-19 pandemic significantly disrupted traditional learning methods, leading to a rapid shift towards online and hybrid learning models (Aldosari, 2020; Veletsianos, et. al., 2021) whereby educational institutions were compelled to adopt technology-driven approaches to ensure continuity (Ashour, et. al., 2021), revealing the potential of technology in expanding accessibility and flexibility (Goodwin University, 2022). As jobs continue to evolve due to technological advancements, there is a growing demand for learners equipped with diverse skills (Raetzsch, et. al., 2021), necessitating universities to adapt their curricula to prepare students for the unpredictable job market (OECD, 2018).

However, the integration of technology and data use in education also raises ethical challenges, including data privacy and algorithmic bias (Diakopoulos, 2016; Williamson, 2020). To address these concerns, responsible data practices, algorithm auditing, and digital literacy training for educators are vital (OECD, 2019; Selwyn, 2014). Moreover, continuous innovation, collaboration, and integration of emerging technologies such as artificial intelligence and virtual reality can enhance the learning experience and attract diverse learners (UNESCO-IESALC, 2021; Raetzsch, et. al., 2021; and The Economist, 2008).

Educational institutions should adopt learner-centered approaches, prioritizing students' needs and preferences (OECD, 2018). Implementing the Universal Design for Learning (UDL) framework can create flexible and inclusive curricula (Goodwin University, 2022). To ensure ethical technology integration, institutions must establish clear data privacy policies and consent protocols (Williamson, 2020). Regular algorithm audits and diverse data sources can minimize biases in educational technologies (Diakopoulos, 2016). Policymakers and institutions should collaborate to bridge the digital divide and provide equitable access to technology and resources (OECD, 2019). Initiatives such as subsidizing devices and internet access can foster inclusivity. Continuous ethical reflection is essential for addressing emerging challenges (Selwyn, 2014). Regular assessments of data practices and technology implementations can lead to ethical improvements, aligning with evolving educational needs. Additionally, Aldosari, and Veletsianos et al., (2021:2021) called the institutions to increase awareness to institutions on how they can integrate technology into teaching and learning and keep the community as collaborators in the process.

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Themes/Subthemes for the Special Issues of University News-2023-24

S. No.	Zonal Vice Chancellors' Meets-2023-24	Theme/ Subthemes for Special Issues	Last Date to Contribute	Date of Publication
1.	**West Zone**	**Future of Work and Skill Development** *Subthemes* • Sustainable Careers: Navigating a Dynamic Workplace • Human-centered Skills in a Tech-driven World: Soft Skills and Emotional Intelligence • Resilience & Adaptability: Impact of Gig Economy on Higher Education	**December 11, 2023**	December 18-24, 2023
2.	**Central Zone**	**Nurturing Research and Innovation Ecosystem** *Subthemes* • Collaborative Research Networks: Fostering Inter-disciplinary Research • Entrepreneurship and Innovation: From Idea to Impact • Innovative Funding Models for Research	**January 01, 2024**	January 15-21, 2024
3.	**North Zone**	**Globalization and Internationalization of Higher Education** *Subthemes* • International Collaborations and Partnerships: Building Bridges for Higher Education • Global Higher Education Policy and Regulation: Harmonizing Standards • Student Mobility and Diversity: Enhancing International Experience	**January 31, 2024**	February 12-18, 2024

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A Study on Changes in Study Habits after the Pandemic

D Mano Stella Charling* and Shobana S**

Study habits play a major role in an individual's academic performance. If an individual is not regular in his study habits, he/she could not perform well in their studies. The researcher has gone through various research papers that focused mainly on the impact of study habits on academic achievement and basic study habits. During the pandemic, teaching methods made a new revolution and hence the study habits of students showed drastic changes. This paper attempts to explore the changes in the study habits of B. Ed trainees after the pandemic. Around 146 B. Ed trainees and teachers were taken for study. The findings of the research paper show that there has been no drastic change in their study habits after the pandemic.

A study habit is an action that students routinely and habitually carry out in order to complete the goal of learning, such as reading, taking notes, and holding study sessions. Depending on how successfully they benefit the students, study habits can be categorised as either effective or ineffective. Study habit is one of the most important learning or student variable that significantly affects students' academic success. If teachers, administrators, parents, guardians, school counselors, and the government do not step up, the trend and threat of pupils' performance in both internal and external examinations will become more damaging and alarming. If students have a clear understanding of their talents, appropriate study habits, and the ability to employ effective study skills, academic performance will be higher.

The New Standard Dictionary of Education defines study habits as the practice of students or pupils to engage in academic pursuits when given the chance. It needs more than just memorization to study effectively and effectively. It necessitates having the necessary knowledge of how and where to get crucial information, as well as the skill to apply it wisely.

Rajinder Singh, and Jharna Gohain (2022) in their paper "Study Habits among Higher Secondary Students in relation to their school environment" examine higher secondary students' study behaviours in connection to their academic environment. An 80-student sample from the higher secondary level was chosen for the current inquiry. The School Environment Inventory (SEI), created by Mishra K.S., was used in the current study. It was established by Mukhopadhyay M and Sansanwal D N. According to the results, there is no appreciable difference between the boys' and girls' study habits' mean scores. Additionally, the findings showed that there is no difference between pupils in terms of gender in terms of the mean scores for school climate. The study habits and educational environment of upper secondary school students are found to have no meaningful association.

Ranju T Nair, and Kulkarni U K(2020) in their paper **"**Study Habits and its Impact on academic performance in English of secondary school students in Kalaburgi Region" determine the relationship between study habits and academic achievement among secondary school students in the Kalaburgi region. The purpose of this study was to ascertain whether there was a connection between the students in Kalaburgi's secondary schools' ninth-grade classes' study habits and their success in learning English. The outcome made obvious the Kalaburgi region's preference for studying. Using the purposive technique, 65 students were chosen as the sample. An inventory of study habits and documents was employed as the research tool (students' mid-term marks score). Data analysis methods employed included descriptive statics and Pearson Product Moment Correlation. The study habits and academic achievement in English were found to be positively correlated. It follows that students' learning achievement will increase in direct proportion to how well they manage their study time. To improve students' academic performance, it was suggested that parents and teachers work together to teach them how to build effective study habits.

Lynda Zohmingliani (2019) in her paper "Study habits among school students and its relevance to teacher education" learns more about the study habits of upper secondary students in Aizawl City. It involved 420 secondary students from the city of Aizawl. The data was gathered using the Study Habit Inventory created by Mukhopadhyay M. and Sansanwal D.N. in 1983.

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The data was analysed using the mean, S.D., and t-test. According to the study, most pupils in Aizawl City had a typical study routine. The survey also revealed that, in comparison to male students, female students have better study habits. Objectives of the Study are:

i. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their age.

ii. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their educational qualifications.

iii. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their major subject.

iv. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on the type of institution they studied.

v. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their year of study.

vi. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their mode of study.

vii. To find out if there is any difference in study habits of B. Ed trainees after the pandemic based on the medium of instruction.

viii. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their place of residence.

ix. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation.

x. To find out if there is any difference in study habits of B. Ed trainees after the pandemic based on annual income.

xi. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on whether they belong to first-generation learners or not.

xii. To find out if there is any difference in the study habits of B. Ed trainees after the pandemic based on their marital status.

Hypotheses of the Study are:

- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on their age.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on their educational qualifications.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on their major subject.
- There is no significant difference in study habits of B. Ed trainees after the pandemic based on the type of institution they studied.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on their year of study.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on their mode of study.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on the medium of instruction.
- There is no significant difference in study habits of B. Ed trainees after the pandemic based on their place of residence.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on the annual income.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on whether they belong to first-generation learners or not.
- There is no significant difference in the study habits of B. Ed trainees after the pandemic based on their marital status.

Analysis and Interpretation

Changes in the study habits of B. Ed trainees after the pandemic are collected through questionnaires using Google Forms. The random sampling method is used for a population of around 146 prospective teachers. A pilot study of 25 samples was done to check the reliability and validity of the scale prepared by the researcher. The scale is reliable with a value of 0.78. SPSS is used for analysis and interpretation of the collected data.

Table 1 t-test for Study Habits of B. Ed Trainees After Pandemic Based on Age

Age	N	Mean	S.D	t value	p value
Below 25	94	43.97	5.675	1.702	0.091
Above 25	52	42.29	5.771		

Interpretation

In Table 1, the calculated p-value 0.091 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed. trainees after the pandemic based on age.

Table 2 t-test for Study Habits of B. Ed Trainees After Pandemic Based on Educational Qualification

Educational Qualification	N	Mean	S.D	t value	p value
UG	83	43.04	5.076	0.804	0.422
PG	63	43.81	6.542		

Interpretation

In Table 2, the calculated p-value 0.422 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on their educational qualifications.

Table 3 t-test for Study Habits of B. Ed Trainees after Pandemic Based on Major Subject

Major subject	N	Mean	S.D	t value	p value
Arts	59	43.56	5.599	0.327	0.744
Science	87	43.24	5.873		

Interpretation

In Table 3, the calculated p-value 0.744 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on the major subject.

Table 4 t-test for Study Habits of B. Ed Trainees after the Pandemic Based on the Type of Institution

Type of institution	N	Mean	S.D	t value	p value
Government aided	83	44.30	5.684	2.280	0.024
Private	63	42.14	5.639		

Interpretation

In Table 9 the calculated p-value of 0.024 is less than the significant value of 0.05, rejecting the null hypothesis. Therefore, there is a significant difference in the study habits of B. Ed trainees after the pandemic based on the type of institution. From the table-9, it is observed that the mean scores of students who studied in government colleges are higher than those of others.

Table 5 t-test for Study Habits of B. Ed Trainees After the Pandemic Based on Year of Study

Year of Study	N	Mean	S.D	t value	p value
I year	91	42.55	5.714	2.250	0.026
II year	55	44.73	5.589		

Interpretation

In Table 5, the calculated p-value of 0.026 is less than the significant value of 0.05, rejecting the null hypothesis. Therefore, there is a significant difference in the study habits of B. Ed trainees after the pandemic based on the year of study. From Table 5, it is observed that the mean scores of B. Ed teachers who study in II years are higher than that of I year.

Table 6 t-test for Study Habits of B. Ed Trainees After Pandemic Based on Mode of Study

Mode of study	N	Mean	S.D	t value	p value
Online	68	44.18	5.950	1.592	0.114
Offline	78	42.67	5.505		

Interpretation

In Table 6, the calculated p-value of 0.114 is greater than the significant value of 0.05, accepting the null hypothesis. Therefore, there is no significant difference in study habits of B. Ed trainees after the pandemic based on the mode of study.

Table 7 t-test for Study Habits of B. Ed Trainees After Pandemic Based on Medium of Instruction

Medium of instruction	N	Mean	S.D	t value	p value
English	115	43.54	5.705	0.684	0.495
Tamil	31	42.74	5.950		

Interpretation

In Table 7, the calculated p-value of 0.495 is greater than the significant value of 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on the medium of instruction.

Table 8 t-test for Study Habits of B. Ed Trainees After Pandemic Based on Place of Residence

Place of residence	N	Mean	S.D	t value	p value
Rural	62	44.21	5.454	1.524	0.130
Urban	84	42.75	5.909		

Interpretation

In Table 8, the calculated p-value 0.130 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in study habits of B. Ed trainees after the pandemic based on place of residence.

Interpretation

In Table 9, the calculated p-value of 0.010 is less than the significant value of 0.05, rejecting the null hypothesis. Therefore, there is a significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation. Post Hoc test is conducted in order to find which group causes the difference in the mean score.

Post Hoc Test

Interpretation

Daily Wage and Self-employed: In the table-10, the calculated p-value 0.086 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation.

Self-employed and Government: In Table 9, the calculated p-value 0.007 is less than the significant value 0.05, rejecting the null hypothesis. Therefore, there is a significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation. From the table, it is observed that the mean scores of study habits of B. Ed trainees whose father is self-employed are higher than those of government employed.

Government and Private: In Table, the calculated p-value 0.607 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation.

Private and Daily Wage: In Table-9, the calculated p-value 0.996 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation.

Daily Wage and Government: In Table--9, the calculated p-value 0.909 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation.

Self-employed and Private: In the table-9, the calculated p-value 0.263 is greater than the significant

Table 9 F-test for Study Habits of B.Ed. Trainees After Pandemic Based on Father's Occupation

Father's Occupation	N	Mean	S.D	Source of variation	df	SS	MSS	F value	Sig
Daily wage	39	42.74	6.256	Among	3	367.920	122.640	3.940	.010
Self employed	34	45.97	5.102	Within	142	4420.108	31.128		
Government	34	41.47	5.604	Total	145	4788.027			
Private	39	43.38	5.225						

Table 10 Post Hoc Test for Study Habits of B.Ed. Trainees After Pandemic Based on Father's Occupation

Mode of teaching	N	Mean	Mode of teaching	N	Mean	Sig
Daily wage	39	42.74	Self-employed	34	45.97	0.086
Self-employed	34	45.97	Government	34	41.47	0.007
Government	34	41.47	Private	39	43.38	0.607
Private	39	43.38	Daily wage	39	42.74	0.996
Daily wage	39	42.74	Government	34	41.47	0.909
Self employed	34	45.97	Private	39	43.38	0.263

Table 11 F-test for Study Habits of B.Ed. Trainees After Pandemic Based on Annual Income

Annual Income	N	Mean	S.D	Source of variation	df	SS	MSS	F value	Sig
Below 1 lakh	71	43.92	5.339	Among	2	118.236	59.118	1.810	.167
1 lakh to 3 lakh	49	43.59	6.308	Within	143	4669.791	32.656		
Above 3 lakhs	26	41.46	5.530	Total	145	4788.027			

Table 12 t-test for the Attitude of B. Ed Trainees and Teachers Towards Internship Based on First Generation Learner

First generation learner	N	Mean	S.D	t value	p value
Yes	60	43.00	5.877	0.648	0.518
No	86	43.63	5.674		

Table 13 t-test for Attitude of B. Ed Trainees and Teachers Towards Internship Based on Marital Status

Marital Status	N	Mean	S.D	t value	p value
Single	107	43.66	5.754	1.023	0.308
Married	39	42.56	5.721		

value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on their father's occupation.

Interpretation

In Table 9, the calculated p-value 0.167 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on annual income.

Interpretation

In Table 9, the calculated p-value of 0.518 is greater than the significant value of 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on first-generation learners.

Interpretation

In Table 9, the calculated p-value 0.308 is greater than the significant value 0.05, accepting the null hypothesis. Therefore, there is no significant difference in the study habits of B. Ed trainees after the pandemic based on marital status.

Educational Implications

- As the study aims to find the study habits of B. Ed trainees after the pandemic, the result of analysis and interpretation of the data collected shows a positive approach.
- The variables age, educational qualification, major subject, mode of study, medium of instruction, place of residence, annual income, marital status, and first-generation learner showed no significant difference in the study habits of B. Ed trainees after the pandemic.
- However, the type of institution they studied at, year of study, and father's occupation showed significant differences in the attitude of B. Ed trainees and teachers towards internship.
- The study is only limited to B. Ed trainees of a particular college.

Conclusion

Changes in study habits do not have a major impact after the pandemic. Only a few demographic variables like the type of institution showed change in study habits. This may be because the teaching methodology in those institutions had made an impact on learning.

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Learning is the Life Force for Human Beings: Always Keep it Vitalised

Rajiv Kumar, Chairman, Pahle India Foundation, and Former Vice Chairman, NITI Aayog, Govt. of India delivered the Convocation Address at the 10th Convocation Ceremony of Hemvati Nandan Bahuguna Garhwal University, Srinagar on December 01, 2022. He said, "But learning should not and in any case does not stop with being a full-time student-it should continue throughout one's life. I am sure your years in this prestigious university have prepared you to be a perpetual learner- for me it is a sad day when I don't learn something new. Keeps one alive in a true sense as learning and improving oneself constantly perhaps is the most important distinction between us and other living beings like plants and animals." Excerpts

Have been a student in three universities — Delhi, Lucknow and Oxford — so know full well the charms of being a student — it is a protective cocoon–where all is taken care of by loving parents and by watchful and caring teachers. Hopefully, this protective state of life encouraged learning as that was the only exclusive task at your hand. This will never come again and I am confident that you have made the fullest use of it.

But learning should not and in any case does not stop with being a full-time student — it should continue throughout one's life. I am sure your years in this prestigious university have prepared you to be a perpetual learner — for me it is a sad day when I don't learn something new. Keeps one alive in a true sense as learning and improving oneself constantly perhaps is the most important distinction between us and other living beings like plants and animals.

We learn from diverse sources — books, daily life, observing nature, etc. but perhaps the most effective learning happens by example, by observing others especially those whom we love or respect — like our parents and teachers. And this is why it is so critical that faculty members become exemplars and role models for the students.

This is best reflected in our traditional *Gurukuls* where the *Guru* not only imparted knowledge and the art of complex reasoning but also set ethical standards and value norms through his own life. I am sure that faculty members in HNBGU are following this lofty model of *Bhartiya Gurukuls* as that makes their students far better equipped to handle the challenges that they are about to face as they step out.

I cannot emphasize enough the importance of teachers being true *Gurus* who not only lecture but inspire and inculcate in their students an unending quest for inquiry, high moral values, and a nationalist spirit that drives them to maximize their potential. These qualities will surely bring them kudos but more importantly, take our country forward towards becoming once again the most sought-after country in the world.

My young friends must realize that India is on the cusp of major historical change that will take it inexorably forward towards raising its share in the global economy to once again become commensurate with the share of our population in the world population — 17% and will become 19% by 2050.

Our share was 17-20% of the global economy in 1850 less than 200 years ago, in our known history of more than 3000 years. According to Angus Maddison, whose work we should all read, India's share of world GDP was about 27% in the 1st Century AD — that is why Europeans came looking for us — Did they not?

Already in the making — overtaken UK and will overtake Germany and Japan soon enough — be among the three largest economies in the world by 2047 for sure.

That will also raise our overall stature in the global community and India will be expected to play a far more active and important role in finding the way forward and forging consensus among diverse players — was already seen in the G-20 meeting in Bali — the final communique had India's imprint.

With our participative and perhaps hyper-active democracy, our noteworthy achievements in achieving peaceful social transition and harmony in a country more diverse than the whole of Europe, and now our economic progress, India will surely become an exemplar to other emerging economies and maybe even for advanced economies.

Because our success will be achieved only and only if we are able to successfully address the incredible

challenges that face us today. We cannot for even a minute estimate these challenges. These are:

i. Grow exponentially and also become greener exponentially — the only country in world history so far that will have to resolve this trade — off.

ii. Grow exponentially but also generate jobs exponentially — in an environment in which technology (AI, Robotics, Singularity) threatens to destroy jobs and not create more than it takes away or destroys.

iii. Generate jobs to improve our labour participation rates which are currently at a mere 44% and an abysmal 23% for women but also to generate them where people live and not in distant places–we cannot and we do not wish to encourage large scale migration within the country or from here to other countries — that is sub-optimal

iv. Modernize our agriculture so as to equate productivity levels in this sector to other sectors. Presently, nearly 50% of our workforce engaged in agriculture produces only 18% of the GDP- reflecting its backwardness.

v. But to modernize agriculture not by blindly adopting the model of 'industrial agriculture' as practiced in the US, Europe or China but to modernize it in an environmentally friendly way — by adopting 'chemical free or natural farming' It is already being practiced by nearly 3 million farmers across 11 states.

vi. Eliminate malnutrition among children which arrests their mental development and eliminates anemia among women- the latest NFHS puts these as 36% and 50%.

vii. And finally, upgrade our education system by implementing in letter and spirit the National Education Policy, which has the potential to make our education system globally comparable.

The list can be surely enlarged. However, addressing the above-cited challenges will itself stretch our governance capacities at all levels of the government and amongst all stakeholders.

So we have to create synergies across all stakeholders which is the only possible way to address these formidable challenges. These synergies will generate the energy and dynamism to forge a New India.

We have to achieve 10 X of where we are today in per capita incomes for us to meet the exploding aspirations of our young population over the next 25 years — during the *Amrit Kaal* as our Prime Minister has called it.

Strong foundations have been laid over the last few years for India to surge forward across all fronts with the help of new technologies, our strong traditions of private entrepreneurship, and our frugal consumption habits that have respected nature and sought to preserve it rather than plunder and exploit it. These are our strengths. We have to build on them and reinforce them.

Our generation and previous ones have painstakingly laid these foundations, defying the world that did not expect us to succeed across all dimensions. We have had to fight our own inherited colonized mindset that made us skeptical of our great strengths and glorious traditions. A glaring example of this colonized mindset is the neglect of our traditional medicinal systems for both preventive and curative treatments.

But that is changing — we are now trying to mainstream Ayurveda — the process has started. It is symbolic of the rejuvenation of our mindset which now is tuned increasingly to Swami Vivekananda's call for making India the *Vishwaguru.*

The responsibility for making the 21st century India's century lies squarely on the students and indeed on the faculty collected here. You are surely liberated from the colonial mindset and have the ambitions and capabilities to build glorious structures on these strong foundations.

We have to give up the practice of constantly trying to copy others or learn from them. We must recognize that India has a unique past and indeed a unique set of current challenges but also a unique set of strengths.

We have to connect with our ground realities and devise our own solutions. I am sure years spent in HNBGU will have helped you to recognize and grow your capabilities.

Now is the time to go out and use them for serving the national cause and for achieving our ambitious goals.

I wish you all the best for doing so and restoring India's position in the global community of nations.

Jai Hind! ❑

National Seminar on Teacher Education

The one-day National Seminar on 'Teacher Education in India: A Perspective on Quality with Special Reference to NAAC and State Level Meeting of Special Interest Group on Environmental Education' was organized by the Gopal Chandra Memorial College of Education, Kolkata, West Bengal, recently. The Convenor, Dr. Shreyashi Paltasingh, Principal of the College and Joint Secretary, AIAER (W.B. Chapter) and Convenor of the Special Interest Group on Environmental Education delivered the Welcome Address where she stated that the seminar aimed to offer insights and experiences on the latest trends in teacher education based on the recommendations of NEP- 2020. She also expressed her gratitude and appreciation to all the experts, eminent guests, and the teaching, and non-teaching staff as well as the students of the college for their valuable contribution in making the seminar successful.

The programme was inaugurated by the President of the Governing Body, GCM College of Education, and Minister in Charge (Finance), Government of West Bengal, Ms Chandrima Bhattacharya with the illumination of the lamp. In her Presidential Address, she assured her unceasing support for the all-round development of the college.

Guest Speaker, Prof. Ramakanta Mohalik, Department of Education, RIE (NCERT) made his insightful deliberation on the topic, 'Quality Teacher Education through NAAC in the Context of NEP-2023', where he talked about the Integrated Teacher Education Programme, recommendations, visions and changes in NEP-2023, and inclusive and equitable education. He brought forth the importance of mother tongue and regional languages with a special focus on experiential learning strategy and multidisciplinary approach in education. The presentation was followed by an interactive session with the audience.

Prof. Tushar Kanti Ghara, Joint DPI, Department of Higher Education, Government of West Bengal and State Nodal Officer, AISHE gave the presentation on 'A Data Orientation for Teacher Education Institutes towards NAAC Accreditation'. Prof. Ghara delved deep into the discussion of technological advancement and data orientation and explained the strategies for systematic documentation of data for NAAC assessment and accreditation. The lecture was followed by an interactive session with the participants.

Swami Tattwasarananda, Principal, Probationer's Training Centre, Belur Math made his thought-provoking deliberation on 'Maintenance of Quality in Teacher Education with Reference to NAAC'. Maharaj provided valuable guidance on the parameters of NAAC and how institutions can work innovatively to fulfil the parameters constructively. The lecture was followed by an interactive session with the audience

The next session was based on paper presentations in four parallel sessions chaired by Dr. Debashis Dhar, Former TIC, GCM College of Education, Dr. Rajiba Lochan Mohapatra, Assistant Professor, Department of Education, Burdwan University, Dr. Lalit Lalitav Mohakud, Assistant Professor, Department of Education, Jadavpur University, and Dr. Bhaswati Ghosh, Principal, Sailajananda Falguni Smriti Mahavidyalaya.

Prof. Debi Prasad Mishra, Director, NITTR and President AIAER (West Bengal Chapter) spoke on 'Role of National Assessment and Accreditation for Improving Quality of Education'. He actively interacted with the participants and enriched the audience with his innovative insights.

Dr. Bijan Sarkar, Professor, Department of Education, University of Kalyani, and General Secretary, AIAER, West Bengal Chapter enriched the participants with his priceless presentation on 'Environmental Education'. He also delineated the themes of BTAE (Better than Average Effect) and SSB (Self-serving Bias) in the course of his deliberation. He concluded his lecture by suggesting a book titled 'How Much Should a Person Consume' for developing sustainable environmental temperament within everyone present.

Prof. Sarkar's deliberation was followed by a State Level Meeting of AIAER Special Interest Group (Environmental Education). In the Valedictory Session, the participants and paper presenters received their

certificates from Dr Monoj Das, Former Professor, NITTR and active member of AIAER (W.B. Chapter). Finally, Dr. Paramita Bandopadhyay, Associate Professor delivered the Vote of Thanks and expressed her heartfelt gratitude on behalf of the college to all experts, participants, staff members and students of the college. The seminar concluded on a solemn note with the singing of the National Anthem.

International Conference on Public Policy, Governance and Administration

The one-day International Conference on 'Public Policy, Governance and Administration in Post-Pandemic Era' is being organized by the Lovely Professional University, Phagwara, Punjab on April 26, 2024.

Public policy plays a crucial role in forming the guidelines and principles of a society, so they're a necessary part of governing and politics. Since public policy is formed as a collective effort between governments, institutions, and even regular citizens, it's an important and effective way to have your voice heard. Public policy is there to influence how other important decisions are made, and it's usually formed as a response to a specific issue that is of interest to the public. Public policy is supposed to offer some sort of solution to a problem. Public Policies and Governance indicate the planning, implementing, and enacting of laws, and adapting of acceptable behavior by the government and citizens to increase the integrity of the society. It is important to recognise the importance of leadership roles Public Administrators have played in the COVID-19 pandemic and many policy initiatives taken after the pandemic. The Subthemes of the Event are*:*

Public Policy

- Public Policy Concept, Significance and Scope.
- Evolution of Policy Sciences.
- Different Types of Public Policy.
- Policy Transfer.
- Policy Analysis.
- Public Policy Approaches and Models.
- Public Policy Implementation, Monitoring and Control.
- Public Policy Evaluation.
- Changing Nature of Public Policy in Post-Pandemic Era.

Good Governance and Sustainability

- Elements and Forms of Good Governance.
- Public Choice Theory.
- New Public Management.
- New Public Service.
- Networking and Collaborative Governance.
- Business Process Re-engineering.
- Ethics and Public Accountability in Governance.
- Sustainable Governance Mechanism.
- Governance in the Post-Pandemic Era.

Citizen Engagement and Digital Transformation

- Citizen and Governance.
- E-Governance.
- Digital Revolution in Governance.
- Digital Literacy.
- Civil Society.
- Citizen Participation.
- Right to Information.
- Administrative Reforms.
- Citizen's Charter.
- Citizen Grievance Redressal Mechanism.
- Challenges and Opportunities of Digital Transformation in the Public Sector.

Media and Public Administration

- Social Media and Public Administration.
- Public Relations Management.
- Media and Public Sector Administration.
- Public Administration, Society, and Media.
- Mass Media and the Imaging of Public Administration.
- Challenges of Media and Public Administration.

Disaster Management and Governance

- COVID-19, Disaster Management and Governance.
- Types of Disaster Management.
- Disaster Management Cycle.
- Importance of Disaster Management and Governance.
- Vulnerability Analysis and Risk Assessment.

- Institutional Arrangements for Disaster Management.
- Role of State and Non-state Actors in Disaster Management and Control.

For further details, contact Organising Secretary, Dr. Manvendra Singh, Associate Professor, Department of Government and Public Administration, School of Humanities (Social Sciences and Languages), Lovely Professional University, Phagwara, Punjab - 144411, Mobile No: 09166038829, E-mail: *ppgappe@lpu.co.in*. For updates, log on to: *www.lpu.in.*

International Conference on Recent Trends in Applied Science and Technology

A two-day International Conference on 'Recent Trends in Applied Science and Technology' is being organized by the Engineering Physics, Faculty of Engineering and Technology, Annamalai University, Annamalainagar, Tamil Nadu in association with the Indian Science and Technology Association and Indian Spectro Physics Association from February 02-03, 2024. The theme emphasizes the significance of materials development, various characteristics, and optimism regarding the potential applications of Applied Science and Technology including Nanotechnology. This would be a great platform for PG students and scholars to interact with reputed scientists and academicians of Tamil origins across the globe. It also opens up vistas by disseminating recent research for industrial applications. The Topics of the Event are:

- Agricultural Science.
- Astronomy.
- Biotechnology.
- Biological Science.
- Crystal Growth.
- Crystallography.
- Chemical Physics.
- Ceramic materials.
- Chemical Engineering.
- Composite Materials.
- Computational Theory (DFT).
- Emerging Technology.
- Engineering materials.
- Energy Materials.
- Energy Technology.
- Functional Materials.
- Green Technology.
- Material Science.
- Modelling and Simulation.
- Medical Science.
- Medical Physics.
- Nanotechnology.
- Nonlinear Optics.
- Semiconductor Materials.
- Spectroscopy.

For further details, contact Convenor, Prof. R Selvaraju, Engineering Physics, FEAT, Annamalai University, Annamalainagar - 608 002, Mobile No: 09994784685, 07339684685, 08838745226, E-mail: *icrtast2024@gmail.com*. For updates, log on to*: www.annamalaiuniversity.ac.in/conf_upcoming.php.*

National Conference on Social Work Research

A two-day National Conference on 'Social Work Research: Methodologies of the Peripheralized' is being organized by the School of Social Work, Tata Institute of Social Sciences, Mumbai from January 08-09, 2024. The Ph.D. Scholars, Young Faculties, and Field Practitioners may participate in the Event. True to the disciplinary and Institutional core values of care, solidarity, equity, and justice, the event will interrogate and encounter the received axiological constructs of social work research methodologies and approaches. The thematic focus, 'methodologies of the peripheralized', may act as a 'frame-of-reference' for a reflective academic engagement to critically understand the layered dimension of the 'social worlds' - ontologies and epistemologies located in the sites of practices across marginalities and vulnerabilities. The Subthemes of the Event are:

- Research Practice in Social Work - Evidence from Field Action Projects and Fields of Practice.
- Theoretical-methodological Frameworks for Margin Studies - Lens, Feminist Standpoints, Perspectives (Decolonial-Historical, Intersectional), Evidence-based, Context and Place-based, and Culturally Sensitive.
- The Evidence of Social Policy Evaluation Research in Social Work Practice.

- Social Work Interventions Through Participatory Action Research.
- Researching Disabilities and Vulnerabilities.
- Participatory Research Methods and Practice with Child and Family.
- Researching Health, Sexuality, Gender, Women, Caste, Tribe and Identities.
- Social Work Research Fieldwork Process and Ethics.
- Researching Communities and Development Practice.
- Embedding Social Justice and Care, Positionality, and Reflexivity in Social Work Methodology.
- Digital and Computational Methods and Applications in Social Work Research.
- Emerging Areas of Social Work Research - Ecology and Biodiversity, Climate Change, Livelihood and Sustainability, Diversity-dialogue, Border Lives, Interstate and Transnational Migration and Refugees.

For further details, contact the Coordinator, Tata Institute of Social Sciences, V.N. Purav Marg Deonar, Mumbai-400088, *Mobile No: 0*8828476859/ 07086525659, *E-mail: tiss.conference2024@gmail.com*. For updates, log on to: *www.tiss.edu/events.*

AIU News

Faculty Development Programme on Career Planning and Development

A six-day Online Faculty Development Programme on 'Career Planning and Development for Effective Performance' was jointly organized by the Association of Indian Universities (AIU)─Academic and Administrative Development Centre (AADC), Shri Vaishnav Vidyapeeth Vishwavidyalaya (SVVV), Indore from September 04-09, 2023. It was an administrative and technical staff development programme. About 35 participants registered for the event. Eminent experts deliberated on different aspects like career planning, work culture and ethics, communication skills, time and activity management, wealth management, workplace conflict management, tools and technology, and cyber security in online mode in eight sessions.

The Inaugural Session began with the lamp lightening and the worship of Goddess Saraswati followed by the welcome of the guests. Dr. Anand Rajavat, Dean Academic, Shri Vaishnav Vidyapeeth Vishwavidyalaya and Nodal Officer of the event introduced the programme and its objectives. He said that the purpose of the programme is to provide a roadmap to the administrative and technical staff of higher education institutes for their career advancement and effective performance. He introduced different topics covered during the event by the eminent speakers.

Dr. Upinder Dhar, Vice Chancellor stated the significance of the event. In brief, he mentioned the purpose of career planning and how important is to make decisions for job enrichment concerning job enlargement.

The Chief Guest, Prof. Manikrao M Salunkhe, former President of the Association of Indian Universities, New Delhi, and former Vice Chancellor, Bharti Vidyapeeth, Pune delivered the Keynote Address on 'Challenges and Opportunities for Digitization in Universities (Higher Education)'. He highlighted the challenges in Global and Indian higher education, different accreditation organizations, and external quality assurance agencies. He elaborated on the Integrated University Management System and its importance for digitization in higher education. The inaugural session concluded with a vote of thanks by the Coordinator, Mr. Anand Singh Gadwal.

Prof. Upinder Dhar conducted the session on 'Career Planning and Development'. He mentioned the purpose of career planning for an individual as well as organizational career planning. He discussed the seven types of organizational career planning programmes. He also discussed how job enrichment is better than job enlargement.

The next session was conducted by Mr. Vinod Mahor, Scientist (E), RCI, DRDO, Hyderabad on 'Cyber Security'. He mentioned Cyber Ethics and Cyber Law in India. He also talked about popular

cyber frauds. He also elaborated on 29 types of cyber-attacks, Bright IT and Dark IT (Dark Web), and secure browsing guidelines.

The session on 'Work Culture and Ethics' was conducted by Prof. P K Chande, Chairman CS MIND at SGSITS, Indore and Former Director SGSITS/ MANIT/NMIMS. He explained the difference between social culture and work culture. The vision, mission, and values of an organization play a great role in its work culture and ethics. He highlighted administrative staff imperatives and preparedness.

Dr. Nitin Tanted, Professor and Head, Finance, Prestige Institute of Management and Research, Indore spoke on 'Wealth Management'. He introduced a stress-free financial life through money management. If we give purpose to our money then it helps us to achieve the target, stop procrastination, curtail overthinking, and increase work efficiency. Through examples, he explained that how to convert dreams into goals by applying the SMART angle.

Mr. Uday Moghe, Software Engineer, Amstech Incorporation Private Limited, Indore spoke on 'Tools and Technology'. He mentioned that the purpose of technology is to go green. He emphasized that the major applications used in routine activities are MS Word and MS Excel. For example, he demonstrated the use of MS Word and MS Excel. He also explained the use of Google Drive applications such as Google Docs, Google Forms, and Google Sheets.

Dr. Santosh Dhar, Rector and Dean, FDSR at SVVV conducted the session on 'Communication Skills'. She highlighted the importance of communication skills in an organizational context. She elaborated on four functions of communication, verbal and non-verbal communication, the importance of decoding and feedback in the communication process.

Dr. George Thomas, Director, Shri Vaishnav Institute of Management, Indore spoke on 'Time and Activity Management'. He discussed how to manage time effectively. He mentioned the purpose of time management and its role in improving one's productivity. He also highlighted the ten most effective time management principles.

Dr. Ankur Saxena, Dy Pro Vice Chancellor, Dean of Planning Affairs, and Dean of Management, Medicaps University, Indore spoke during the session on 'Workplace Conflict Management'. He explained types of conflict, sources of conflict, and how to handle the conflict in the workplace through examples. Communication plays a major role other than defining roles and responsibilities, written manuals, feedback mechanisms, transparency, etc. in conflict management, he further said.

During the Valedictory Session, after welcoming all the guests, Dr. Pavan Kumar Gupta, Coordinator presented the report of the event. The Welcome Address was delivered by Dr. Upinder Dhar. The participants gave feedback on the event. Nodal Officer, Dr. Anand Rajavat proposed the vote of thanks. ❑

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STUDENT COLUMN

Integrating Sustainable Education into Teacher Education Programmes

Aastha Srivastava*

"Education is the most powerful weapon which you can use to change the world."

- Nelson Mandela

Education plays a critical role in forming responsible and conscientious citizens at a time of unprecedented environmental challenges and complex global issues. Teachers are at the forefront of raising a generation that can take the lead in addressing the urgent issues of social injustice, resource depletion, and climate change. Nelson Mandela said some very poignant things that highlight how education can be a powerful catalyst for positive change. This article acknowledges that education has the power to be the primary factor in forming a sustainable future and begins a thorough analysis of the critical need to incorporate sustainable education into teacher education programs.

Integrating sustainable education into teacher education programs can equip educators with the necessary skills to instill sustainability, environmental stewardship, and social responsibility in their students. This equips educators to create a future generation of socially and environmentally conscious individuals who can effectively navigate the challenges of the 21st century.

This study explores the transformative potential of sustainable education, drawing inspiration from Paulo Freire's adage that individuals transform the world, not the world.

The article explores the importance of integrating sustainable education into teacher education programs, examines pertinent research to support this integration, suggests implementation strategies that work, explores the broad implications of this integration and ends with a thought on the significant influence this integration can have on creating a society that is more just and sustainable.

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The promotion of sustainable practices and the development of environmentally conscious citizens can both be significantly aided by the inclusion of sustainable education in teacher education curricula. Schools can have a positive impact on communities and beyond by giving future teachers the tools to incorporate sustainability into their teaching methods.

It is profoundly important to incorporate sustainable education into teacher education programmes because, in the words of Margaret Mead, "Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has." This integration gives teachers the tools they need to raise a new generation of responsible citizens who can promote societal and environmental progress (Mead, 1972).

The intrinsic link between education and societal advancement is further highlighted by John Dewey's insight, which states that 'Education is not preparation for life; education is life itself' (Dewey, 1897). We enable holistic learning experiences that equip students to take on real-world challenges, fostering critical thinking and active citizenship, by integrating sustainable principles into teacher training.

Its significance extends to a wider range of educational institutions and is consistent with UNESCO's goals for education for sustainable development. It gives teachers the tools they need to incorporate sustainable values into all of their lessons, promoting an innovative and responsible culture.

The National Education Policy-2020 (NEP-2020) highlights the importance of including sustainable education in teacher education programmes. It emphasises the need for educators to instill principles, knowledge, and a thorough grasp of sustainability in future generations. In the end, this integration establishes the framework for a more knowledgeable, active, and sustainable global community.

Review of Related Literature

Existing literature emphasises how urgent it

is to incorporate sustainable education into teacher preparation. According to research, educators are better able to instill eco-friendly behaviors in their students when they have a solid grasp of sustainability concepts. Furthermore, research demonstrates how sustainable education improves students' analytical abilities and all-around academic performance.

The writings of Sterling (2001) place a strong emphasis on the fact that sustainable education goes beyond conventional pedagogical approaches and promotes a holistic comprehension of interdependent ecological, social, and economic systems. According to Sterling, sustainable education fosters a sense of agency and empowerment in students by providing them with the critical thinking skills necessary to deal with complex global challenges.

Interdisciplinary approaches to sustainable education are promoted by Wals and Corcoran (2012). They contend that incorporating sustainability ideas into a variety of subject areas not only improves students' comprehension of complicated issues but also gives teachers the tools they need to encourage cross-disciplinary learning.

The impact of sustainable education on students' cognitive and emotional outcomes is examined in a study by Lieflander, et. al. (2015). According to the research, students who receive sustainable education show enhanced critical thinking skills, a greater awareness of the environment, and a greater willingness to engage in pro-environmental behaviours.

Jordan and Hinds (2016) emphasise the importance of educators acting as change agents in order to encourage sustainable behaviour. According to their research, teachers who have received training in sustainable education are more likely to include environmental themes in their lesson plans, which results in students who have a greater sense of environmental responsibility.

The importance of incorporating sustainability principles into education is emphasised by UNESCO's Education for Sustainable Development framework. This framework emphasises how teachers can help students develop a sense of global citizenship and get them ready to work towards a more sustainable future.

According to NEP- 2020, teacher education programmes should provide educators with the information and skills they need to incorporate sustainability themes into their teaching practises. This entails incorporating environmental, social, and economic sustainability into the curriculum and cultivating a comprehensive awareness of these concepts. NEP- 2020 aims to produce educators who can effectively convey the importance of sustainable living, environmental stewardship, and responsible citizenship to their students, thereby contributing to a more sustainable and conscientious society

The literature review highlights the transformative potential of incorporating sustainable education into programmes for teacher preparation. It emphasises the beneficial effects on student learning, emphasises the function of educators as change agents, supports interdisciplinary methods, and is consistent with international agendas for sustainable development. The research article's subsequent sections will delve into implementation strategies and cover the results and implications of incorporating sustainable education into teacher preparation courses.

How to Integrate Sustainable Education?

This section deals with methods for integrating sustainable education into teacher education programs, including collaborative learning, interdisciplinary coursework, experiential learning, and real-world case studies. It also highlights guest lectures, field visits, and service-learning projects, presenting a multifaceted approach.

Curriculum Integration

The integration of sustainable education into the existing teacher education curriculum will be achieved through collaboration between education experts, curriculum designers, and sustainability practitioners, identifying specific subjects and courses where sustainability concepts can be interwoven.

Sustainable education may be included into teacher education programmes by developing a course called 'Sustainable Teaching Practises'. This course would focus on climate change, conservation, social justice, diversity, and inclusive practises to address environmental, social, and economic sustainability. It would also educate ethical consumerism and financial literacy. This integration prepares future educators to teach students about responsible consumerism and ethical business practises, educating them to be knowledgeable, responsible, and mindful global citizens.

Interdisciplinary Learning

An interdisciplinary approach, inspired by Dewey's experiential learning theory, can be implemented that can allow educators to explore sustainability themes across various subjects, fostering a deeper understanding of the interconnectedness of sustainability issues.

Interdisciplinary learning has the potential to incorporate sustainable education into teacher education programmes. Students from several disciplines might work together on a project addressing local environmental challenges such as water conservation. They learn about water cycles, human activities, societal repercussions, and economic ramifications. This strategy broadens their education and equips them to be successful agents of sustainable education when they become teachers. Lessons that include several areas encourage critical thinking and problem-solving abilities, which will benefit students' future education.

Experiential Learning and Field Engagement

The methodology will emphasise hands-on engagement with sustainability issues, with educators participating in field trips, environmental projects, and community engagement initiatives to see real-world applications of sustainable principles and improve their ability to effectively communicate these concepts to students.

Example: Students can engage in community garden initiatives, learn about sustainable practices, and share their experiences in the classroom. Reflection sessions might assist students in incorporating these lessons into their future teaching. Students may also create lesson plans that link field experiences to their curriculum, making the learning process more relevant and influential for future students.

Guest Lectures and Experts

Educators can enhance their understanding of sustainability challenges and solutions by inviting sustainability experts for guest lectures and workshops, fostering innovative teaching approaches.

The professionals may give specialised knowledge on topics such as biodiversity, organic agricultural practises, and social sustainability. By introducing students to these experts, future educators will be better prepared to integrate sustainable education across multiple disciplines and grade levels, making it a vital component of their teaching philosophy. This method has the potential to improve the efficacy of sustainability education in teacher education programmes.

Reflective Practice

Regular reflective sessions and peer conversations will be included in the methodology to encourage educators to critically review their teaching methods, share experiences, and collaborate on enhancing sustainable education practises.

Students can engage in continuing sustainability-related evaluation and self-assessment by documenting their own sustainable practises such as energy and water conservation, recycling, and community event engagement. They can assess the influence of their experiences on the environment, communities, and themselves. They might inquire about ways to use these experiences in future teaching and motivate others to follow suit. Students can participate in group discussions and activities that encourage sharing sustainability ideas and difficulties, in addition to personal contemplation. They can also create action plans to promote sustainability in future classrooms and schools. Students get a greater knowledge of sustainable concepts and learn how to implement them by using reflective practise.

Assessment and Feedback

Sustainable education can be integrated into teacher education programmes through a variety of means, including the development of a sustainable education portfolio, encouraging peer assessment, mentor teacher evaluation, development assessment rubrics, student self-assessment, and sustainability feedback sessions. A portfolio of sustainable education should contain lesson plans, projects, and reflections that demonstrate the use of sustainability concepts in the classroom. Peer evaluation promotes a collaborative learning environment that allows for a variety of opinions on sustainable education practises. Mentor-teacher assessment aids in the refinement of teaching techniques and the adaptation of tactics to better address sustainability. Assessment rubrics encompass several aspects of sustainability, informing students of the expectations for integrating sustainability into coursework and teaching practise. Students can use self-assessment to reflect on their work and find areas for development. Expert perspectives and constructive criticism are provided at sustainability feedback sessions.

Discussion

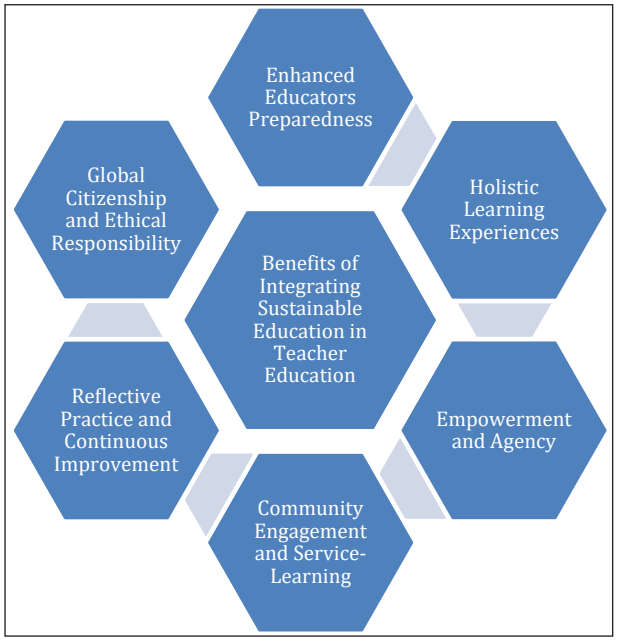
Sustainable education in teacher training programs can revolutionize education by addressing global challenges, integrating sustainability into various subjects, and promoting a holistic understanding of interconnected systems.

By addressing global concerns, integrating sustainability principles across fields of study, and encouraging a holistic understanding of interrelated systems, sustainable education in teacher training programmes has the potential to transform education. Students gain a better grasp of climate change, biodiversity conservation, and renewable energy by including sustainability into scientific teaching. This approach inspires future educators with the ability to instill a feeling of environmental responsibility in their students.

Benefits of Integrating Sustainable Education in Teacher Education

The following are some benefits of Integrating Sustainable Education in Teacher Education:

Fig 1: Benefits of Integrating Sustainable Education in Teacher Education



Enhanced Educator Preparedness

Incorporating sustainable education into teacher education programmes considerably improves educators' readiness to solve difficult global concerns. Educators who grasp sustainability principles well are better positioned to steer pupils towards critical thinking, problem-solving, and active involvement with important environmental and social challenges.

Holistic Learning Experiences

The interdisciplinary method used in this study promotes comprehensive learning experiences for teachers as well as pupils. By incorporating sustainability concepts across courses, educators enrich the curriculum with real-world applications, allowing students to understand the interconnection of ecological, social, and economic systems.

Empowerment and Agency

Educators educated in sustainable education are empowered to be change agents, teaching in their pupils ideals of environmental stewardship and responsible citizenship. This empowerment has a cascading effect, as students feel empowered to actively contribute to their communities and advocate for sustainable practises.

Community Engagement and Service-Learning

Incorporating experiential activities and service-learning initiatives promotes meaningful community participation. Educators regularly participate in local efforts, allowing them to help students in tackling real-world sustainability concerns. This hands-on approach fosters a sense of ownership and responsibility in children.

Reflective Practice and Continuous Improvement

Regular reflection sessions allow educators to improve their teaching approaches and integrate feedback from their experiences. This iterative method develops a culture of continual development, ensuring that sustainable education stays relevant and successful over time.

Global Citizenship and Ethical Responsibility

The incorporation of sustainable education coincides with UNESCO's Education for Sustainable formation framework, assisting in the formation of global citizens who have an ethical duty to the environment and society. Educators have a critical role in instilling in children a sense of global citizenship.

Finally, the comprehensive analysis of integrating sustainable education into teacher education programmes demonstrates its revolutionary potential. The major results emphasise improved educator preparation, comprehensive learning experiences, empowerment, community participation, reflective practise, global citizenship, and long-term effect. This will help to shape a more sustainable and equitable future by providing educators with the knowledge and resources they need to instill sustainability ideals in their students.

Conclusion

Integrating sustainable education into teacher education programmes is a critical step towards developing a responsible, knowledgeable, and environmentally concerned society. It prepares prospective educators to teach sustainability concepts across a wide range of courses and grade levels, developing critical thinking, empathy, and an understanding of our interdependence with the environment and society. Teacher education programmes may form educators who appreciate the necessity of sustainability and motivate students to become stewards of our world through interdisciplinary learning, experiential engagement, guest lectures, reflective practise, and evaluation. Future instructors that include sustainability into their teaching practises spread seeds of awareness and responsibility, preparing future generations of students to face complicated issues.

This integration may pave the way for the creation of ground-breaking educational initiatives and regulations that include sustainability into all facets of instruction and learning. Additionally, in order to generate practical learning experiences that support sustainable practices and solutions, educational institutions must build collaborations with nearby communities and companies.

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THESES OF THE MONTH

SCIENCE & TECHNOLOGY

A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of Sep-Oct, 2023)

AGRICULTURAL & VETERINARY SCIENCES

Biotechnology

1. Yadav, Anupam. **A comparative study on effect of chemical and organic fertilizers on crop health and productivity of *Zea mays***. (Dr. Kunvar Gyanendra Kumar), Department of Biotechnology, Bhagwant University, Ajmer.

Horticulture

1. Mukesh Kumar. **Effect of integrated nutrient management on growth, flowering and yield of Marigold (*Tagetes erecta* L) under agro-climatic conditions of Ajmer Zone**. (Dr. Bindhya Prasad Pandey), Department of Horticulture, Bhagwant University, Ajmer.

Veterinary Science

1. Dehury, Sagarika. **Seasonal histomorphochemical study on buffalo uterus**. Department of Veterinary Anatomy, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana.
2. Sanmeet Kour. **Studies on molecular detection of non tuberculous mycobacteria including *Mycobacterium avium* subspecies paratuberculosis in feces of cattle and buffaloes**. Department of Veterinary Microbiology, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana.
3. Verma, Abhishek. **Clinical studies on visible congenital deformities and their association with heart defect in bovine calves**. Department of Veterinary Surgery and Radiology, Guru Angad Dev Veterinary and Animal Sciences University, Ludhiana.

BIOLOGICAL SCIENCES

Biotechnology

1. Akshaya, R L. **Regulation of TGF-β1-stimulated activating transcription factor 3 by micrornas in human breast cancer cells**. (Dr. N. Selvamurugan), Department of Biotechnology, SRM University, Kattankulathur, Chennai.

Life Science

1. Yasmin, Rafika. **Identification and characterization of an anti-platelet protein from *Daboia russelii* venom and understanding its molecular mechanism**. (Prof. Robin Doley), Department of Molecular Biology and Biotechnology, Tezpur University, Tezpur.
2. Yengkhom Damayanti Devi. **Molecular Epidemiology of Group: A Rotaviruses (*RVA)* in children of the State of Imphal, Manipur, India**. (Dr. Nima D Namsa), Department of Molecular Biology and Biotechnology, Tezpur University, Tezpur.

ENGINEERING SCIENCES

Architecture & Planning

1. Gajjar, Vibha Haresh. **Role of green cover in sustaining urban ecology of cities: A case of land use planning in Ahmedabad**. (Prof. Utpal Sharma), Institute of Architecture & Planning, Nirma University, Ahmedabad.

Civil Engineering

1. Dhayalan, V. **Investigation of plant growth promoting soil nutrients and bacteria at anaimalai block, Coimbatore: An integrated geospatial and statistical approach**. (Dr. Karuppasamy Sudalaimuthu), Department of Civil Engineering, SRM University, Kattankulathur, Chennai.
2. Doley, Chirajyoti. **An experimental study on behaviour of geocell- reinforced sand beds under static and repeated loads**. (Prof. Utpal Kumar), Department of Civil Engineering, Tezpur University, Tezpur.
3. Prakash, Vandana Loka. **Extraction of natural phase change material from natural additives with expanded vermiculite, expanded graphite for thermal energy storage in construction materials**. (Dr. R Ravi), Department of Civil Engineering, SRM University, Kattankulathur, Chennai.

Computer Science & Engineering

1. Gupta, Atul. **Development of robust and efficient computational intelligence based algorithm for semantic similarity between words**. (Dr. Kalpana Sharma and Dr. Krishan Kumar Goyal), Department of Computer System & Engineering, Bhagwant University, Ajmer.

2. Gupta, Isha. **Development of feature selection-based sentiment analysis framework for cross-domain applications**. (Dr. Neha Gupta), School of Computer Applications, Manav Rachna International Institute of Research and Studies, Faridabad.

3. Jayapradha, J. **An efficient privacy-preserving data publishing models for relational datasets**. (Dr. M. Prakash), Department of Computer Science & Engineering, SRM University, Kattankulathur, Chennai.

4. Juneja, Sarita. **The Role of Educational Data Mining (EDM) in predicting the academic performance of students in education using data mining methods**. (Dr. Vishal Pareek), Faculty of Science, Tantia University, Sri Ganganagar.

5. Maurya, Harish Chandra. **Performance improvement of routing protocol for vehicular mobile ad-hoc networks using NS3**. (Dr. Pushpneel Verma), Department of Computer System & Engineering, Bhagwant University, Ajmer.

6. Parminder Kaur. **A cross-modal system for image annotation and retrieval**. (Dr. Husanbir Singh Pannu and Dr. Avleen Kaur Malhi), Department of Computer Science & Engineering, Thapar Institute of Engineering and Technology, Patiala.

7. Priya, S. **A novel dynamic ensemble classification framework for streaming imbalanced data with concept drift**. (Dr. Annie Uthra), Department of Computer Science & Engineering, SRM University, Kattankulathur, Chennai.

8. Rajalakshmi, M. **A robust framework for contactless bi-modal palm based vascular (vein) pattern recognition system using CD-NET-SPOA classifier**. (Dr. K. Annapurani), Department of Computer Science & Engineering, SRM University, Kattankulathur, Chennai.

9. Revathi, M. **Framework for improving security and resilience of IOT networks using SDN**. (Dr. V V Ramalingam), Department of Computer Science & Engineering, SRM University, Kattankulathur, Chennai.

10. Safa, M. **An efficient big data analysis for cardio vascular disease prediction using optimized classification model in Iot environment**. (Dr. A Pandian), Department of Computer Science & Engineering, SRM University, Kattankulathur, Chennai.

11. Saikia, Sumpi. **Classification of dynamic gestures of Sattriya dance from video**. (Prof. Sarat Saharia), Department of Computer Science, Tezpur University, Tezpur.

12. Tomer, Uma. **Augmentation of IOT framework in building management system**. (Dr. Parul Gandhi), School of Computer Applications, Manav Rachna International Institute of Research and Studies, Faridabad.

Electrical & Electronics Engineering

1. Pawan. **Intelligent methods for brain computer interface**. (Dr. Rohtash Dhiman), Department of Electrical Engineering, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

Electronics & Communication Engineering

1. Baruah, Hilly Gohain. **NSST-based feature descriptors for remote sensing and bio-medical image retrieval**. (Prof.Vijay Kumar Nath), Department of Electronics & Communication Engineering, Tezpur University, Tezpur.

2. Das, Satyajit. **Design and development of capacitive sensor for bitterness assessment in citrus fruit juices**. (Prof. Partha Pratim Sahu), Department of Electronics & Communication Engineering, Tezpur University, Tezpur.

3. Gopi, K. **Non-small cell lung cancer detection and stage classification using modified CNN**. (Dr. J. Selvakumar), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

4. Gurprince Singh. **Design of compact microstrip antenna for biomedical applications**. (Dr. Jaswinder Kaur), Department of Electronics & Communication Engineering, Thapar Institute of Engineering and Technology, Patiala.

5. Ramkumar, N. **Design and analysis of channel and gate engineered III-nitride high electron mobility transistors for RF applications**. (Dr. P Eswaran), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

6. Sohi, Arashpreet Kaur. **Investigations on ultrawideband fractal microstrip patch antenna arrays for MIMO wireless communication applications**. Department of Electronics & Communication Engineering, Thapar Institute of Engineering and Technology, Patiala.

7. Sriram, A. **Design and development of multi service automotive antennas**. (Dr. M Sangeetha), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

8. Vinoth Kumar, M. **Design, simulation and investigation of high data transmission over**

gamma-gamma free-space optical channel under various atmospheric losses. (Dr. Rupali Singh), Department of Electronics & Communication Engineering, SRM University, Kattankulathur, Chennai.

9. Yadav, Niranjan. **Analysis and classification of thyroid tissue using ultrasound images**. (Dr. Rajeshwar Dass and Dr. Jitendra Virmani), Department of Electronic Media, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

Energy Studies

1. Sanjay. **Analyzing the effect of weather, soil and seasonal variations on the performance of SPV power Plant**. (Dr. Anil Kumar Berwal), Department of Energy & Environmental Studies, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

Food Engineering & Technology

1. Tapasya Kumari. **Development of dietary fiber enriched functional food from green pea peel**. (Prof. Sankar Chandra Deka), Department of Food Engineering and Technology, Tezpur University, Tezpur.

Mechanical Engineering

1. Dommeti, Vamsi Krishna. **Design, analysis, and development of textured metallic materials with coating for dental implant**. (Dr. Sandipan Roy), Department of Mechanical Engineering, SRM University, Kattankulathur, Chennai.

2. Gupta, Rahul. **Study of dry sliding wear characteristics of boron carbide and ilmenite mineral reinforced AMCs**. (Dr. Tarun Nanda and Dr. O P Pandey), Department of Mechanical Engineering, Thapar Institute of Engineering and Technology, Patiala.

3. Punniakodi, B M Swami. **Thermal performance analysis of paraffin wax in a vertical cylindrical container using modified helical heat transfer tubes**. (Dr. R Senthil), Department of Mechanical Engineering, SRM University, Kattankulathur, Chennai.

4. Rajesh Kumar. **Tribological performance analysis of coated hydro turbine blade materials**. (Dr. Deepa Mudgal and Dr. Satish Kumar), Department of Mechanical Engineering, Thapar Institute of Engineering and Technology, Patiala.

5. Sathishkumar, A. **Experimental study on charging and discharging characteristics of NEPCM based low capacity cool thermal energy storage system**. (Dr. M. Cheralathan), Department of Mechanical Engineering, SRM University, Kattankulathur, Chennai.

MATHEMATICAL SCIENCES

Mathematics

1. Karthick, S. **Computational methods and convergence analyses for first order hyperbolic delay partial differential equations**. (Dr. V Subburayan), Department of Mathematics, SRM University, Kattankulathur, Chennai.

2. Kuppan, R. **Face magic type labeling and its application**. (Dr. L Shobana), Department of Mathematics, SRM University, Kattankulathur, Chennai.

3. Loganathan, T. **A study on single and multi objective fuzzy linear fractional programming problems**. (Dr. K. Ganesan), Department of Mathematics, SRM University, Kattankulathur, Chennai.

4. Rajvinder Kaur. **Transport characteristics of fluid flow and heat transfer through porous media and porous obstacles for various configurations and fluids**. (Dr. Sapna Sharma and Dr. Avinash Chandra), School of Mathematics, Thapar Institute of Engineering and Technology, Patiala.

5. Vijayalakshmi, T. **Approximate analytical approach to nonlinear system of prey-predator models**. (Dr. R. Senthamarai), Department of Mathematics, SRM University, Kattankulathur, Chennai.

MEDICAL SCIENCES

Microbiology

1. Paul, Alamu Juliana. **Phenotypic and molecular characterization of gram-negative bacteria causing bacteriemia/sepsis in a tertiary care hospital with special reference to demonstrate the virulence factor**. (Dr. K V Leela), Department of Medical Microbiology, SRM University, Kattankulathur, Chennai.

Pharmaceutical Science

1. Ahmad, Shmmon. **Formulation and development of curcumin- piperine-loaded S-Snedds for the treatment of Alzheimer's disease**. (Dr. Abdul Hafeez), Department of Pharmaceutics, Glocal University, Saharanpur.

2. Bhagat, Babasaheb Vasantrao. **Formulation and development of lipid based non aqueous nano**

emulsion for selected nsaid. (Dr. Punit R Rachh and Dr. Anil R Pawar), Department of Pharmaceutical Sciences, Bhagwant University, Ajmer.

3. Dahiya, Sandeepkumar. **Formulation design for improvement of performance characteristics of BCS-IV drugs**. (Dr. Jignasa Savjani), Institute of Pharmacy, Nirma University, Ahmedabad.

4. Hajare, Pranit Pandurang. **Formulation and development of novel gastroretentive microballoons**. (Dr. Punit R Rachh), Department of Pharmaceutical Sciences, Bhagwant University, Ajmer.

5. Halder, Tripti. **Sialic acid conjugated cationic nanostructured lipid carriers loaded with natural bioactives for the management of Alzheimer's disease**. (Dr. Niyati Acharya), Institute of Pharmacy, SRM University, Kattankulathur, Chennai.

6. Kokate, Shekhar Vikaram. **Formulation and evaluation of multiparticulate hot melt pellets technology for selected drugs**. (Dr. Punit R Rachh), Department of Pharmaceutical Sciences, Bhagwant University, Ajmer.

7. Mehta, Chirag Chimanlal. **Design, synthesis and biological evaluation of novel substituted 4H-1,2,4- triazole derivatives as anti-cancer agents**. (Dr. Hardik Bhatt), Institute of Pharmacy, Nirma University, Ahmedabad.

8. Mirza, Anwarbaig Chandbaig. **Pharmacological evaluation of phenolic acids in neonatal Streptozotocin (nSTZ) induced type 2 diabetes mellitus associated complications**. (Dr. Shital Panchal), Institute of Pharmacy, Nirma University, Ahmedabad.

9. Patel, Divyang. **Phytochemical analysis & anti-obesity activity of herbal extracts**. (Dr. Vimal Kumar), Institute of Pharmacy, Nirma University, Ahmedabad.

10. Patel, Pankti Shammikumar. **Investigation of effect of metformin and hesperidin in combination with doxorubicin in experimentally-induced breast cancer**. (Dr. Jigna Shah), Institute of Pharmacy, Nirma University, Ahmedabad.

11. Singh, Gopeshkumar Rajaram. **Design, development, and evaluation of controlled-release formulations of freely water-soluble drugs**. (Dr. Vimal Kumar), Institute of Pharmacy, Nirma University, Ahmedabad.

12. Thakkar, Prashant Ranjit. **Design and optimization of taste masking process for bitter tasting drugs**. (Dr. Jigna Shah), Institute of Pharmacy, Nirma University, Ahmedabad.

13. Thoddi, Parthasarathi Ramamoorthi. **Method development of novel analytical methods for the determination of certain pharmaceuticals in bulk and pharmaceutical dosage forms**. (Dr. Girendra Kumar Gautam and Dr.CH Narasimha Raju BH), Department of Pharmacy, Bhagwant University, Ajmer.

Physiotherapy

1. Aggarwal, Divya. **Effect of diabetes mellitus on the efficacy of neural mobilization with cervical traction in patients with cervical radiculopathy**. (Dr. Manoj Narain Shukla), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

2. Arun. **Effect of cervical or upper thoracic spine mobilization, myofascial release, scapular stabilization exercises and deep cervical flexion exercises in individuals with forward head posture**. (Dr. Mukesh Kumar Goyal), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

3. Chhikara, Sameer. **To Study the correlation between scapular asymmetry and shoulder Rom, pain and functional disability along with the physiotherapy management in patients with peri-arthritis shoulder**. (Dr. Mukesh Kumar Goyal), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

4. Lamba, Vikas. **Importance of physiotherapy treatment for patients with pathological musculoskeletal conditions of the shoulder**. (Dr. Mukesh Kumar Goyal), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

5. Mago, Kapil. **Post TKR treatment through maitland mobilization and tens: A comparative study**. (Dr. Manoj Narain Shukla), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

6. Mor, Surender. **Efficacy of maitland mobilization technique and McKenzie approach in chronic low back pain patients: A comparative study**. (Dr. Mukesh Kumar Goyal), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

7. Naqvi, Zia Abbas. **Effect of Mulligan Technique (NAGS) and conventional treatment of mechanical pain in end range of cervical spine: A randomised clinical study**. (Dr. Mukesh Kumar Goyal), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

8. Pintu Kumar. **Comparative study of Transcranial Direct Current Stimulation (TDCS) and conventional physiotherapy for motor recovery of upper extremity in ischemic stroke patients**. (Dr. Manoj Narain Shukla), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

9. Yadav, Udey Kumar. **Comparative analysis between surgical and non-surgical treatment for ACL injury with major focus on physiotherapy treatment**. (Dr. Mukesh Kumar Goyal), Faculty of Para-Medical & Allied Health, Tantia University, Sri Ganganagar.

PHYSICAL SCIENCES

Chemistry

1. Ali, Asadulla Asraf. **A Scientific Study on Sancipat Manuscript and Hengul-Haital painting traditions of early and medieval Assam**. (Prof. Robin Kumar Dutta), Department of Chemical Sciences, Tezpur University, Tezpur.

2. Harpreet Kaur. **Influence of g-C_3N_4 and metal loading on layered double hydroxides for their improved adsorption and photocatalytic properties**. (Dr. Bonamali Pal and Dr. Satnam Singh), School of Chemistry and Bio-Chemistry, Thapar Institute of Engineering and Technology, Patiala.

3. Mishra, Vijay Shrikant. **A study of the effect of heavy metals on soil and water leading to environmental pollution in Jabalpur Mandla and Dindori**. (Dr. Gurdeep Kaur Chandok), Department of Chemistry, Bhagwant University, Ajmer.

4. Saikia, Priyankamoni. **Study of Sensing and photocatalytic potentials of some perovskite-based materials**. (Prof. Swapan Kumar Dolui and Dr. Sanjeev Pran Mahanta), Department of Chemical Sciences, Tezpur University, Tezpur.

5. Sharma, Deepak. **Optical spectroscopic and electrochemical studies of nitrogen and oxygen containing heterocyclic compounds**. (Dr. Hari Om and Dr. Ashok Kumar Sharma), Department of Chemistry, Deenbandhu Chhotu Ram University of Science and Technology, Murthal.

Physics

1. David, C. **Influence of gas adsorption on surface photovoltage in various hybrid nanomaterials towards chemical sensing applications**. (Dr. S Yuvaraj), Department of Physics, SRM University, Kattankulathur, Chennai.

2. Jain, Alok Kumar. **Study of mechano-chemical synthesis of Sb2Se3, CuSbSe2, and Cu2znSnSe4 for thin film solar absorber preparation and heterojunction devices based on Sb2Se3**. (Prof. P Malar), Department of Physics, SRM University, Kattankulathur, Chennai.

3. Kishore Babu, S. **Investigation on metal-organic framework derived metal oxide composites for energy storage applications**. (Dr. B Gunasekaran), Department of Physics, SRM University, Kattankulathur, Chennai.

4. Meenachisundaram, Sridevi. **Preparation and evaluation of self-assembled free-standing magnetoelectric thin films**. (Dr. C. Muthamizhchelvan), Department of Physics, SRM University, Kattankulathur, Chennai.

5. Vivek, P. **Investigation on solid state batteries by thin film fabrication and titanium based electrode materials**. (Dr. K Kamala Bharathi), Department of Physics, SRM University, Kattankulathur, Chennai.

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GOKHALE INSTITUTE OF POLITICS AND ECONOMICS

(Deemed to be University u/s 3 of the UGC Act, 1956), **PUNE – 411 004**

FACULTY RECRUITMENT (Re-Advt)

Population Research Centre (PRC) (Ministry of Health & Family Welfare, Government of India) invites applications for the Post of PROFESSOR (OBC) on regular basis at Gokhale Institute of Politics and Economics, Pune.

For further details on eligibility, pay, application etc. visit **https://prc.mohfw.gov.in/** and **www.gipe.ac.in**

Last date for online applications – **January 31, 2024.**

REGISTRAR

November 30, 2023

MOUNT CARMEL COLLEGE OF TEACHER EDUCATION FOR WOMEN, KOTTAYAM

Muttambalam P.O., Kottayam-686004.
Affiliated to Mahatma Gandhi University
Email: mountcarmeltrainingcollege@gmail.com
Ph: 9495873120 Website: www.mountcarmelcollege.ac.in

VACANCY (RE-NOTIFICATION) ASSISTANT PROFESSOR

Applications are invited from eligible candidates for the post of **Assistant Professor in Mathematics Education (1Post- (PwD)** at Mount Carmel College of Teacher Education for Women, Kottayam against permanent vacancy. Scale of Pay, qualifications and age as per norms of UGC/NCTE/Mahatma Gandhi University/Government of Kerala. Application form can be downloaded from the College Website. The vacancies reserved for Differently Abled Candidates **person with Deaf and hard of hearing / Loco-motor Disability, Intellectual Disability, Multiple Disabilities** will be as per the G.O.(Ms) No.96/2021/H.Edn. dated 15.02.2021 and G.O.(Ms) No.242/2022/H.Edn. dated 18.05.2022. Duly filled in application along with self attested copies of all the supporting documents should reach the Manager by registered/speed post within 30 days from the date of this notification. This is in continuation of notification dated 17.08.2023 of the Manager. Preference shall be given to hearing impaired candidates (PwBD). If eligible candidates under the category of hearing impaired have not applied in response to this re-notification, rotation order as per No. 242/2022/HEDN dtd:18/05/2022 will be followed (Section 34(2) of the RPWD Act).

Kottayam
04.12.2023

(Sd/-)
Manager

Dr. Rafiq Zakaria Campus II

Dr. Rafiq Zakaria College for Women

Navkhanda Palace, Jubilee Park, Chhatrapati Sambhaji Nagar, (Aurangabad), Maharashtra

NAAC Accredited B+

Minority Institution

APPOINTMENT

Applications are invited for the following teaching post in CHB (Clock Hour Basis) Grant in Aid Section, for one academic year 2023-2024 only. Eligible Candidates shall submit their application with the Principal during office hours **within 15 days** of publication of this advertisement.

Sr. No	Particulars	Vacant Post
	Assistant Professor on Clock Hour Basis	
1	English	3
2	Economics	3
3	Chemistry	4
4	Mathematics	1
5	Zoology	3
6	Botany	2
7	Analytical Chemistry	2
8	Computer Science	3

Eligibility: As per the UGC, Government of Maharashtra & University Norms and Rules of Appointments.

Note: In service candidates should apply through proper channel. No TA/DA will be paid to the candidates for attending the Interview.

Dr. Maqdoom Farooqui
Principal

Saraswat Education Society's
SRIDORA CACULO COLLEGE OF COMMERCE AND MANAGEMENT STUDIES
TELANG NAGAR
KHORLIM, MAPUSA GOA

(Recognized by Govt. of Goa, Affiliated to Goa University)

Applications with full Bio-Data are invited from Indian citizens for the post of College Director of Physical Education & Sports (Regular basis) from the academic year 2023-24 onwards.

Sr. No.	Category of post	No. of Post	Reservation
1.	College Director of Physical Education and Sports	01	Unreserved

Qualifications, pay scale, and eligibility conditions for appointment of post are as per UGC/Goa University statute SA-19, SA-20/DHE, Govt. of Goa rules. The appointment is subject to approval by the Goa University and DHE, Government of Goa. For details, please refer to the website: www.caculocollege.ac.in & www.unigoa.ac.in . Apply within 20 days from the date of publication of advertisement.

Date: 28/11/2023

Shri Ramnath Burye
CHAIRMAN

Janata Shikshan Mandal's
Smt. Indirabai G. Kulkarni Arts College, J. B. Sawant Science College and
Sau. Janakibai Dhondo Kunte Commerce College
Late Nanasaheb Kunte Education Complex,
Behind SBI Bank, Alibag
Dist.-Raigad, Maharashtra, India, Pincode-402201

APPLICATIONS ARE INVITED FOR THE FOLLOWING POSTS FROM THE ACADEMIC YEAR 2023-2024

AIDED

Sr. No.	Cadre	Subject	Total No of Post	Post Reserved for
1	Principal	-	01	01-Open
2	Assistant Professor	Chemistry	01	01-OBC

The advertisement for the post of Principal is approved subject to the final decision in the Writ Petition No.12051/2015.
The post for the reserved category candidates will be filled in by the same category candidates (Domicile of State of Maharashtra) belonging to that particular category only.

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

Candidates having knowledge of Marathi will be preferred.

"Qualification, Pay Scales and other requirement are as prescribed by the UGC Notification dated 18th July, 2018, Government of Maharashtra Resolution No. Misc-2018/C.R.56/18/UNI-1, dated 8th March, 2019 and University Circular No. TAAS/(CT)/ICD/2018-19/1241, dated 26 March, 2019 and revised from time to time". The Government Resolution & Circular are available on the website: mu.ac.in.

Applicants who are already employed must send their application through proper channel. Applicants are required to account for breaks, if any in their academic career.

Candidates belonging to reserved categories should send two Xerox copies of their application along with the attested copy of the Caste Certificate to the Deputy Registrar, Special Cell, University of Mumbai, Mumbai - 400 032.

Application with full details should reach the **PRESIDENT, Janata Shikshan Mandal's, J.S.M. College, Alibag Taluka-Alibag, Dist- Raigad 402201, within 15 days** from the date of publication of this advertisement. This is University approved advertisement.

Sd/-
PRESIDENT

K. M. E. Society's
Night Degree College of Arts & Commerce
(Affiliated to University of Mumbai)
Rais High School Campus, Thane Road, Bhiwandi, Dist. Thane – 421302

MINORITY

APPLICATIONS ARE INVITED FOR THE POST OF

PRINCIPAL

FROM THE ACADEMIC YEAR 2023-2024

UN-AIDED

The above post is open to all however candidates from any category can apply for the post.

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

Candidates having knowledge of Marathi will be preferred**.**

"Qualification, Pay Scales and other requirements are as prescribed by the UGC Notification dated 18th July, 2018, Government of Maharashtra Resolution No.Misc-2018/CR.56/18/UNI-1, dated 8th March, 2019 and University Circular No. TAAS/(CT)/ICD/2018-19/1241, dated 26th March, 2019 and revised from time to time." The Government Resolution & Circular are available on the website mu.ac.in.

Applicants who are already employed must send their application through the proper channel.

Applicants are required to account for breaks, if any, in their academic career.

Application with full details should reach the **Hon. Gen. Secretary, K.M.E Society's Night Degree College of Arts and Commerce, Rais High School Campus, Thana Road, Bhiwandi, Dist. –Thane 421302 within 15 days** from the date of publication of this advertisement. **This is a University approved advertisement.**

Sd/-
Hon. Gen. Secretary

VIDYA VIKAS MANDAL

Shree Damodar Educational Campus
G. R. Kare Road, Tansor, Comba, Margao – Goa 403 601
Email: office@vvm.edu.in

Applications are invited for the post of

PRINCIPAL

of VVM's Shree Damodar College of Commerce & Economics, Margao - Goa

Applications with full Bio data are invited from Indian Citizens for the **POST OF PRINCIPAL** (Unreserved Category). The required minimum qualifications for the post of Principal are as follows:

A. ELIGIBILITY:

i. Ph.D. Degree

ii. Professor/Associate Professor with a total Service/Experience of at least Fifteen years of Teaching/Research in Universities, Colleges and other institutions of Higher Education.

iii. A minimum of 10 Research Publications in peer reviewed journals as approved by Goa University from time to time or in UGC listed journals, of which at least 02 should be in Scopus/Web of Science Journals.

iv. A minimum of 110 Research Score as per Appendix II, Table 2 of Goa University Statute SC-16.

B. TENURE:

A College Principal shall be appointed for a period of five years.

ESSENTIAL REQUIREMENTS:

a) Knowledge of Konkani Language.

b) Certificate of 15 years of Residence in Goa issued by a competent authority.

DESIRABLE REQUIREMENTS: Knowledge of Marathi Language.

SCALE OF PAY: As prescribed by the UGC, Goa University and Directorate of Higher Education, Govt. of Goa from time to time.

SERVICE CONDITIONS: As prescribed by the UGC, Goa University, Directorate of Higher Education, Govt. of Goa and other competent authorities from time to time.

Applicants who are already employed shall send their applications through proper channel.

Applications complete in all respects, with photograph, along with self-certified photocopies of statement of marks of all public examinations from S.S.C onwards, copy of 15 years Residence Certificate, Experience Certificate, publications, research score sheet, etc. should reach the undersigned at the above address of the Mandal **within 20 days** from the date of publication of this advertisement, by super scribing on the envelope "Application for the post of Principal of VVM's Shree Damodar College of Commerce & Economics".

Place: Margao – Goa
Date: 30/11/2023

President
Vidya Vikas Mandal

ASSOCIATION OF INDIAN UNIVERSITIES

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