ASSOCIATION OF INDIAN UNIVERSITIES

Association of Indian Universities

Advertisement Tariff: UNIVERSITY NEWS JOURNAL
W.E.F. April 01, 2017

For Educational Institutions, Govt. Organizations, Publishers, Book Sellers & Distributors

GST Rate of **5%** is payable for Publication of all types of advertisement in addition to the payable charge as mentioned below. Effective 01st April 2020

1. Rate of Black and White Advertisement

Description of Advertisements	1 Insertion	Total Amount Payable (including 5 % GST)	4 Insertions	Total Amount Payable (including 5 % GST)	8 Insertions	Total Amount Payable (including 5 % GST)	12 Insertions	Total Amount Payable (including 5 % GST)
Full Page	15,000	15,750	45,000	47,250	85,000	89,250	1,20,000	1,26,000
Half Page	8,000	8,400	28,000	29,400	50,000	52,500	68,000	71,400
Quarter Page	5,000	5,250	16,000	16,800	28,000	29,400	40,000	42,000
Cover (Inside)	16,000	16,800	55,000	57,750	1,00,000	1,05,000	1,44,000	1,51,200
Cover (Back)	20,000	21,000	65,000	68,250	1,20,000	1,26,000	1,65,000	1,73,250

Mechanical Data of Journal
Size of Page: 21 Cms x 27 Cms

PRINT AREA

FULL PAGE   23 Cms (Height) x 16.5 Cms (Width)

HALF PAGE   12 Cms (Height) x 16.5 Cms (Width)

QUARTER PAGE   11 Cms (Height) x 8 Cms (Width)

(Preferable Size of the Font-Minimum 10 point)

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

Advertisement Agencies (INS Accredited) are allowed 15 % Discount

Full advance payment must be sent directly to AIU Account using any of the digital modes. The details of AIU Account are available in AIU Website (www.aiu.ac.in)

Your guide to making the Online Payment for the Advertisement Tariff

- Open the AIU Website: **https://aiu.ac.in**
- Go to the AIU Payment Gateway Option (payment.aiu.ac.in)
- Click on the **Advertisement Tariff** section of the Payment Portal
- Fill up the required details and make the payment for the Advertisement Tariff
- **Insertion** means your advertisement is printed in one issue of University News

UPI ID: 10342296000975@cnrb

For further information write to:

Publication & Sales Division

Association of Indian Universities
AIU House, 16, Comrade Indrajit Gupta Marg,
New Delhi – 110 002
EPABX: 011-23230059 (Extn. 208)
DIRECT LINE: 011 23213481
E-mail ID: advtun@aiu.ac.in
www.aiu.ac.in |

In This Issue

Bridging the Linguistic Gap in Higher Education through Collaboration: A Case Study

Rajeev Kumar Shukla* and Nayantara Padhi Mishra**

The National Education Policy (NEP) 2020 emphasizes the importance of mother tongue-based education, particularly in foundational learning. NEP 2020 recognizes that language is more than just a communication tool; it is a vehicle for culture, identity, and knowledge. By delivering education in a learner's native language, NEP 2020 aims to deepen understanding, build confidence, and foster a more accessible and inclusive learning environment. The Indira Gandhi National Open University (IGNOU), a global leader in distance education, has been a key player in implementing this vision. Through a strategic partnership with the government of Odisha, IGNOU is now making its high-quality educational content accessible to a wider audience in the Odia language.

IGNOU has long been a force in democratizing education, offering affordable and flexible learning opportunities to millions. Its wide reach, with 69 regional centers and over 2000 study centers in India, plus 25 overseas study centers in 15 countries, along with its diverse and high-quality course content, made it a perfect partner for Project e-Kumbh, an initiative by AICTE to provide educational materials in different Indian languages. Initially, e-Kumbh focused on translating engineering books, but it soon expanded to include other professional disciplines, most notably through a collaboration with IGNOU to translate its MBA program course materials into 12 Indian languages to align with the NEP 2020's focus on multilingual education.

The collaboration's first phase involved translating IGNOU's MBA course materials into Hindi and Odia. This effort provided a blueprint for future projects. When the Minister of Higher Education for the government of Odisha, Mr. Suraj, attended the launch of the Odia-translated MBA materials as a special guest, he recognized a significant opportunity: leveraging the translation of IGNOU's study materials for other programs into Odia to benefit students across his state. He realized that translating existing, high-quality IGNOU course materials would be far more time- and cost-effective than developing new courses from scratch.

Scaling the Initiative: A Partnership with the State of Odisha

Based on the minister's vision, the Ministry of Higher Education, Government of Odisha, and IGNOU signed a Memorandum of Understanding (MoU) to translate IGNOU's course materials into

---

* *Professor, School of Management Studies, Indira Gandhi National Open University, Maidan Garhi, New Delhi- 110068. E-mail- rkshukla@ignou.ac.in*
** *Professor, School of Management Studies, Indira Gandhi National Open University, Maidan Garhi, New Delhi-110068. E-mail- nayantara@ignou.ac.in*

Odia. The first program to be translated was the Diploma in Early Childhood Care and Education (DECE). This was a strategic choice, as the DECE program is specifically designed to train and equip professionals like Anganwadi workers and play school teachers who are crucial to foundational learning, such as early childhood education, child health and nutrition, and holistic development of children. The DECE programme provides essential knowledge and skills for individuals working with children from birth to six years old in various settings, including preschools, creches, and *Anganwadis.*

The translation process for the DECE course materials was streamlined using the UDAN translation tool developed by IIT Bombay. The translated content was then carefully vetted by subject matter experts to ensure accuracy, quality, and cultural relevance.

Outcomes and Impact

The collaboration between IGNOU and the Government of Odisha proved to be a resounding success. The translation of the DECE program into Odia demonstrated the viability of the initiative. At the programme's launching ceremony, the Minister of Higher Education expressed his satisfaction at seeing his idea come to life. Similarly, IGNOU's vice chancellor and team were excited to see a notable increase in enrollment for the DECE program, highlighting the positive impact of offering courses in a regional language. This success story showcases how strategic partnerships and a commitment to linguistic inclusivity can significantly expand educational access and empowerment.

The collaboration showcased following key benefits:

- **Increased Accessibility and Inclusivity**: The translation removed a significant linguistic barrier, allowing individuals who were more comfortable with Odia to access a vital professional development course.[7] This directly aligned with the goals of the NEP 2020 to make education accessible to all, regardless of their linguistic background.[8]

- **Cost and Time Efficiency**: By translating existing IGNOU course materials, the government of Odisha avoided the substantial costs and time associated with designing, developing, and vetting new courses.

- **Enhanced Learning Outcomes**: Providing complex educational content in the mother tongue deepened students' understanding and boosted their confidence, enabling them to better grasp concepts and apply their knowledge in their work with young children.

Following the success of the DECE program, the MoU paves the way for a more extensive collaboration, with IGNOU planning to gradually translate and offer a wide range of its other programs—including undergraduate, postgraduate, and vocational courses—in the Odia language.

Conclusion

This initiative and collaboration between IGNOU and the Government of Odisha serves as a powerful model for how a national education policy can be effectively implemented at the regional level. By leveraging existing high-quality resources and focusing on mother-tongue instruction, this initiative has made critical educational programs more accessible, particularly for those in fields like early childhood development. It highlights how targeted partnerships and a commitment to linguistic inclusivity can lead to tangible positive outcomes in education.

❑

To Our Readers

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

Editor

Higher Education in Arunachal Pradesh: Issues and Challenges

N A Khan*

"Knowledge is one that Liberates"

The Indian education system believes in such knowledge that liberates from material bondings. Indian educationists emphasized emotional and spiritual education. They understand that the young minds need proper nourishment, which can be done through a meticulous education system. They stressed the value education imparted to the generation and further had a dream for India that can exist in the world of reality through a transparent and empowered education system.

Higher Education plays an important role in the socio-economic development of a country - it boosts the creation of human capital that influences productivity. From the individual point of view, it facilitates all-around development and competence among the Youngsters for employability, and it provides the economy with the requisite qualified and skilled manpower for various sectors of the economy.

The secret of all developed economies is that they all invested a large sum in social infrastructure like Education long back, and now they are reaping the benefits –advances in all fields and all sectors of the economy, and there is a high positive correlation between higher education and human resource development. Globally, higher education is considered one of the key drivers of growth, performance, prosperity, and competitiveness.

According to the UNESCO report, the social role of higher education provides the link between the intellectual and educational role of universities on one hand and the development of society on the other. Gross Enrolment Ratio (GER) is a statistical measure for determining the number of students involved in undergraduate, postgraduate, and research–level students within a country.

India is aiming to attain a GER of 30%, but it is still far behind countries like China, with a GER of 43.39 %/and the US, with 85.8%. India

_____
* *Vice Chancellor, Apex Professional University, Pasighat, Arunachal Pradesh. E-mail: drkhan58@gmail.com*

registered its best performance on the Gender Parity Index (GPI) in the last seven years. 94 in 2016-2017 from 86 in 2010-11. GPI is calculated as the quotient of the number of females by the number. Males enrolled) GPI equals 1 indicates equality, less than 1 indicates disparity. In seven states, viz, Goa, Himachal Pradesh, Meghalaya, J&K, Nagaland, Sikkim, and Kerala, women in higher education have outnumbered men.

Looking at the college densities, states of southern India have the highest college density. The skilled proportion of students pursuing higher education in India has not increased dramatically from 2015-16 to 2016-17. It was in the range of 23 to 25 since 2013-14, Tamil Nadu had the highest 46.91%, and only six states have registered GER that is higher than the national average of 25.2%. The Union Cabinet passed the new National Education Policy 2020. The Policy also sets targets over the next 10 years, increasing GER to 50% (by 2030) from the present 25.8%, by increasing the education budget to 6% of the GDP from the present 3%. The Gross Enrollment Ratio (GER) of higher education in the state of Arunachal Pradesh within the age group of 18-23 years is 35.4 (overall), with male GER 36.5 and 34.4 for female GER, as compared to the national 27.1 (overall) GER, so it is more than the national average. It is further observed that in Arunanchal Pradesh in academic session of 2021-2022 total enrollment was 31,196 students of which 21,723 were boys and 17,473 were girls it means gender parity index is not equal to one (1) there is disparity means male students are more than female in higher education in Arunanchal Pradesh, so the state has to take measures to make GPI equal to one in course of time.

Further, it is observed that the current enrollment of students in Open and Distance learning mode (ODL), is 7,737, of which a total of 3,386 were boys and 4,351 were girls. It is noted here that in the ODL model, Girls are more than boys, but still GPI is not equal to one (1), so there is disparity in this alternate mode of enrollment, also in higher education in Arunachal Pradesh.

Current Scenario of Higher Education in Arunachal Pradesh

Higher education refers to all types of education – Academic, Professional, Technological, vocational, Teacher Education, Medical, Law, Engineering, and Polytechnics. Arunachal Pradesh has made rapid expansion in higher education since only 07 institutions in 2011 to 34 higher education institutions in 2024, including universities and colleges, with a mix of government and private institutions. Key institutions include Rajiv Gandhi University, the state's oldest university, along with others like Arunachal University of Studies and Himalayan University. Specific government-run facilities include a medical college (Tomo Riba Institute of Health and Medical Sciences) and engineering colleges, such as NIT Arunachal Pradesh.

It is a positive indication for the development of the state in terms of producing quality human resources in various fields. On 1st January 2024, there is only one government university in Pasighat (state university) and one central university in Itanagar, eight private universities and one deemed university in Arunachal Pradesh, and the number of colleges was 32.

Problems of Higher Education Institutions in Arunachal Pradesh

There are many problems in Higher education but the most urgent issues that need immediate attention are:

Teacher Quality

The quality of education is primarily determined by the competencies, skills, abilities, and motivation of teachers. In schools, a teacher must have a B.Ed., but in higher education institutions, there is no such qualification for teachers except the NET/SLET/Ph.d, and the teachers with these qualifications are very few available in Arunachal Pradesh at present.

Lack of Infrastructure in Higher Education Institutions

Most of the government colleges do not have quality infrastructure, including buildings, proper faculty houses, hostels, and libraries. As the solution, the state government should make the National Assessment and Accreditation Council (NAAC) accreditation mandatory for private institutions as well as public universities and other higher education institutions so that, to some extent, the quality of infrastructure can be improved.

Issues in the Examination

In universities, there is a semester system, but in colleges, there is an annual examination system, with mostly essay-type and 50% choice. The Choice-Based Credit System should be implemented immediately.

Employment Issues

For getting employed, in this era of a highly competitive world, students of higher education must have developed effective skills while pursuing their programmes in higher education institutions, and there should be a good nexus between Academia and Industry. But this is lacking in Arunachal Pradesh, so the absorbing capacity for employment is less.

At the end of the day, in higher education institutions, the student will be judged on whether he/she acquired the full employability skills by the end of the programme. So, in a nutshell, the higher education institutions have a big challenge, which is to make the student competent enough with the skills to be employed.

Conclusion

There is a hope that the present government, with the Commissionerate of Higher Education, will take appropriate measures to address the issues and enhance the quality of higher education, which is the need of the hour.

References and Readings

1. UNESCO (1995). Policy Paper for Change and Development in Higher Education.

2. UNESCO (1998). Final Report, World Conference in Higher Education, Paris.

3. Govt. of India (2022). Reports on Higher Education, Arunachal Pradesh, 2022-23.

4. Sharma, S., C., Mittal, Pankaj, Varghese, Mariamma, A., Swamy, S. Srikanta, and Pani, Sistla, Rama Devi (2023). Indian Higher Education Heritage, New Delhi, Association of Indian Universities.

❑

The Impact of Virtual and Augmented Reality on Experiential Learning

Lohans Kumar Kalyani* and Neeraj Yadav**

Research has consistently highlighted three essential components of experiential learning: reflection, critical analysis, and synthesis applied to problem-solving situations. Recent technological advancements and decreasing costs of devices have led to the adoption of Virtual Reality (VR) and Augmented Reality (AR), hosted in fully immersive environments, to facilitate experiential learning. The integration of Virtual Reality (VR) and Augmented Reality (AR) technologies in education has revolutionized experiential learning by creating immersive, interactive, and engaging environments. These technologies bridge the gap between theoretical knowledge and real-world application, allowing learners to visualize abstract concepts, conduct virtual experiments, and explore complex scenarios in a safe and controlled setting. This paper explores how VR and AR enhance student engagement, improve knowledge retention, and foster critical 21st-century skills such as problem-solving and collaboration. Furthermore, it examines case studies from secondary and higher education where VR/AR applications have positively impacted learning outcomes. Challenges related to accessibility, cost, and teacher training are also discussed, offering recommendations for effective implementation. The study concludes that VR and AR hold significant promise in transforming traditional pedagogical methods into dynamic, learner-centered approaches. Experiential learning is a process through which knowledge is generated via the transformation of experience.

Understanding Experiential Learning

Experiential learning, a paradigm espoused by theorists like Dewey, Kolberg, and Piaget, represents a dynamic interplay between experience and concepts. Kolb's model specifically identifies four fundamental processes—Concrete Experience, Reflective Observation, Abstract Conceptualization, and Active Experimentation—that form the basis of the experiential learning cycle. The premise is that

*Assistant Professor, Department of B.Ed. Shri Lal Bahadur Shastri Degree College, Gonda Uttar Pradesh-271003. Email: lohanskalyanilbs@gmail.com
**Assistant Professor, Department of B.Ed. Shri Lal Bahadur Shastri Degree College, Gonda Uttar Pradesh-271003. Email: lohanskalyanilbs@gmail.com

meaningful learning arises neither exclusively from direct social transmission nor solely from empirical, personal experience; rather, it involves an integrative process combining these elements. The concept of immersion further enriches our understanding of experiential learning, described as a state of cognitive absorption that naturally enhances the impact of the experience. Incorporating virtual reality heightens this effect, promoting intensified learning by bolstering the sense of involvement to which the learner is committed.

Definition and Importance

Virtual environments provide precise visualization of abstract, difficult, or impossible-to-depict objects and processes, encouraging focused learning experiences. For example, abstract settings become more tangible, such as visualizing biological cells or understanding geometrical mathematics better than with traditional methods (Schwarze et al., 2019). Virtual and Augmented Reality environments enable active participation rather than passive observation, with benefits demonstrated in fields like surgical training that involve active interactions and haptic feedback. Users can access locations or scenarios that are practically infeasible in real life, such as visiting historical sites or exploring changing physical phenomena. Current research on Virtual and Augmented Reality environments examines learning and task performance, often focusing on immersion and its role in cognitive absorption. Studies investigate perceived individual learning, group learning outcomes, and the influence of immersion, context, and social facilitation on collaborative tasks.

The Oculus Rift significantly enhances immersive Virtual Reality experiences, surpassing other solutions and offering affordability for widespread adoption. The device marks a substantial advance in creating a sense of presence that is difficult to achieve with other methods, rendering it valuable for entertainment, education, training, and simulations. Its immersive capabilities are compelling once experienced (Reiners et al., 2014).

Theoretical Frameworks

Virtual and augmented reality technologies generate highly realistic scenarios and enhance

experimental participation, thereby strengthening cognitive processes. The persistence of spatial information in real time during the initial stages of developing motor and spatial skills makes these technologies especially effective for experiential learning (Huang et al., 2019). Designing effective virtual reality environments for experiential learning requires consideration of several theoretical frameworks from disciplines such as HCI and education (Yang et al., 2020). Six major principles have been identified to guide the creation of virtual and augmented environments that promote learning. First, virtual or augmented environments provide natural affordances and constraints for each situation, enabling participants to act properly by leveraging their knowledge of the physical world. Second, the principle of situated learning ensures that knowledge and skills acquired in an immersive environment are translatable to analogous situations outside the virtual environment. Third, the maintenance of co-location, co-presence, social manipulation, and self-presentation facilitates social cognition, particularly the understanding of others' emotions, intentions, and plans. Multimedia representations of events, situations, and objects enable participants to apprentice skills and increase motivation to acquire competencies. Finally, the construction of elements that can be acted upon during virtual experience strengthens the link between learning and doing.

Key Components

The widespread availability of virtual and augmented reality (VR and AR) technologies is shaping a new era of immersive experiences that further empower users to engage in meaningful activities for experiential learning purposes. Arising from a selection of well-established technologies, key components of these technologies include real-time interaction, the ability to execute physical actions, immediate feedback, and continuous simulation to facilitate the learning process. A survey of the theoretical and practical implications of key components highlights the underlying pedagogical and cognitive foundations of immersive applications. By enhancing these factors, immersive learning environments enable students, for example, to engage in situated learning scenarios that foster knowledge transfer and retention. Studies emphasize the significance of motivation and engagement, with virtual environments sustaining interest and encouraging intrinsic motivation when thoughtfully designed. Strategies such as virtual field trips, simulations, and interactive 3D models

prove particularly effective across various subjects. Additional research identifies cognitive benefits including improvements in spatial comprehension, problem-solving abilities, and information retention. The interactive nature of these technologies allows manipulation of virtual objects and participation in hands-on activities, thereby supporting experiential learning. Practical challenges associated with implementation are also recognized, encompassing the necessity for teacher training, budgetary constraints, and technical limitations (Sungheetha et al., 2023). Comparing AR and VR in educational contexts reveals distinct strengths and considerations. Both modalities offer exciting opportunities and innovative tools that can enhance student knowledge acquisition. Effectiveness studies consistently report that VR-based instruction yields improved learning outcomes across educational levels. The concept of spatial presence, pertinent to immersive experiences, plays a critical role in influencing educational effectiveness and engagement. Research further explores varied applications, highlighting the substantial potential of AR for educational use (Huang et al., 2019).

Overview of Virtual and Augmented Reality

The concepts of Virtual Reality (VR) and Augmented Reality (AR) date back to the early stages of media and computer science analysis, with foundations in cinematography, computer image synthesis, and the evolution of Merleau-Ponty's phenomenology of perception. VR is defined as "a computer-generated, interactive, three-dimensional environment in which a person can immerse himself and with which he can interact," while AR is "a system that incorporates three characteristics: a combination of real and virtual, real-time interaction, and accurate 3D registration" (Reiners et al., 2014). VR and AR applications are related to highly interactive and immersive systems. These next-generation Multimedia Systems use Virtual and Augmented Reality to extend interaction, for example, on web applications and interactive simulators (Schwarze et al., 2019). Readily available, commercially found hardware facilitates extended interaction with VR applications, providing audio, video, and motion. VR applications require highly interactive means. A 3D space where a participant can move in or a means of "being there" where real objects can be handled with precision and in real-time further improves the VR experience. VR may also be delivered through small, special-purpose devices with built-in head-tracking, large displays, and custom spatial 3D sound systems.

AR systems usually display video either on screens or through devices such as HMDs or digital glasses (Huang et al., 2019). Integrating AR and VR into learning environments necessitates considering their respective strengths and weaknesses, as each offers a unique educational experience. Ultimately, both technologies present students with an exciting new educational reality.

History and Evolution

Virtual reality (VR) uses head-mounted technology to substitute the content of the real world with immersive virtual spaces. Throughout the past 5 years, a small surge in interest has sparked in the academic community to explore and make use of this exciting new technology to carry out a variety of different types of activities. The results of these studies offer an informative insight into the ways in which sectors such as education and training could make use of VR to enhance their current offerings and make their material more immersive for users who undertake educational opportunities. VR makes narrating a story conceptually easier because it provides a unique capacity to engage sensory channels. To create a story, though, the same factors still apply as with other forms of mediation: a carefully crafted storyline, a descriptive narrative, and the ability to utilise the medium in a way that benefits the message that the story tries to convey. Experience with media education, knowledge of theoretical models, and a nurturing environment could improve the development of applications ready for the consumers that VR is expected to reach shortly. It also offers planners a simple solution to the question of travel and logistics because it aims to eliminate the need for people to be physically present in a place: instead, the required environment is made available virtually (Reiners et al., 2014). VR applications have been extensively discussed, ranging from commercial implementations and training to performance and art, addressing adaptations of VR to build theatre environment sites, immersive training systems, effects of VR environments, and related topics (Schwarze et al., 2019). Further progress towards a 'holodeck' experience, enhancing verbal commands, true 3D imagery, object sensing, and unlimited motion in VR environments, depends on advancements in user interfaces and integration of complementary elements such as task design, sound pedagogy, and informative feedback. The Oculus Rift, for example, significantly enhances immersion in virtual reality, surpassing other solutions at an affordable price and thus supporting wide-scale adoption (Reiners et al., 2014).

Technological Advancements

Recent developments in consumer-accessible media, computing, and tracking technologies have accelerated educational trends towards media-rich, interactive, and multimodal learning environments. Concurrently, advances in Virtual Reality (VR) and Augmented Reality (AR) hardware are enabling unprecedented possibilities to enhance experiential learning and training. These technologies harness various devices beyond the established desktop/laptop and tablet/mobile interfaces to provide more immersive solutions. Noteworthy examples include gaming engines that facilitate the creation of 3D virtual environments, head-mounted displays (HMDs) such as Oculus Rift and HTC Vive, and integrated systems combining headset tracking with hand controls. Despite these promising technological platforms, the full potential of VR- and AR-supported learner-content interactions remains under-explored. This gap is largely attributable to the fact that much of the current VR and AR hardware is either relatively new or still in developmental stages (Reiners et al., 2014).

The adoption of VR and AR in educational settings varies widely. Contexts often dictate preferences; for example, training for hazardous or logistically complex tasks tends to favor VR, while more straightforward instructional scenarios may lean towards AR. Various hypotheses attempt to explain these choices, taking into account factors such as technology maturity, reliability, portability, cost, ease of integration, and suitability to the educational context. A further consideration is the balance between overlap and complementarity in the support provided by each technology, which may influence decisions. Nevertheless, AR and VR present novel modalities that promise to invigorate educational experiences. Each technology possesses distinct strengths and limitations, yet both represent an exciting new reality for students (Huang et al., 2019).

Current Applications

Virtual and augmented reality are employed across higher education, corporate training and medical sectors. The technologies allow learners to engage with educational objects at a level of detail and complexity that is not otherwise possible (Huang et al., 2019). Immersive technologies are used in education to create realistic, engaging, and high-benefit learning environments without the real-world risks and resource costs (Reiners et al., 2014). Fully

immersive environments enable trainees to create transferable skills through the contextualisation of learning that leads to situated cognition (Schwarze et al., 2019).

Integration of VR and AR in Education

Immersive technologies provide powerful new ways to enhance learner engagement, activate interest, and deepen understanding. Virtual reality creates an immersive, three-dimensional environment that can be viewed and directly interacted with, typically via a head-mounted display. The resulting experiences simulate interactions and perceptions highly similar to those in real life, promoting substantial gains in involvement and comprehension. Visual representations of complex or abstract concepts further increase understanding and help prevent misconceptions during the learning process (Peisachovich et al., 2021). Embedding virtual reality into the curriculum, therefore, offers educators additional tools for guiding students toward desired outcomes.

Similarly, mobile augmented reality applications incorporate superimposed visual and audio elements, enabling learners to engage with dynamic content from multiple perspectives within their physical surroundings. Both augmented and virtual realities possess unique advantages and shortcomings that merit consideration before integrating either as a primary platform. Nonetheless, both represent valuable additions as supplementary instructional media across disciplines (Huang et al., 2019).

Pedagogical Approaches

The immersive nature of virtual immersive education allows students to engage with tasks beyond traditional classroom constraints and to practice in various environments. This offers advantages over video-based instruction by enabling embodied active learning and exploration. An emphasis on immersive design leads to a hybrid learning approach capable of enhancing depth of learning and supporting multiple pedagogical models.

Current efforts focus on creating adaptable Virtual Reality (VR) learning environments that facilitate collaborative pedagogy. Text and voice communication provide avenues to express confusion, reflect, and share ideas, while collaborative avatar manipulation supports problem-solving and scientific exploration of cause and effect. Customizable interactions and group assignments adapt the environment for synchronous cooperative or competitive learning, aligning with established job aids and learning strategies (Reiners et al., 2014). These features are implemented within an optimized multiuser stereoscopic 3D commercial game engine, integrating various VR platforms, traditional online learning, and Management Information System (MIS) tools to maintain tracking and reporting systems (Peisachovich et al., 2021).

Case Studies

The existing body of research illuminates a range of pedagogical benefits associated with the implementation of VR and AR systems in experiential learning. Additionally, several application scenarios have been suggested that demonstrate where immersive technology initiatives could be deployed effectively in the future.

According to Huang et al. (Huang et al., 2019) , both AR and VR provide students with an exciting new educational reality. In terms of potential, Schwarze et al. (Schwarze et al., 2019) identify tangible advantages associated with these mediums, including enhanced interactivity, the ability to transmit information in a highly visual (and therefore quickly processed) manner, the promotion of spatial presence and experiential learning, greater freedom to explore the environment, and increased motivation to remain focused on a given topic. The use of these platforms for explicit learning is, however, hindered by a limited ability to provide high sensory fidelity or haptic feedback. This restriction constrains the accuracy and precision of user actions, reducing their suitability for acquiring complex motor skills, especially in contexts demanding extremely fine manipulation, such as those faced by surgeons or mechanics. The development of fluid, intuitive, and natural controls and interactions therefore, remains a key priority for the medium's long-term viability as a pedagogical tool.

Challenges and Limitations

Virtual and augmented reality technologies are not only improving access and convenience but may also enable educational experiences that are simply impossible or extremely costly to replicate in a traditional setting (Reiners et al., 2014). However, important challenges remain to be resolved.

The most severe limitation of current VR technologies is motion sickness, which has a variety of symptoms including nausea, eyestrain,

disorientation, and fatigue (Schwarze et al., 2019). This severe problem means that current devices can only be used for a few minutes before discomfort occurs. Specialized treatments or behavioral adaptations may be required to alleviate these effects and allow for prolonged use.

Impact on Student Engagement

Virtual and augmented reality applications have become increasingly prevalent as computing technology has advanced. The educational potential of these technologies is tremendous, and they have many possible uses. Studies of technology-based instruction indicate that such applications can enhance both student motivation and learning outcomes (Huang et al., 2019).

Extensive research conducted in educational, immersive industry training and therapy settings demonstrates the extensive range of practical applications of augmented and virtual reality. For example, in authentic social-emotional learning scenarios, immersive technologies offer students opportunities to explore complex dimensions of social interaction (Sungheetha et al., 2023).

VR and AR promote student engagement by providing simulation and visualization with an unmatched level of interaction. Planning an immersive, interactive learning environment often requires optimizing trajectories to connect relevant learning points while reducing user discomfort. Traditional spatial positioning of virtual objects uses Euclidean space, but for immersive education, trajectories must simultaneously reduce travel distance, minimize changes in altitude and azimuth, and connect multiple learning tasks strategically. Collaborative learning is also enhanced because the same collaborative content can be experienced on both AR and VR platforms.

Motivation and Interest

Motivation and interest are crucial aspects of learner experience when engaging with virtual or augmented reality (VR/AR) in experiential settings (Bacca et al., 2018). Emotionally salient experiences, opportunity for personal and social affective engagement, sense of control over the experience, and understanding of relevance to wider goals determine how individuals react to, process, and evaluate educational events, shaping their enduring interest (Peisachovich et al., 2021). VR and AR facilitate these processes through novel and

dynamic input in controlled settings. Recent large-scale studies of virtual field trips, museum tours, and industrial training provide relevant examples that shape policy and practice beyond educational settings (Reiners et al., 2014). The Oculus Rift, for instance, significantly exceeds other solutions in delivering immersive VR experiences at an affordable price, suitable for widespread adoption in education and training. Compared to alternatives, it represents a leap in immersion that is difficult to revert once experienced. Its affordability and ease of use support broad implementation across entertainment and education sectors.

Cognitive Load

Cognitive load refers to the information held in working memory where conscious cognitive processing takes place. Working memory can accommodate only a few novel interacting elements simultaneously. Educational VR systems often require simultaneous interaction with controls, wayfinding, and curricular content, placing considerable demands on short-term memory and thereby impeding long-term memory storage. Cognitive load theory offers guidelines for information presentation that enhance processing efficiency and alleviate working memory limitations, thereby facilitating learning in complex systems. The theory also provides strategies for developing schemas that integrate VR interface components, which minimizes cognitive load. The concept of chunking aids in schema formation, enabling learners to group information into manageable units. When navigating VR environments, cognitive load rises as learners contend with wayfinding, interface controls, and subject matter, a burden that is further increased by distractions arising from VR interface management, subsequently constraining skill acquisition and retention (Burkett, 2014).

Social Interaction

According to (Reiners et al. 2014) , immersion is the most important part of any learning environment. Students learn faster, find topics better, and do not get distracted when engagement is high, leading to better learning outcomes. Apart from immersion, social interaction is another crucial aspect of an effective learning environment. Social warmth increases immersion, and in long-term use, the social aspect can compensate for reducing immersive effects (Cocchia et al., 2024). Moreover, for people accustomed to visual social cues, such as direct eye contact, including such cues in virtual social interactions can increase engagement. Building on these perspectives,

the collaboration feature described in Section 5.2 was extended with a variety of social communication tools to enable effective interaction and teamwork in immersive virtual-reality environments.

Effectiveness of VR and AR in Skill Development

Virtual reality (VR) and augmented reality (AR) have shown effectiveness in helping students develop various skills, including drawing, manufacturing, assembling, observing, discovery, facing fear, diagnosis, treatment, and maintenance (Valimont, 2002). While VR enables active participation in a synthetic environment and allows learners to customize exploration and interaction, AR enhances the real world by superimposing virtual elements. Both technologies contribute to knowledge acquisition by fostering motivation and facilitating the encoding and retention of information. VR has also been found to offer advantages such as reduced time and cost for training. However, each medium has its own strengths and weaknesses that should be taken into account during integration into educational settings (Huang et al., 2019). Students generally find both technologies to provide an engaging and novel educational experience.

Practical Skills Acquisition

Virtual and augmented reality technologies offer advantages for long-term skill acquisition that surpass those of traditional videos or computer-based classes. However, their development is constrained by uncertainties concerning the optimal features and design principles for such systems (Schwarze et al., 2019).

Effectively structured AR and VR-user interfaces may not only equal but also surpass tutor-learner sequences in practical competency acquisition (Valimont, 2002). Existing experimental evidence suggests that these systems can reliably function as effective e-trainers for knowledge transfer within sponsors' workforce development schedules. Interactive VR enables students to gain practical experience otherwise inaccessible, affording training in physical tasks without expenditure on consumables. Consequently, these platforms have the potential to revolutionize technical training and education, instilling practical skills vital for a diverse spectrum of vocational qualifications.

Critical Thinking and Problem Solving

Immersive virtual environments can comprise multiple components, such as the visual element delivered through a head-mounted display, the auditory element, trackers, haptic devices, and more. Beyond the technology, the design of the environment itself is crucial to the level of sense of presence achieved. Virtual training scenarios occasionally forgo a detailed, realistic visual design, opting instead for a basic visual construct with simple, possibly blue, sky textures, grey walls and floors, and little else. Such a setup is typically poor at supporting a sense of presence, despite its ability to convey the core training instructions. When visual fidelity is limited, design should focus on creating believable authenticity through detailed, dynamic scenarios, realistic behaviours and a created environment where a user can project themselves more believably. Virtual, augmented and mixed reality technologies all have potential for impact in the learning domain. It is important to gain an understanding of the specific technologies available and to select those appropriate to the task or experience being created. The greater the match between the technology and the task or learning outcome, the better the overall result is likely to be. Small, targeted training packages deployed over smartphones or tablet devices broadly support augmented applications, whereas wider simulations involving free movement and more complex interactions are best suited to immersive virtual reality solutions. The key is to understand where environments and which technologies make sense, and then work towards capitalising on those opportunities. Although rising levels of graphical detail have improved some aspects of learning, the underlying principles remain the same: instructional design should provide denotations for digital content to maximise transfer of learning from virtual to real-world experiences.

Assessment of Learning Outcomes

Assessment of learning outcomes plays a key role in understanding the effectiveness of virtual reality (VR) and augmented reality (AR) environments for experiential learning applications (Huang et al., 2019). Experimental results indicate clear performance advantages for VR with a 25% increase in learning gain compared to traditional text/video instruction methods. VR also induces increased positive emotions, decreased negative emotions, and elevated engagement ratings. Participants in VR report higher engagement and enjoyment levels than their counterparts working with text or video.

The effectiveness of VR and AR for education across different user groups has been studied by Kuo-Ting Huang et al. The ability of VR and AR to

improve knowledge retention and understanding of science concepts is examined relative to text/video baseline conditions. VR conditions provide superior performance results. Learning outcomes improve by 8% for VR and 2% for AR relative to conventional formats. VR environments produce stronger experiential immersion than AR applications. Both technologies thus have potential as tools to enhance educational experiences. The Channel Mediated, Task-Technology Fit, and Heuristic Evaluation frameworks together can identify key factors influencing knowledge retention using offline mobile AR/VR applications.

Devon Allcoat and Adrian von Mühlenen focus on their latest work on VR learning effects, which confirms that VR is capable of improving learning outcomes and enhancing engagement. The influences of VR on user emotions during the learning process are also investigated. A comparative study contrasts the impact of VR, video, and conventional text-based methods on recall performance, emotional response, and engagement. A total of 99 participants took part in the study, each receiving identical content comprising text and 3D models but exposed to one of three delivery modes. The results demonstrate a marked improvement in learning achievements within the VR condition, exceeding the other two groups. Emotion self-assessments reveal an increase of positive feelings coupled with diminished negative affect for VR users, as opposed to a decline of positive sentiments exhibited amongst traditional and video learners. On the whole, VR administration leads to greater enjoyment and involvement than observed when studying via text or films (Allcoat & von Mühlenen, 2018).

Future Trends in VR and AR for Learning

Future trends in VR and AR situated learning encompass broad principles and practical examples that may influence the development of applications aimed at supporting situated learning. Research indicates that AR and VR each possess distinct advantages and limitations when integrated into educational settings; both technologies nevertheless offer students novel and compelling learning experiences (Huang et al., 2019). Prior to 2016, VR systems were predominantly available in specialized university settings. The release of the Oculus Rift consumer product marked a second wave of VR, providing significant enhancements for learning by transitioning from abstract to tangible settings, enabling user interaction, facilitating methods that

would otherwise be infeasible, and transcending the constraints of physical reality.

Emerging Technologies

In education, digital technologies have been used since 1986 to encourage collaboration and promote collective intelligence (Huang et al., 2019). Currently, levels of immersion and presence are a function of the device rather than the content, communication, or pedagogy (Gordon & Brayshaw, 2017). "The term 1virtual environment 2 (VE) describes a technology-driven computer-generated three-dimensional environment; Virtual Reality (VR) has become a well-known medium for such environments. It is usually described as a medium composed of multiple technologies that generates an artificial three-dimensional world with which a user can interact in a natural, i.e., intuitive and non-mediated, or non-syntactic, manner." In the mid-2010s, consumer technologies such as the Oculus Rift offered an affordable and widely accessible means to deliver immersive experiences in virtual worlds for education and vocational training. While not a perfect solution, these technologies significantly enhance immersion compared to other methods and are deployable at scale (Reiners et al., 2014).

Potential for Broader Applications

Google Glass has created a resurgence of interest in other technologies that enable a single user to perceive more than one display at a time; for example, the Oculus Rift goggles. This capability enables a VR experience parallel to the real world. The iPhone AR apps, Pokémon GO and World Brush; the heavily promoted Vive HMD (especially designed for room-scale VR) from Valve/HTC; and the re-designed Oculus Rift HMD (due mid-2016) are likely to increase the market for such experiences. This boost is already providing an impetus to communities and also to app developers who want to be part of the emerging cultural and technological shift (Huang et al., 2019). In conjunction with VR and AR apps, XR applications such as OpenSim, match-ups with the Web and social apps, and immersive technology continue to offer a rich set of opportunities. The affordances of XR environments include opportunities for geographically dispersed learners to learn in environments similar to their traditional classrooms without forfeiting the ability to learn at their own pace and in their own time zone (Ziker et al., 2021). Combination of VR applications such as virtual worlds with other XR applications serve as a multiplier effect for research where communities

of practice span across international boundaries. Immersive conferences such as Virtual Worlds Best Practices in Education and OpenSimulator Community Conference enable sharing of research and development across XR applications. Network members in organizations such as the Immersive Learning Research Network and Educators in VR overlap the disciplines of education, technology, and industry to further the research-based, effective application of XR technologies. In juxtaposition to the experiences of users in 3D worlds using 2D screens, XR social platforms allow users to feel as if their "virtual self is experienced as the actual self," offering new areas of exploration. Both VR and AR provide learners with an exciting new educational reality.

Ethical Considerations

Ethical concerns arise when considering the integration of Virtual Reality (VR) and Augmented Reality (AR) into learning processes. These concerns need to be addressed to ensure adherence to established principles of research and educational ethics. A virtual workshop environment can integrate ethical theories with theories of learning and communication to design experiences presenting ethical dilemmas, thereby enhancing moral imagination. AR-based behavior simulation offers students an interactive means to comprehend ethical dilemmas encountered in the workplace (Candra Sari et al., 2021).

Conclusion

Virtual and augmented realities are increasingly gaining prominence as immersive constructionist learning technologies; they have recently matured through the adoption of affordable state-of-the-art technology such as the Oculus Rift and Microsoft HoloLens (Reiners et al., 2014). Studies on the use of the Oculus Rift in [educational context redacted] have demonstrated its effectiveness in facilitating multi-sensory engagement and authentic experiential learning, thereby overcoming constraints inherent in traditional education and training (Reiners et al., 2014). The democratisation of these immersive technologies suggests their rising influence on the future of experiential education (Huang et al., 2019). Different mechanisms and technologies deliver varying degrees and types of immersion. It therefore remains imperative to examine and measure the specific affordances of VR and AR applications in educational settings, and to distinguish the methods by which they facilitate engagement and immersion.

This issue is pivotal to substantiating the development of multi-sensory constructionist learning strategies that transcend existing approaches to experiential education and training.

References and Readings

1. Schwarze, A., et al. (2019). Is Virtual Reality the Future of Learning? A Critical Reflection.

2. Reiners, T., et al. (2014). Experimental Study on Consumer-technology Supported Authentic Immersion in Virtual Worlds for Education and Vocational Training.

3. Huang, K., T., et al. (2019). Augmented Versus Virtual Reality in Education: An Exploratory Study Examining Science Knowledge Retention When Using Augmented Reality/Virtual Reality Mobile Applications. *ncbi.nlm.nih.gov*

4. Yang, K., Zhou, X., and Radu, I. (2020). XR-Ed Framework: Designing Instruction-driven and Learner-centred Extended Reality Systems for Education.

5. Sungheetha, A., Sharma, R, R., and R, C. (2023). Emotion-based Prediction in the Context of Optimised Trajectory Planning for Immersive Learning.

6. Reiners, T., Wood, L., and Gregory, S. (2014). Experimental Study on Consumer-technology Supported Authentic Immersion in Virtual Environments for Education and Vocational Training.

7. Peisachovich, E., et al. (2021). CVRriculum Programme Faculty Development Workshop: Outcomes and Suggestions for Improving the Way We Guide Instructors to Embed Virtual Reality into Course Curriculum. *ncbi.nlm.nih.gov*

8. Bacca, J., et al. (2018). Insights Into the Factors Influencing Student Motivation in Augmented Reality Learning Experiences in Vocational Education and Training. *ncbi.nlm.nih.gov*

9. Burkett, R. (2014). Development and Quasi-experimental Evaluation of a Screen-based Virtual Reality Tutorial.

10. Cocchia, L., et. al. (2024). The Impact of Social Environment and Interaction on User Experience and Social Acceptability of an Augmented Reality Game.

11. Valimont, B. (2002). The Effectiveness of an Augmented Reality Learning Paradigm.

12. Allcoat, D. and Von Mühlenen, A. (2018). Learning in Virtual Reality: Effects on Performance, Emotion, and Engagement.

13. Gordon, N. and Brayshaw, M. (2017). Flexible Virtual Environments: Gamifying Immersive Learning.

14. Ziker, C., Truman, B., and Dodds, H. (2021). Cross Reality (XR): Challenges and Opportunities Across the Spectrum. *ncbi.nlm.nih.gov*

15. Candra Sari, R., et al. (2021). Does Behaviour Simulation-based on Augmented Reality Improve Moral Imagination? *ncbi.nlm.nih.gov*   ❏

Culture-specific Tools in Cognitive Development: A Vygotskian Perspective

Manash Kumar*

The socio-cultural theory of cognitive development by Russian psychologist Lev Semyonovich Vygotsky (1896–1934), is one of the most significant theories of learning and development. This paper explores Lev Vygotsky's Sociocultural Theory (SCT) of cognitive development, which emphasises the role of social interaction, cultural context, and language in shaping learning. Unlike Piaget's constructivist framework, which placed cognitive development before language, Vygotsky argued that learning is socially mediated and that language functions as the primary cultural tool driving thought. Key concepts such as the Zone of Proximal Development (ZPD), scaffolding, and the role of the More Knowledgeable Other (MKO) are examined to illustrate how children's potential learning exceeds their independent ability when supported by peers or adults. The differentiation between social speech, egocentric speech, and inner speech is highlighted as evidence of the internalisation process that transforms social dialogue into higher-order thinking. Applications such as reciprocal teaching, collaborative learning, and culturally responsive pedagogy demonstrate SCT's lasting influence on contemporary education. A review of related literature further situates Vygotsky's contributions within broader research on language, culture, and development, underlining the enduring relevance of his theory to both first and second language learning contexts.

Vygotsky stressed the social and cultural context of learning, in contrast to behaviourists who saw children as passive learners moulded by reinforcement and Piaget, who placed more emphasis on individual inquiry. Children actively create knowledge, he contended, but this process is largely influenced by their social interactions with parents, teachers, and more experienced classmates as well as by the cultural resources and customs they are born with.

His theory is based on the notion that learning is a social process rather than just an individual endeavour, where cognitive development is shaped by guidance, discussion, and cultural experiences. This idea is demonstrated by the Zone of Proximal Development (ZPD), which is the difference between what a student can do on their own and what they can achieve with help. The idea of scaffolding is closely connected, whereby children can attain greater comprehension levels until they can complete tasks on their own with short-term assistance from peers or adults.

The function of language is another essential component of Vygotsky's framework. He saw language as a psychological and cultural tool that facilitates self-control, thought, and communication. His differentiation of inner speech, egocentric/private speech, and social speech clarifies how children's interactions with the outside world gradually give way to internal mental processes. Furthermore, Vygotsky acknowledged the value of play, viewing it as a potent tool for fostering creativity, self-control, and higher-order thinking. Vygotsky's socio-cultural theory thus highlights four fundamental ideas: learning drives development, language is essential to cognition, development is inextricably linked to its cultural setting, and knowledge is created through social interaction. These concepts have had a significant impact on education, influencing methods like peer tutoring, collaborative learning, and culturally responsive teaching (Table-1).

Culture-specific Tools

Cultural Tools and Cognitive Growth -Vygotsky thought that cultural tools, such as symbolic and actual tools, were crucial to cognitive growth. He focused on the cultural resources that facilitate thought, emphasising that psychological resources like language, signs, and symbols mediate all higher-order mental functions like reasoning and problem-solving. During daily activities, adults teach these psychological tools to youngsters, who then absorb them to help them further their own growth.

For example, when children and adults participate in activities together, they share ideas and approaches to conceptual thinking and representation.

Research Scholar, Faculty of Education (K), Banaras Hindu University, Varanasi. Email: manashkumar@bhu.ac.in

Table -1: Related Literature

Books /Research Papers	Authors	Year	Methodology	Key Findings
Mind in Society: The Development of Higher Psychological Processes	L. S. Vygotsky (eds. Cole, John-Steiner, Scribner, Souberman)	1978	Foundational theoretical synthesis with classic experiments	ZPD, social roots of higher mental functions, tools/signs, and mediation are introduced. ZPD, social roots of higher mental functions, tools/signs, and mediation are introduced.
Thought and Language (rev. ed.)	L. S. Vygotsky	1986 (orig. 1934)	Theoretical treatise with developmental data	explains how exterior speech develops into private or inner speech; word meaning is used as the analytical unit.
"The Role of Tutoring in Problem Solving"	D. Wood, J. Bruner, G. Ross	1976	Experimental tutoring study	Coins "scaffolding": learners can tackle problems beyond their own capabilities with measured support.
"Reciprocal Teaching of Comprehension-Fostering and Monitoring Activities"	A. S. Palincsar, A. L. Brown	1984	Two quasi-experimental classroom studies	Poor understanding is significantly improved by guided conversation (predict, summarize, question, and clarify).
Rousing Minds to Life	R. G. Tharp, R. Gallimore	1988	Classroom ethnography & intervention	ZPD is operationalised throughout the lesson stages; teaching is a supported performance.
Vygotsky and the Social Formation of Mind	J. V. Wertsch	1985	Theoretical synthesis	highlights dialogue as a unit of analysis for the societal consciousness and mediated action.
Voices of the Mind	J. V. Wertsch	1991	Theory and discourse analyses	Bakhtinian, dialogic perspective on mediation; voices influence cognitive growth
Apprenticeship in Thinking	B. Rogoff	1990	Cross-cultural/ethnographic analyses	Participation under guidance as a cognitive growth process
The Cultural Nature of Human Development	B. Rogoff	2003	Comparative developmental synthesis	Learning is not the transmission of specific knowledge but rather involvement in community activities.
"Scaffolding in Teacher–Student Interaction: A Decade of Research"	J. Van de Pol, M. Volman, J. Beishuizen	2010	Systematic review	Features that make scaffolding effective include fading, contingency, and responsibility transfer.
"A Bayesian Meta-analysis of Scaffolding in STEM PBL"	B. R. Belland, A. E. Walker, N. Kim, M. Lefler	2017	Meta-analysis	In STEM problem-based learning, scaffolding produces notable learning gains.

Books /Research Papers	Authors	Year	Methodology	Key Findings
"Meta-analysis of Scaffolding in Online Learning"	Y. Doo, C. J. Bonk, H. Heo	2020	Meta-analysis	Self-regulation and online learning results are greatly enhanced by instructional scaffolding.
Sociocultural Theory and Second Language Learning	J. P. Lantolf (Ed.)	2000	Edited empirical/ theoretical volume	makes social cultural theory the primary lens through which L2 development is seen (mediation, ZPD, private speech)
Sociocultural Theory and the Genesis of Second Language Development	J. P. Lantolf, S. L. Thorne	2006	Theoretical synthesis studies	Second language development as mediated activity; internalization via activity, artefacts, and dialogue
"State of the Art: Sociocultural Theory and Second Language Learning"	J. P. Lantolf	2006	Scholarly review	illustrates the evidence for ZPD, regulation, and mediation in L2 situations.
"Collective Scaffolding in Second Language Learning"	R. Donato	1994	Micro genetic qualitative study	Scaffolds are co-constructed by peers, and groups share expertise.
"Negative Feedback in the ZPD"	A. Aljaafreh, J. P. Lantolf	1994	Tutoring case studies (L2 writing)	In ZPD, graduated, contingent feedback encourages control and uptake.
The Guided Construction of Knowledge	N. Mercer	1995	Classroom discourse analyses	"Exploratory talk" serves as a framework for group thinking.
The Construction Zone	D. Newman, P. Griffin, M. Cole	1989	Design experiment theory	Activity systems should be set up in instruction to establish "construction zones" (ZPDs).
Vygotsky and Education: Instructional Implications and Applications	L. C. Moll (Ed.)	1990	Edited case studies	Vygotskian instruction is operationalized through community and funds-of-knowledge methodologies.
Vygotsky and Pedagogy	H. Daniels	2001	Theoretical/practice review	converts cultural-historical ideas into modern teaching
"A Critique of the ZPD"	S. Chaiklin	2003	Conceptual analysis	clarifies misunderstandings; ZPD is a task-specific, social, rather than a universal "ability gap."
"Scaffolding - Teaching and Learning in Language and Literacy Education"	J. Hammond, P. Gibbons	2005	Practitioner review	Connects instantaneous scaffolding movements with macro-curriculum cycles
"From 'external speech' to 'inner speech' in Vygotsky"	P. E. Jones	2009	Critical theoretical paper	Specific linguistic characteristics of private → inner discourse, such as abbreviations and condensation

Books /Research Papers	Authors	Year	Methodology	Key Findings
"Inner Speech: Development, Cognitive Functions, Phenomenology, Neurobiology"	B. Alderson-Day, C. Fernyhough	2015	Interdisciplinary review	relates Vygotsky to contemporary findings and suggests enlarged versus condensed inner speech.
Cultural Psychology: A Once and Future Discipline	M. Cole	1996	Theoretical synthesis and case studies	Through artifacts and activity environments, culture structures cognition (Vygotskian roots).
"Zone of Proximal Development (overview)"	S. McLeod (Simply Psychology)	Latest rev.	Scholarly overview	explains ZPD and scaffolding and provides a summary of relevant research and classroom applications.
"An Analysis through the Lens of Sociocultural Theory"	M. Shah, M. Balaji	2022	Conceptual analysis (STEM education)	demonstrates how speech and social interaction influence disciplinary learning.
"Using Vygotsky's SCT to Explore Ethnic Culture in Childhood Education"	Z. Wang	2020	Conceptual paper	argues that early education's cultural and linguistic transfer of values
"The Effectiveness of Scaffolding on EFL Learners' Speaking"	L. Naibaho	2019	Quasi-experimental EFL study	Speaking achievement is greatly increased by scaffolding.

Children internalise these co-created concepts, and as a result, their knowledge, beliefs, attitudes, and values grow as they appropriate the behaviours and thought patterns offered by their culture and the more experienced group members. Youngsters begin to build a "cultural tool kit" and utilise the resources provided to develop their own understandings, patterns, symbols, and representations.

According to Piaget, children construct their own understandings through the exchange of signs and symbols, which progressively evolve as they participate in social activities and attempt to make sense of the environment. The most significant symbol system in the toolkit, according to Vygotsky's thesis, is language, which also serves to expand the kit with more tools.

Language Development

Vygotsky emphasised that language plays a crucial role in cognitive development. It serves as an important tool for social interaction and the exchange of ideas. Through language, children are able to learn from adults or more knowledgeable peers. Without communication, it would be difficult for children and adults to understand each other's perspectives. In this way, language supports the social interactions that are essential for acquiring knowledge and skills.

For example, Ananya, a 5-year-old girl, is learning from her mother how to switch on a computer. Ananya asks, "Mummy, how do I switch on the computer?" Her mother replies, "Look at the switchboard on the wall, press the second button." Ananya responds, "Yes, I've switched it on." The mother continues, "Now check the computer table. Do you see the UPS there? Press the button in the front." Ananya follows the instructions and says, "Yes, I have switched it on." The mother then adds, "Good. Now press the blue button on the CPU. The computer will start." Through this dialogue, the child learns step by step. Later, Ananya will internalize her mother's instructions, recall them, and operate the computer on her own. According to Vygotsky, while internalizing such verbal and social interactions, children often go through a stage where they repeat the instructions aloud. This is especially common between the ages of 2 to 6 years. Pre-schoolers frequently talk to themselves during play or activities,

and Vygotsky referred to this as *'self-directed speech.'* Some examples make this idea clearer:

1. A 2½-year-old girl is playing "doctor-doctor" with her doll. She says, "Let me check your fever with this thermometer. Yes, you have a fever! I should give you an injection and medicine. Now sleep for a while."

2. A 4-year-old boy is building with blocks. While playing, he says, "No, these two don't fit. Let me try the blue one. Yes, it fits! Great! I'll show it to Grandma."

3. A 5-year-old girl is colouring. She wonders aloud, "What colour should I use for the clouds? Blue? But the sky is already blue. Maybe black? No… gray! Yes, I'll colour them gray."

The Zone of Proximal Development (ZPD)

Teachers often assess children's learning levels based on class performance. For example, if a Class V teacher gives a Math test and finds that a child performs at a Class IV level, she may begin teaching at that lower level. While this appears logical, Vygotsky argued that such tests show only part of the picture. Traditional intelligence and achievement tests measure a child's actual developmental level-what they can do independently they do not reflect the child's learning potential, or what they can achieve with guidance. If, instead, the teacher had provided hints or asked guiding questions, the child might have solved more problems correctly. Because traditional tests do not allow such support, they fail to reveal what children can achieve with assistance. Vygotsky explained that development has two levels:

1. *Actual Developmental Level* - tasks the child can perform independently.

2. *Potential Developmental Level* -tasks the child can perform with help from adults or more capable peers.

The distance between these two is called the Zone of Proximal Development (ZPD). It represents tasks a child cannot yet do alone but can complete successfully with guidance. For example, two 8-year-old girls, Aarti and Meena, score at the same level on an intelligence test. When given harder problems along with some guidance, Aarti performs at the 9-year-old level, while Meena performs at the 10-year-old level. Though their actual levels were the same, their ZPDs were different-1 for Aarti (9-8) and 2 for Meena (10-8). This shows that ZPD provides a better understanding of children's cognitive development, as it highlights skills that are emerging—those they can achieve with support now and independently in the near future. Such tasks may involve play, schoolwork, or daily activities.

Scaffolding

The first step in scaffolding is to identify a task that lies within the child's Zone of Proximal Development (ZPD)-something the child cannot yet do independently but can learn with support. The adult then provides guidance through methods such as verbal instructions, questions, hints, demonstrations, simplifying steps, or drawing attention to overlooked aspects of the task, while also ensuring that the child's interest and motivation are maintained. For example, when Aarav plays carom with his father, he receives just the right amount of guidance-such as where to strike or how much force to use—until he gradually improves through repeated attempts. As the child gains confidence and skill, the adult slowly withdraws support, allowing the child to take greater responsibility and perform independently. This temporary assistance, carefully adjusted to the learner's needs, is what Vygotsky called scaffolding, and it shows how learning progresses effectively through social interaction.

More Knowledgeable Other (MKO)

According to Vygotsky, learning occurs most effectively when a student engages with an individual who possesses greater expertise, experience, or understanding in a given field. This individual is known as the MKO, or More Knowledgeable Other. The Zone of Proximal Development (ZPD) is where this occurs. An MKO can be a teacher, parent, peer, or even a tool or resource (such as a book, computer, or online tutorial) that aids in the learner's progress. The MKO offers direction, feedback, and support, allowing the learner to complete tasks that they are still unable to complete on their own but can handle with assistance. With repetition and assistance, the learner eventually internalises the information and can function on their own without the MKO's assistance.

Example

1. The teacher (MKO) may read aloud to the student initially while guiding them by pointing to words as they learn to read. The youngster gradually begins to read short phrases, recognise words, and eventually read on their own.

2. In a group exercise in the classroom, a peer who is a little bit more experienced can serve as the MKO by elucidating ideas to the others.

Reciprocal Teaching

Palincsar and Brown (1984) created reciprocal teaching, an educational approach based on Vygotsky's sociocultural theory. Through the use of four essential strategies—predicting, questioning, clarifying, and summarising—it highlights the utilisation of interaction between the teacher and students to enhance comprehension abilities. After demonstrating these techniques and assisting students within their Zone of Proximal Development (ZPD), the instructor progressively hands off more responsibility to the pupils. Vygotsky's theory that knowledge is socially created through interaction with a More Knowledgeable Other (MKO) is illustrated by this cooperative learning process (Vygotsky, 1978).

Development First, then Language: Piaget

According to Jean Piaget, language acquisition comes after cognitive development. He contends that children actively explore to build mental schemas and that language develops as a tool for thinking expression after these cognitive frameworks are established. For instance, a child's understanding of object permanence develops before they can articulate concepts like "gone" or "hidden." Accordingly, Piaget maintained that thought precedes language and saw language as a by-product of underlying cognitive development (Piaget, 1959).

Language First, then Development: Vygotsky

On the other hand, Lev Vygotsky suggested that language is what propels cognitive development. He underlined that language, as a cultural instrument, enables children to transition from external communication to internalised thinking by mediating learning and cognitive processes. Since children first converse with peers and adults before turning this external discourse into internal speech, social engagement is crucial. According to Vygotsky, language therefore influences cognition and fosters higher mental processes (Vygotsky, 1987).

Vygotsky (1987) Differentiates between Three Forms of Language: Social Speech (or External Speech)

According to Vygotsky (1987), social speech—also referred to as exterior speech—is the first language that children employ to interact with others. It fulfils interpersonal purposes like making requests, providing information, and communicating requirements. For example, a child is using external communication when they say, 'Give me the toy'. Social speech illustrates how language first serves as a tool for communication before being internalised to direct thought.

Egocentric Speech

Children's tendency to talk out loud to themselves while playing or addressing problems is known as egocentric speech. Its goal is self-direction rather than interpersonal communication, in contrast to social speech. A child using building blocks, for instance, would say, "This one goes here... no, that one fits better." According to Vygotsky (1978), egocentric speech is a crucial phase that separates internal cognition from external communication. This external speech eventually internalises as inner speech, promoting self-control and autonomous problem-solving.

Inner Speech

Vygotsky (1987) defined inner speech as the internalised, silent language that develops as children grow older. It symbolises how egocentric speech can be transformed into an inside cognitive instrument. Inner speech, which reflects personal meaning-making processes, is far shorter than social speech. Inner speech is used, for instance, when an older child discreetly practices responses in their head before writing them down. Vygotsky highlighted that inner speech is a unique psychological process that underpins higher cognitive activities rather than just exterior speech devoid of sound.

Conclusion

Vygotsky's Sociocultural Theory presents a powerful framework for understanding the dynamic relationship between learning, development, and culture. By positioning social interaction and language as the foundations of cognition, Vygotsky challenged earlier perspectives that privileged individual discovery or reinforcement-based learning. His concepts of the Zone of Proximal Development, scaffolding, and the More Knowledgeable Other underscore the importance of guided participation in fostering emerging skills. Moreover, his distinction between social, egocentric, and inner speech clarifies the transformative role of language in bridging external communication and internal thought. Educational practices such as reciprocal teaching,

peer collaboration, and culturally embedded instruction reveal the enduring significance of SCT in modern pedagogy. Ultimately, Vygotsky's insights affirm that knowledge is not developed in isolation but co-constructed within cultural and social contexts, making his theory a cornerstone for both psychological research and effective educational practice.

References and Readings

1. Alderson-Day, B., and Fernyhough, C. (2015). Inner Speech: Development, Cognitive Functions, Phenomenology, and Neurobiology, *Psychological Bulletin, 141*(5), 931–965. *https://doi.org/10.1037/bul0000021*

2. Aljaafreh, A., and Lantolf, J., P. (1994). Negative Feedback as Regulation and Second Language Learning in the Zone of Proximal Development, *The Modern Language Journal, 78*(4), 465–483. *https://doi.org/10.2307/328585*

3. Belland, B., R., et al. (2017). A Bayesian Meta-analysis of the Effects of Scaffolding in STEM Education, *Review of Educational Research, 87*(6), 1042–1081. *https://doi.org/10.3102/0034654317723009*

4. Chaiklin, S. (2003). The Zone of Proximal Development in Vygotsky's Analysis of Learning and Instruction, In A. Kozulin, B. Gindis, V. S. Ageyev, & S. M. Miller (Eds.), *Vygotsky's Educational Theory in Cultural Context* (pp. 39–64), Cambridge University Press.

5. Cole, M. (1996). *Cultural Psychology: A Once and Future Discipline*, Harvard University Press. McLeod, S. (2023), Zone of Proximal Development (ZPD), *Simply Psychology*. *https://www.simplypsychology.org/Zone-of-Proximal-Development.html*

6. Daniels, H. (2001). *Vygotsky and Pedagogy,* Routledge.

7. Donato, R. (1994). Collective Scaffolding in Second Language Learning, In J. P. Lantolf & G. Appel (Eds.), *Vygotskian Approaches to Second Language Research* (pp. 33–56). Ablex.

8. Doo, Y., Bonk, C., J., and Heo, H. (2020). Meta-analysis of Scaffolding in Online Learning, *Educational Technology Research and Development, 68*(3), 1253–1279. *https://doi.org/10.1007/s11423-019-09728-9*

9. Hammond, J., and Gibbons, P. (2005). Putting Scaffolding to Work: The Contribution of Scaffolding in Articulating ESL Education, *Prospect, 20*(1), 6–30.

10. Jones, P., E. (2009). From 'External Speech' to 'Inner Speech': Vygotsky and the Problem of the Transition, *Language & Communication, 29*(1), 6–21. *https://doi.org/10.1016/j.langcom.2008.12.003*

11. Lantolf, J., P. (2006). Sociocultural Theory and L2: State of the Art, *Studies in Second Language Acquisition, 28*(1), 67–109. *https://doi.org/10.1017/S0272263106060037*

12. Lantolf, J., P. (Ed.). (2000). *Sociocultural Theory and Second Language Learning,* Oxford University Press.

13. Lantolf, J., P., and Thorne, S., L. (2006). *Sociocultural Theory and the Genesis of Second Language Development,* Oxford University Press.

14. Mercer, N. (1995). *The Guided Construction of Knowledge: Talk amongst Teachers and Learners,* Multilingual Matters.

15. Moll, L., C. (Ed.). (1990). *Vygotsky and Education: Instructional Implications and Applications of Sociohistorical Psychology,* Cambridge University Press.

16. Naibaho, L. (2019). The Effectiveness of Scaffolding on EFL Learners' Speaking Achievement, *International Journal of Research in English Education, 4*(2), 29–38. *https://doi.org/10.29252/ijree.4.2.29*

17. Newman, D., Griffin, P., aqnd Cole, M. (1989). *The Construction Zone: Working for Cognitive Change in School,* Cambridge University Press.

18. Palincsar, A., S., and Brown, A., L. (1984). Reciprocal Teaching of Comprehension-fostering and Comprehension-monitoring Activities, *Cognition and Instruction, 1*(2), 117–175. *https://doi.org/10.1207/s1532690xci0102_1*

19. Piaget, J. (1959). *The Language and Thought of the Child,* Routledge & Kegan Paul.

20. Rogoff, B. (1990). *Apprenticeship in Thinking: Cognitive Development in Social Context,* Oxford University Press.

21. Shah, M., and Balaji, M. (2022). An Analysis through the Lens of Sociocultural Theory: Implications for STEM Education, *Journal of Educational Research and Practice, 12*(1), 45–59.

22. Tharp, R., G., and Gallimore, R. (1988). *Rousing Minds to Life: Teaching, Learning, and Schooling in Social Context,* Cambridge University Press.

23. Van de Pol, J., Volman, M., and Beishuizen, J. (2010). Scaffolding in Teacher–student Interaction: A Decade of Research, *Educational Psychology Review, 22*(3), 271–296. *https://doi.org/10.1007/s10648-010-9127-6*

24. Vygotsky, L., S. (1978). *Mind in Society: The Development of Higher Psychological Processes* (M. Cole, V. John-Steiner, S. Scribner, & E. Souberman, Eds.), Harvard University Press.

25. Vygotsky, L., S. (1986). *Thought and Language* (A. Kozulin, Ed.; Rev. ed.), MIT Press. (Original work published 1934)

26. Vygotsky, L., S. (1987). *The Collected Works of L. S. Vygotsky, Volume 1: Problems of General Psychology,* Plenum Press.

27. Wang, Z. (2020). Using Vygotsky's Sociocultural Theory to Explore Ethnic Culture in Childhood Education, *Early Child Development and Care, 190*(15), 2470–2482. *https://doi.org/10.1080/03004430.2018.1564917*

28. Wertsch, J., V. (1985). *Vygotsky and the Social Formation of Mind,* Harvard University Press.

29. Wertsch, J., V. (1991). *Voices of the Mind: A Sociocultural Approach to Mediated Action,* Harvard University Press.

30. Wood, D., Bruner, J., S., and Ross, G. (1976). The Role of Tutoring in Problem Solving, *Journal of Child Psychology and Psychiatry, 17*(2), 89–100. *https://doi.org/10.1111/j.1469-7610.1976.tb00381.x*   ❑

Technological Innovations for a Sustainable Future: Need for Concerted Efforts

Tessy Thomas, FNAE, Vice Chancellor, Noorul Islam Centre for Higher Education, Kumaracoil, Kanyakumari and Former Director General (Aeronautical Systems), Defence Research and Development Organisation (DRDO) delivered the Convocation Address at the 56th Convocation Ceremony at the Indian Institute of Technology Delhi on August 02, 2025. She said, *"You are entering a world brimming with complexity and creativity. In this decade, the world needs problem solvers, dreamers who implement, builders who take action, and leaders who execute. Move on with the spirit of innovation, humility to learn from others, and courage to walk paths uncharted. Let your research and work solve numerous problems of the planet, and your enterprise empower the marginalised, and let your success be our nation's success."* **Excerpts**

First of all, let me congratulate the toppers with Institute Medals and all the graduating students of 2025.

You have reached the culmination of years of rigorous study, countless hours of experimentation, and sleepless nights of coding, designing, analysing, innovating, and aiming high. At IIT Delhi, you have mastered the principles of science and engineering and cultivated values like curiosity, resilience, and the courage that define a global technologist.

I would like to take a moment to acknowledge a truly commendable achievement by IIT Delhi. According to the QS World University Rankings 2026, the Indian Institute of Technology Delhi has risen to the 123rd position globally, moving up significantly from its previous rank, and has been recognised as the No. 1 educational institution in India. This recognition is the result of focused effort in academics, research, innovation, and industry engagement.

IIT Delhi features among the top 50 globally in Employer Reputation, the top 90 for Citations per Faculty, the top 150 in Academic Reputation, and the top 175 in Sustainability, reflecting both intellectual depth and a commitment to responsible progress. These achievements reflect the vision of leadership, the dedication of faculty, and the pursuit of excellence by students, the contributions of alumni, and the support of the government and industry partners. I extend my heartfelt congratulations to every contributor to this success.

From the newly launched M.Tech. programme in Energy Transition and Sustainability at the Abu Dhabi campus to cutting-edge research in Quantum Computing, Artificial Intelligence, Electric Vehicles and Blockchain, IIT Delhi is shaping the narrative of India's technological progress. The institute's reach is truly global—embracing collaborations from Estonia to Colombia, Denmark to the Dominican Republic, and stands out in the collaborative R&D, knowledge exchange, and technology co-development.

I was particularly pleased to note the state-of-the-art Central Research Facility in Sonipat, with 150 crore worth of advanced instruments, and the comprehensive atmospheric observatory built in collaboration with IMD, ISRO, NASA, and the University of Helsinki—a shining example of interdisciplinary and international science.

IIT Delhi's innovations, from low-cost battery pack energy storage systems to geospatial technology applications for agriculture to AI-led innovations in healthcare and energy, have a very high impact on society.

A time when the world is rapidly digitising, adopting new technologies, and ensuring those technologies are ethical, inclusive, and sustainable is a great challenge for future engineers, scientists, entrepreneurs, and leaders. Whether it is decarbonization, water conservation, digital equity, bio-innovation, or an engineering marvel, let it be your contribution to society.

India is in the midst of a powerful transition, from importing technologies to exporting innovations. ISRO launches, DRDO systems, indigenous semiconductors, AgriTech startups, and Bharat-made AI platforms are proof of these achievements. The vision of Atmanirbhar Bharat is no longer aspirational, and institutes like IIT Delhi are at the core of this journey.

Let me touch upon a few technologies where I see enormous promise and responsibility for generations to come.

Artificial Intelligence (AI) and Generative Models

AI is now integrated into national security systems, medical diagnostics, and disaster prediction.

The coming years will demand AI to be explainable, unbiased, and human-centric.

Sustainable Energy and Circular Economy

The future will not be powered by fossil fuels, and the shift to hydrogen, solar, and bio-based fuels, along with storage innovations, will redefine the energy systems. IIT Delhi's research on energy science, electric vehicles, and waste reuse puts the institution in a pivotal position to lead this revolution.

Quantum Technologies

With expertise in physics, materials science, and computation, IIT Delhi is poised to contribute to quantum communication, quantum sensing, and the new frontier of the quantum internet.

Space and Satellite Technologies

As someone who has worked with missile systems, I can tell you—the space above us is waiting to get explored more and more. This generation will define how we use these space technologies for climate resilience, agriculture, disaster management, and global communications.

Human-machine Interfaces

With wearable sensors, bio-chips, and augmented reality, the boundary between machine and human is narrowing and comes with the need for responsible innovation that preserves privacy and dignity.

As we look towards building a secure and self-reliant India, it is essential to recognise the transformative role that DRDO plays in our nation's growth and security. The synergy between scientific research and national security is growing stronger. DRDO, as the premier Defence R&D Organisation under the Ministry of Defence, strengthens India's national security through indigenous technological advancements.

Its work spans critical domains—strategic missiles, advanced fighter aircraft, secure radar systems, unmanned aerial vehicles, underwater systems, and electronic warfare platforms. Developing advanced systems across all domains—missiles, naval platforms, aeronautical systems, cyber technologies, life sciences, and electronics— requires a multidisciplinary and collaborative approach. Today, India is accelerating its journey towards *Atmanirbhar Bharat* through integrated partnerships between government agencies, academia, scientific institutions, and industry. With new policies encouraging deeper academic and industrial collaboration, institutions like IIT Delhi are becoming key enablers in shaping future-ready solutions for national defence and societal well-being.

These achievements are the result of years of focused scientific research, technological refinement, and unwavering commitment to national interest through academia and industry collaborations. Sustained. The efforts of our scientists, technologists, and academicians have made *Atmanirbhar Bharat* possible.

India's recent milestones—*Chandrayaan-3*, Aditya L1, and the upcoming *Gaganyaan* Mission—showcase the country's growing prominence in space research. With initiatives like *Viksit Bharat* 2047, Digital India, and Make in India, our country is poised to become a global leader in technology, manufacturing, and innovation, and India stands at the forefront of technological revolutions, economic expansion, and sustainability initiatives.

In a world increasingly driven by data, algorithms, and automation, human values will matter more than valuations.

IIT education has prepared you to build systems and has trained you to be custodians of trust in a world dominated by technology. As you step out, remember the words of Prof. Satish Dhawan, one of India's finest aerospace scientists—"Progress in science and technology must be accompanied by progress in thought, values, and compassion."

My hearty congratulations to the parents and guardians, who believed in their children before the world noticed them and stood behind their choices and curiosity. Dear faculty members, you have played a crucial role in shaping the young minds that will shape the future and human lives.

Dear graduates, you are entering a world brimming with complexity and creativity. In this decade, the world needs problem solvers, dreamers who implement, builders who take action, and leaders who execute. Move on with the spirit of innovation, humility to learn from others, and courage to walk paths uncharted. Let your research and work solve numerous problems of the planet, and your enterprise empower the marginalised, and let your success be our nation's success.

Once again, I extend my heartfelt congratulations to all the graduating students.

May your journey ahead be full of curiosity, courage, and rich contributions to society.

Thank you.

Jai Hind ❑

CAMPUS NEWS

Seminar on Empowering the Nation's Youth to Live Addiction-free Life

The One-day Seminar on 'Empowering the Nation's Youth to Live Addiction-free Life' is being organised by the Principal K. M. Kundnani College of Pharmacy, Cuffe Parade, Mumbai in collaboration with the Student Council, Department of Lifelong Learning, KMKCP, Mumbai and Hetero Healthcare Ltd. on September 11, 2025. The event aimed to empower the students to live an addiction-free life by providing a deeper understanding of addiction, including the science behind it and how it affects the brain. It explored the psychology of tobacco dependency and raised awareness about the dangers of tobacco use and its long-term health consequences. The session also offered expert strategies to help individuals quit smoking and tobacco habits, along with free guidance and support resources to assist them throughout their journey.

The event began with the introduction of the guests and speakers by Ms Nimarta Gill. The guests were welcomed by presenting floral greetings. The Guest Speaker, Mr Rohann Bokdawala, Psychiatrist, delivered an insightful talk, addressing various forms of addiction prevalent among the youth, such as cigarette smoking, cannabis use, tobacco chewing, and the rapidly growing trend of vaping. He explained how these substances create psychological and physical dependency, their harmful effects on health, and provided guidance on overcoming addiction. Mr Bokdawala elaborated on multiple psychological techniques and therapeutic approaches, including the use of nicotine patches, one of which— a unique 3-day nicotine transdermal patch— is developed by Hetero Healthcare, the only company manufacturing this product. Following his insightful talk, a question-and-answer session was conducted where students actively participated and raised queries regarding toxicity, health hazards, and possible alternatives to smoking.

Adding to the session, Mr Devendra Morajkar, General Manager, Healion Division, also shared his insights on the importance of early intervention and awareness in curbing substance abuse. The Teacher In-Charge, Dr Mrinal Sanaye, further emphasised how crucial it was for pharmacy students to be well informed and actively involved in promoting anti-tobacco initiatives for the betterment of community health. As a token of appreciation, a memento was presented to Mr. Rohann Bokdawala on behalf of K.M.K. College of Pharmacy by Dr Mrinal Sanaye. The session concluded with a heartfelt vote of thanks by Ms Nimarta Gill, acknowledging the efforts of the organisers, the speakers, and the audience who contributed to making the event successful.

World Management Conference on Driving Social Impact through Management Research

A three-day World Management Conference on 'Driving Social Impact through Management Research' is being organised by the Indian Institute of Management Ranchi, Jharkhand, from November 27-29, 2025, through hybrid mode. The event brings together researchers, academicians, policymakers, and industry professionals.

Management research holds immense potential to be a catalyst for social transformation, addressing some of the most pressing challenges of our time. By shaping business practices, informing policy decisions, and refining organisational strategies, management research can foster innovative solutions that promote sustainability, inclusivity, and societal well-being. In an era defined by rapid technological advancements, climate change, economic disparities, and evolving workforce dynamics, the role of management research in creating sustainable business models and responsible leadership has never been more crucial. Research-driven insights can help organisations to navigate the complexities, drive impactful initiatives, and bridge the gap between profitability and purpose. The following are the disciplines, focused on but not limited to, the event theme:

- Economics.
- Finance and Accounting.
- Information Systems and Business Analytics.
- Responsible Business.
- Marketing.
- Organisational Behaviour and Human Resource Management.
- Quantitative Methods and Operations Management.
- Strategy and Entrepreneurship.
- Interdisciplinary Studies.

For further details, contact Conference Patron, Prof. Deepak Kumar Srivastava, Director, Indian Institute of Management Ranchi, Prabandhan Nagar, Ranchi – 835 303, Jharkhand, E-mail: *paniimwmc2025@iimranchi.ac.in.* For updates, log on to: *www.paniim2025.iimranchi.ac.in*

International Conference on Case Pedagogy@2050

A two-day International Conference on 'Case Pedagogy@2050: Challenges and Opportunities' is being hosted by the Case Research Centre, ICFAI Business School, Hyderabad, ICFAI Foundation for Higher Education, Hyderabad, from November 13-14, 2025. The event will provide a platform to leaders in academia, policymakers in higher education, case teachers, writers, and publishers to engage with and understand the trends that will shape the future of the case method.

The case method of teaching and learning is more than 100 years old. It is still a powerful teaching and learning tool in management education. What will its relevance be in the next 25 years? How will it evolve? What will the impact of technology, especially AI, be on case teaching, learning, and writing? Can the case method be adopted in Engineering and the Liberal arts? How can the case method help in preserving and promoting indigenous knowledge? The Subthemes of the Event are:

AI-enabled Case Teaching and Learning

- Maintaining a Human Connection in AI-enhanced Case Teaching.
- Harnessing AI for Personalised Case Learning.
- Innovative Case Teaching Formats Enabled by AI.
- Case Teaching for Engineering, Law, and the Liberal Arts.
- Expanding Case Pedagogy to Non-traditional Learners.

AI in Case Development

- Ethical Concerns in AI-driven Case Development.
- Security and Privacy Risks in Using AI for Case Development.
- AI as a Tool for Case Writers.
- Reimagining Teaching Notes with AI Support.

Preserving and Promoting Indigenous Knowledge through Cases

- Preserving and Promoting Indigenous Knowledge Systems.

For further details, contact the Organising Secretary, Case Research Center, ICFAI Business School, Hyderabad, ICFAI Foundation for Higher Education, Hyderabad, Telangana-501203, Mobile No: 096409 01313, E-mail: *icsc2025@ibsindia.org.* For updates, log on to*: www.icfaiuniversity.in/events/*

Faculty Development Programme on AI-Driven IoT for Smart and Sustainable Systems

A six-day Faculty Development Programme on 'AI-Driven IoT for Smart and Sustainable Systems' is being organised by the Motilal Nehru National Institute of Technology (MNNIT), Allahabad, from December 01-06, 2025, through online mode. The event is sponsored by the All India Council for Technical Education.

The fusion of Artificial Intelligence (AI) with the Internet of Things (IoT) is transforming how physical systems interact, respond, and evolve. This integration, commonly known as AIoT, enables intelligent automation, real-time decision-making, and context-aware responses across a wide range of applications. From smart cities and industrial automation to precision agriculture and intelligent healthcare, AIoT is revolutionising modern systems to become more sustainable, efficient, and responsive. One of the key enablers of this transformation is edge computing, where AI algorithms are executed closer to the data source, such as sensors or IoT devices, minimising latency and reducing the need for constant cloud communication. This not only improves real-time responsiveness but also supports energy-efficient operations and enhances data privacy. The Topics of the Event are:

- Edge AI for Real-time IoT Decision-making.
- Federated Learning in IoT Environments.
- Secure and Privacy-aware AI Models for IoT.
- AI-powered Predictive Maintenance Using IoT Sensors.
- AI in Smart Cities: Applications in Traffic, Energy, and Waste Management.
- IoT Data Analytics and Visualisation with AI Techniques.
- Integration of AIoT (AI + IoT) in Industry 5.0 and Healthcare.

For further details, contact the Coordinator, Dr. Pragya Dwivedi, Associate Professor, Department of Computer Science and Engineering, Motilal Nehru National Institute of Technology, Allahabad, Prayagraj –211004, Mobile No: 08601850563, E-mail:

pragyadwi86@mnnit.ac.in. For updates, log on to: *https://mnnit.ac.in*.

National Conference on Critical Metals

A three-day National Conference on 'Critical Metals: Recycling, Innovation, Separation and Processing' is being organised by the Department of Fuel Minerals and Metallurgical Engineering, Indian Institute of Technology, Indian School of Mines (ISM) Dhanbad, Jharkhand from October 13-15, 2025. The researchers, academicians, mining, mineral and metallurgical engineers, scientists and sustainability experts, industry professionals and e-waste recyclers, policy makers, and students may participate in the event.

The accelerating global transition towards clean energy, digitalisation, and advanced manufacturing has intensified the demand for critical metals - lithium, cobalt, rare earth elements, nickel, and more. These elements power the future: from EVs and wind turbines to aerospace and electronics. India, recognising the strategic importance of these resources, has launched the National Critical Minerals Mission to enhance domestic exploration, forge global partnerships, and build sustainable, resilient supply chains. Global efforts toward resource security, responsible mining, and innovation in recycling underscore the urgency for collaborative platforms that address the full lifecycle of critical metals. The Themes of the event are:

- Identification, Exploration and Characterisation of Critical Minerals.
- Beneficiation of Critical Minerals.
- Critical Metals Extraction from Primary and Secondary Resources.
- Advanced Separation and Purification Techniques.
- Value Addition and Alloy Development.
- Role of AI and Automation in Critical Metals Exploration and Extraction.
- Environmental Impact and Lifecycle Analysis.
- National Policy and Regulatory Framework on Critical Metals.
- Future Trends and Opportunities in Critical Metals.

For further details, contact the Convenor, Department of Fuel Minerals and Metallurgical Engineering, Indian Institute of Technology, Indian School of Mines (ISM) Dhanbad, Jharkhand-826004, Mobile No: 09304603155/08754510216, E-mail: *crisp2025@iitism.ac.in*. For updates, log on to: *https://people.iitism.ac.in/~crisp2025/* ❑

Opinions expressed in the articles published in the University News are those of the contributors and do not necessarily reflect the views and policies of the Association.

THESES OF THE MONTH

SOCIAL SCIENCES
A List of doctoral theses accepted by Indian Universities
(Notifications received in AIU during the month of July-August, 2025)

Business Administration

1. Ramneet Kaur. **Impact of faculty work conditions and job satisfaction on quality of education: A study of B-schools in Haryana**. (Dr. Rajneesh Ahlawat), Department of Business Administration, Chaudhary Devi Lal University, Sirsa.

Commerce

1. Adroja, Kantilal Haribhai. **A study of financial performance of selected payments banks in India**. (Dr. Jayeshkumar R Vasava), Faculty of Commerce, Bhakta Kavi Narsinh Mehta University, Junagadh.

2. Dhanesha, Kaushal Gopalbhai. **A study of Goods and Services Tax and its impact on selected pharmaceutical companies of Gujarat**. (Dr. Pareshkuamr J Parmar), Department of Commerce & Management, Bhakta Kavi Narsinh Mehta University, Junagadh.

3. Patel, Ruchi Shantilal. **Corporate governance in Indian banking sector: An empirical research**. (Dr. Hajabhai D Barad), Department of Commerce & Management, Bhakta Kavi Narsinh Mehta University, Junagadh.

4. Raval, Dipamkumar Maheshkumar. **A study on impact of Organisational Citizenship Behaviour [OCB] on employees of colleges in Saurashtra Region**. (Dr. Jayeshkumar R Vasava), Department of Commerce & Management, Bhakta Kavi Narsinh Mehta University, Junagadh.

5. Rupareliya, Roshani Sureshbhai. **A study on role of banking sector towards the vision of $5 trillion economy**. (Dr. Kailashben P Damor), Department of Commerce, Saurashtra University, Rajkot.

6. Vinita. **A study of implementation of labour welfare schemes at construction sites in Haryana**. (Dr. Kamlesh Rani), Department of Commerce, Chaudhary Devi Lal University, Sirsa.

Economics

1. Diwakaran, S. **Impact of performance management system on employee retention in selected automobile industries of Tamilnadu**. (Dr. H Samuel Thavaraj), Department of Rural Industries and Management, The Gandhigram Rural Institute-Deemed University, District Dindigul.

2. Pancras, J.J Stany. **Role of Missionary organizations in rural transformation: Study in Dharmapuri District, Tamil Nadu**. (Dr. R. Venkata Ravi), Department of Lifelong learning and Extension, The Gandhigram Rural Institute-Deemed University, District Dindigul.

3. Priyadharsini. **A study on financial management of silk handloom cooperatives in Kumbakonam cluster**. (Dr. R Seerangarajan), Department of Rural Industries and Management, The Gandhigram Rural Institute-Deemed University, District Dindigul.

4. Sandra, Surendran. **An economic impact of Deen Dayal Upadhyaya Grameen Kaushalya Yojana on poverty eradication in Kerala**. (Dr. M Soundarapandian), Department of Rural Industries and Management, The Gandhigram Rural Institute-Deemed University, District Dindigul.

5. Soni. **Declining sex ratio in India: A case study of Haryana**. (Dr. Kavita Chakravarty), Department of Economics, Maharshi Dayanand University, Rohtak.

Education

1. Beena, A V. **Development of professional enrichment programme for the secondary school mathematics teachers**. (Prof. K Pushpanadham), Department of Education, M S University of Baroda, Vadodara.

2. Bharathi, N V. **Effectiveness of advance organizer model on achievement in biology**. (Dr. Praveen R), Department of Education, CMR University, Bangalore.

3. Bhoraniya, Paulomi Mukeshbhai. **An effectiveness of activity based teaching programme for the selected units of Science subject for 6th class**. (Dr. Nimishkumar Naranbhai Viramgama), Department of Education, Bhakta Kavi Narsinh Mehta University, Junagadh.

4. Bosmia, Darshana Chhaganlal. **A study of the school management problems and the adjustment and professional efficacy of primary school head teacher**. (Dr. Kashyap Mansukhlal Joshi), Department of Education, Bhakta Kavi Narsinh Mehta University, Junagadh.

5. Gorain, Shishupal. **Teacher effectiveness of secondary school teachers in relation to personality and burnout in West Bengal**. (Dr. Satish Kumar Kalhotra), Department of Education, Rajiv Gandhi University, Itanagar.

6. Kislay, Kishor Mirgank. **Effect of scaffolding strategy on learning outcome of secondary school students of mathematics in relation to mathematical attitude and academic motivation**. (Dr. Satish Kumar Kalhotra), Department of Education, Rajiv Gandhi University, Itanagar.

7. Mahajan, Anagha Arun. **Effect of MOOC & flipped learning on students' self-regulated learning and academic achievement**. (Dr. Neha Deo), Department of Education, S.N.D.T. Women's University, Mumbai.

8. Mittal, Priya. **Academic resilience of senior secondary school students in relation to their meta-cognitive skills, learning style and productive thinking**. (Dr. Anu Balhara), Department of Education, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan.

9. Patel, Vatikaben Hasmukhbhai. **Restandardization of HSPQ for the students of the age of 14 to 18 years of Gujarat State and a study of their personality traits in context to certain variables**. (Dr. Ramchandra B Mehta), Department of Education, Bhakta Kavi Narsinh Mehta University, Junagadh.

10. Pinki. **A study of academic performance in relation to parental pressure, examination anxiety and smart phone addiction among secondary school students**. (Dr. Jitender Kumar), Department of Education, Maharshi Dayanand University, Rohtak.

11. Sarkar, Mousumi. **Effect of social media based collaborative learning approach on academic performance of the pre-service teachers of Assam**. (Dr. P K Barik), Department of Education, Rajiv Gandhi University, Itanagar.

12. Savitha, L J. **Occupational stress and teaching effectiveness among secondary school teachers**. (Dr. Balaji B R and Dr. Asokan N), Department of Education, CMR University, Bangalore.

13. Sharma, Rajesh Kumar. **A study of academic achievement of graduation level students in relation to self esteem and achievement motivation**. (Dr. Sanand Kumar), Department of Education, AKS University, Satna.

14. Sunya, Duyu. **A study on teaching competency of B.Ed student teachers of Arunachal Pradesh in relation to personality and academic achievement**. (Dr. Vivek Singh), Department of Education, Rajiv Gandhi University, Itanagar.

15. Tasing, Jyoti. **Teaching effectiveness of secondary school teachers of Arunachal Pradesh in relation to occupational stress, emotional intelligence and school organizational climate**. (Dr. Satish Kumar Kalhotra), Department of Education, Rajiv Gandhi University, Itanagar.

Home Science

1. Gajjar, Nayana Jentibhai. **Impact of food pattern on health of working community in Junagadh District**. (Dr. Mita R Rajpura), Department of Home Science, Bhakta Kavi Narsinh Mehta University, Junagadh.

2. Padsumbiya, Hetal Hitendrakumar. **A study on the role of self-help group in empowerment of women in Rajkot District of Gujarat**. (Dr. Mita R Rajpura), Department of Home Science, Bhakta Kavi Narsinh Mehta University, Junagadh.

3. Savant, Hina Dinmahamadbhai. **The prevalence of under nutrition and its associated factors among preschool children in Junagadh District**. (Dr. Mita R Rajpura), Department of Home Science, Bhakta Kavi Narsinh Mehta University, Junagadh.

Journalism & Mass Communication

1. Shahin, Shabnam. **Psycho Thiller series on OTT platforms: An analytical study of antagonists and protagonists**. (Dr. M Nawaz Khan), Department of Mass Communication, Rajiv Gandhi University, Itanagar.

2. Uikey, Seema. **Media and happiness: A study on usage of social media and its effect on life satisfaction and psychological well being (With special reference to Bhopal)**. (Dr. Urvashi Parmar), Department of Mass Communication, Makhanlal Chaturvedi National University of Journalism and Communication, Bhopal.

Law

1. Arora, Tanu. **Sexual harassment at higher educational institutions: A study of Haryana & Delhi universities**. (Dr. Sandhya Rohal), Department of Laws, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan.

2. Chishty, Syed Raghib. **An analytical study of the role of the National Human Rights Commission in the protection of human rights in India**. (Dr. Dushyant Kumar), Department of Law, Bhagwant University, Ajmer.

3. Debnath, Arkajit. **A Critical study on phishing attacks in India with special reference to the State of Tripura**. (Dr. Raghunath Chakraborty), Faculty of Law, ICFAI Foundation for Higher Education.

4. Himanshu Singh. **Working of HALSA in the State of Haryana: A socio-legal study**. (Dr. Anusuya Yadav), Department of Law, Maharshi Dayanand University, Rohtak.

5. Manvender Singh. **Environment protection in India: A study with special reference to air pollution**. (Dr. Satya Pal Singh), Department of Law, Maharshi Dayanand University, Rohtak.

6. Monika. **Need to redefine the doctrine of fair dealing in India: A descriptive study**. (Dr. Parmod Malik), Department of Laws, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan.

7. Plathottam, Subash G. **Legal measures for socio-economic integration of migrant labourers: A study with special reference to Kottayam District in Kerala**. (Prof. Seema Surendran), Department of Law, CMR University, Bangalore.

8. Poonam. **Right to privacy in digital era in India: A descriptive study**. (Dr. Ashok Kumar), Department of Laws, Bhagat Phool Singh Mahila Vishwavidyalaya, Khanpur Kalan.

9. Syed Muzahir. **Analytical study of victims rights of cheque dishonour in present legal scenario**. (Dr. Dushyant Kumar), Department of Law, Bhagwant University, Ajmer.

Management

1. Das, Dipti Ranjan. **Health care of pregnant women in aspirational Nabarangpur District of Odisha**. (Dr. Ipseeta Satpathy), KIIT School of Management, Kalinga Institute of Industrial Technology, Bhubaneswar.

2. De, Kaberi. **Impact of personality traits on organizational citizenship behavior of faculties in higher educational institutions of Tripura: Interactive effects of work life balance and work engagement**. (Dr. Prasanjit Dasgupta), Faculty of Management and Commerce, ICFAI Foundation for Higher Education.

3. Deb, Sankha Subhra. **Behavioral biases in equity investment: A study on bank employees in Tripura**. (Dr. Sujit Deb), Faculty of Management and Commerce, ICFAI Foundation for Higher Education.

4. Dev, Debadrita. **Women entrepreneurship through self-help group- bank linkage program in Tripura**. (Dr. Annesha Saha), Faculty of Management and Commerce, ICFAI Foundation for Higher Education.

5. Goel, Ridhima. **Measuring relationship of work from home, employee well-being and performance**. (Dr. Jagdeep Singla), Department of Management, Maharshi Dayanand University, Rohtak.

6. Hameed, Ibrahim Mohammed. **Effect of Management Information System on organizational agility and excellence: A comparative study of India & Iraq**. (Dr. Jagdeep Singla), Department of Management, Maharshi Dayanand University, Rohtak.

7. Nikkam, Sangeetha E. **Impact of accountability mechanism determinants on sustainability: An empirical study of NGOs accountability practices in Karnataka**. (Dr. T Kishore Kumar and Dr. Nagaraju Ellaturu), Department of Management, CMR University, Bangalore.

8. Preeti. **Adoption and satisfaction of e-banking services among rural customers**. (Dr. Jagdeep Singla), Department of Management, Maharshi Dayanand University, Rohtak.

9. Singh, Pratima. **A critical study of gamification to explore the possibility of an alternative performance appraisal system in IT industry in NCR**. (Prof. Pragati Chauhan), School of Management & Commerce, Manav Rachna University, Faridabad.

10. Tashi, Lungtan Kee. **Assessment of homestay tourism in Arunachal Pradesh with special reference to Tawang and Lower Subansiri District**. (Dr. Shankar Thapa), Department of Management, Rajiv Gandhi University, Itanagar.

Physical Education & Sports

1. Devender Singh. **A comparative study of physical fitness and anthropometric components of raider and stopper of kabaddi players**. (Prof Ashok Kumar Sharma), Department of Physical Education, Chaudhary Devi Lal University, Sirsa.

2. Gomati Devi. **Remedial effect of selected yogasanas on postural deformities of school children**. (Prof Ashok Kumar Malik), Department of Physical Education, Chaudhary Devi Lal University, Sirsa.

3. Pawan Kumar. **A study of body composition and selected anthropometric variables of combat and team games players**. (Prof Ashok Kumar Sharma), Department of Physical Education, Chaudhary Devi Lal University, Sirsa.

Political Science

1. Opi, Hage. **Assam-Arunachal Pradesh boundary dispute with special reference to Lower Siang District, Arunachal Pradesh**. (Dr. David Gao), Department of Political Science, Rajiv Gandhi University, Itanagar.

2. Pani, Renyu. **Child labour in Arunachal Pradesh: A case study on Papum Pare District**. (Dr. Punyo Yarang), Department of Political Science, Rajiv Gandhi University, Itanagar.

Psychology

1. Bagra, Jomyir. **Effectiveness of mental health awareness training on mental health literacy, help seeking behaviour and psychological well-being among the youth of Arunachal Pradesh**. (Dr. Kakali Goswami), Department of Psychology, Rajiv Gandhi University, Itanagar.

2. Butani, Daxagauri Parsotambhai. **A social psychological study of modernization social change and youth problem among college students**. (Dr. Jamkuben A Sojitra), Department of Psychology, Bhakta Kavi Narsinh Mehta University, Junagadh.

3. Rinyo, Koj. **Psychological influences of perceived parenting styles among the apatani adolescents**. (Dr. Dharmeshwari Lourembam), Department of Psychology, Rajiv Gandhi University, Itanagar.

4. Sweta Kumari. **Efficacy of intervention for gaming addiction among adolescents**. (Dr. Ravisankar A V), Department of Psychology, CMR University, Bangalore.

Public Administration

1. Siwach, Nitin. **Performance evaluation of State Information Commission: An empirical study of Haryana**. (Dr. S S Dahiya), Department of Public Administration, Maharshi Dayanand University, Rohtak.

Social Work

1. Jiri, Toko. **Commodification, credibility and VIP culture in healthcare: A phenomenological study on priorities and efficacy of medical social work in public and private hospitals in India**. (Dr. Ravi Ranjan Kumar), Department of Social Work, Rajiv Gandhi University, Itanagar.

2. Vaghela, Avani Shantikumar. **Mandate of CSR a beneficiaries and practitioners perspective**. (Prof. Bhavna Mehta), Department of Social Work, M S University of Baroda, Vadodara.

Sociology

1. Bhawna. **Substance use, mental health and quality of life among male youth: A case study of slums in Delhi, India**. (Prof. R Nagarajan), Department of Population & Development, International Institute for Population Sciences (Deemed to be University), Deonar.

2. Dangar, Dinesh Valjibhai. **A sociological study of role and role conflict of women teachers of primary school: With reference to Rajkot District**. (Dr. Ashok B Mungara), Department of Sociology, Saurashtra University, Rajkot.

3. Kalita, Juhi. **A study of social, cultural life, economic conditions and changing occupational structure of folk artists of Lower Assam**. (Dr. Sujata Gokhale), Department of Sociology, S.N.D.T. Women's University, Mumbai.

4. Parveen Kumar. **Swasthya Vigyan evam Shodhvishvidyalya, Rohtak mein karyarat narsoan ka samajshastriya adhyayan**. (Dr. Preeti Dahiya), Department of Sociology, Maharshi Dayanand University, Rohtak.

5. Rathod, Aarati Dayalal. **Impacts of health related schemes on women's health: A sociological study**. (Prof Jaysinh B Zala), Department of Sociology, Bhakta Kavi Narsinh Mehta University, Junagadh.

6. Rathod, Alpa Hasmukhbhai. **Social status and challenges of single parent family: A sociological study (In reference of Porbandar District**. (Dr. Punjabhai G Bheda), Department of Sociology, Bhakta Kavi Narsinh Mehta University, Junagadh.

7. Sarif, Nawaj. **Trajectories, factors, and consequences of urban shrinkage in India case studies of selected towns and cities**. (Prof. Archana K Roy), Department of Migration & Urban Studies, International Institute for Population Sciences (Deemed to be University), Deonar.

8. Shirsat, Deepa. **A study of Marathi cinema of 21st century: Social content and changing trends**. (Dr. Sujata Gokhale), Department of Sociology, S.N.D.T. Women's University, Mumbai.

9. Sisodia, Akansha. **Socio-economic impacts of women empowerment in special reference to Ajmer District**. (Dr. Sourabh Vyas and Dr. Nidhi Singh), Department of Sociology, Bhagwant University, Ajmer.

Women's Studies

1. Nair, Rajni. **Gender in cyberspace: A study of refashioning of the self among urban women**. (Dr. Putul Sathe and Dr. Vibhuti Patel), Department of Research Centre for Women's Studies, S.N.D.T. Women's University, Mumbai. ❑

CHINMAYA VISHWA VIDYAPEETH

(Deemed-to-be (DeNovo) University under Section 3 of the UGC Act, 1956)

Appointment of Vice-Chancellor

Applications are invited for the post of **Vice-Chancellor** of Chinmaya Vishwa Vidyapeeth (CVV), a Deemed-to-be University integrating Indian Knowledge Systems with contemporary higher education.

Eligibility: As per UGC Regulations; in addition, candidates should have proven academic leadership and institution-building ability, with demonstrated experience in research promotion, NEP-2020 implementation, quality assurance and resource mobilisation in alignment with CVV's vision.

Tenure & Pay: As per UGC Regulations and CVV Statutes.

How to Apply:

Eligible candidates may send a single PDF containing

- Detailed CV
- 1,500–2,000-word vision note for CVV,
- Evidence of eligibility
- Top five achievements,
- Three referees' details

How to Apply: Applications may be submitted by **email to secretary.scscvc@cvv.ac.in** with the subject line "Application – Vice-Chancellor – [Your Name]" or through the University's **website at cvv.ac.in/careers/vc.**

Application window: 17 September – 6 October 2025 (up to 23:59 IST).

Chairperson
Search-cum-Selection Committee
Chinmaya Vishwa Vidyapeeth

Late Shri Balibhadra Singh Shikshan Sansthan's
SIR J. P. COLLEGE OF EDUCATION & RESEARCH, PALGHAR
J. P. Compound, Haranwadi Naka, Mahim Road, Mahim Village, Palghar (W) 401404

Minority

APPLICATIONS ARE INVITED FOR THE FOLLOWING POSTS FROM THE ACADEMIC YEAR 2025-2026:

UN-AIDED

Sr. No.	Cadre	Subject	Total No. of Posts	Category
1.	Principal	--	01	01-OPEN
2.	Assistant Professor	Perspectives in Education	04	04-OPEN
		Pedagogy of Teaching school Subject Marathi, Hindi, English History, Geography, Science, Economics.	07	07 OPEN
		Health and Physical Education	01	01-OPEN
		Fine Arts	01	01-OPEN
		Performing Arts (Music/Dance/Theater)	01	01-OPEN
3.	Librarian	-----	01	01-OPEN

The above posts are 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 person 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. TASS/(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 proper channel. Applicants are required to account for breaks, if any, in their academic career.

Application with full details should reach the **SECRETARY, Late Shri Balibhadra Singh Shikshan Sansthan's Sir J. P. College of Education & Research, Palghar J. P. Compound, Haranwadi Naka, Mahim Road, Mahim Village, Palghar (W) 401404 within 15 days** from the date of publication of this advertisement. **This is university approved advertisement.**

Sd/-
SECRETARY

Krishibhushan Dr Tanajirao Chorage Education and Research Institute, Mandki Palvan
DR TANAJIRAO CHORAGE ADHYAPAK MAHAVIDYALAY (B.ED)
At Post- Mandaki-Palvan, Dist. –Ratnagiri 415641

APPLICATION ARE INVITED FOR THE PRINCIPAL, LECTURERS & LIBRARIAN FORM THE ACADEMIC YEAR 2025-26:

UNAIDED

Sr. No	Cadre	Subject	Total No of posts	Posts Reserved For
1.	Principal	--	01	01-OPEN
2.	Assistant Professor	Education	07	01- SC, 01-ST, 01-DT(A), 01 OBC, 01, SEBC/EWS, 02- OPEN
3.	Librarian	--	01	01-OPEN

The posts reserved for the Backward Class Candidates will be filled in by backward 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.

"Qualifications 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 26th March, 2019 and revised from time to time "The Government Resolution & Circular and available on the website: Mu.ac.in.

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

Applications with full details should reach the **SECRETARY, Krishibhushan Dr Tanajirao Chorage Education and Research Institute, Mandki Palvan, Dr Tanajirao Chorage Adhyapak Mahavidyalay (B.ED), Mandaki- Palvan, Tal. Chiplun, Dist. Ratnagiri. 415641 within 15 days** from the day of publication of this advertisement. **This is University approved advertisement**.

Sd/-
SECRETARY

Jai Jagdamba Bahhu-udeshiya Sanstha, Sarjapur
JAI JAGDAMBA COLLEGE OF EDUCATION, VAIRAG
Tal- Barshi, Dist- Solapur, Maharashtra
(Affiliated to Punyashlok Ahilyadevi Holkar Solapur University, Solapur)

PERMANENT NON-GRANTABLE

Applications are invited from eligible candidates for the following Post of Principal and Assistant Professor.

Sr. No	Subject/Designation	Vacant Post	Reserved Category Posts
01	**Principal**	01	Open
02	**Perspective in Education**	01	ST-01
03	**Pedagogy Subject (Language Methodology),**	01	SEBC-01
04	**Pedagogy Subject (Science Methodology),**	01	EWS-01
05	**Health and Physical Education OR Fine Art OR Performing Art (Music/Dance/Theatre)**	01	VJNT-A-01

Instructions:-

1. Open post is open to all; however, candidates from any category can apply for the post.

2. Educational Qualification service conditions and pay scale will be applicable as prescribed by, the UGC Notification Dated 18th July 2018, Govt. of Maharashtra Resolution No. Misc 2018/C.R.56/18 UNI-1 Dated 8th March 2019 and University Circular No. PAHSUS/Estt/7th pay/2019/2285/dtd.25h March 2019.

3. Candidates should submit their Academic Research Score (Academic Performance Indicator) report with related documents. (Only for the post of Principal)

4. A relaxation of 5% shall be allowed at the Bachelors as well as at the Masters Level of the candidates belonging to SC/ST/ OBC (Non-Creamy Layer)/ Differently-abled for the purpose of eligibility and assessing good academic record for direct recruitment.

5. Reserved candidates, who are domiciled out of Maharashtra State, will be treated as Open Category candidates.

6. Reserved candidates should also to send a copy of their application to the Deputy Registrar, Special Cell, Punyashlok Ahilyadevi Holkar Solapur University, Solapur.

7. Application received after the last date will not be considered. The College will not be responsible for postal delay, if any.

8. Reservation for PWD, Women and Disable persons will be as per the Govt. norms.

9. Reserved category candidates shall produce the Caste Validity Certificate as per the directives issued by the State Government vide Circular No. BCC-201/Pra.Kra.1064/2011/16B date 12-12-2011.

10. Reserved category candidates (except SC/ST) shall produce Non-Creamy Layer Certificate at the time of interview.

11. Applicants who are in service must send their application through proper channel.

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

13. T.A., D.A. will not be paid for attending the interview.

14. Applications with full details should reach through Proper channel to The Secretary, Jai Jagdamba Bahuuddeshiya Sanstha, Sarjapur, tal -Barshi, Dist-Solapur **Or C/o I/C Principal Jai Jagdamba College of Education, Vairag, Tal-Barshi, and Dist- Solapur. 413402 within 30 days** from the date of publication of this advertisement.

15. Incomplete applications will not be entertained.

16. All the Terms & Conditions are applicable as mentioned in the NOC letter no. JDHE Solapur/NOC/2019/3 dated 17/01/2023 from Hon. Deputy Secretary, Higher and Technical Education Dept, Govt. of Maharashtra, Mumbai and letter No. DJD/HE/SDS/2023/138 dated 24/01/2023, Hon. Deputy Director of Higher Education, Solapur Division, Solapur.

17. All the Terms & Conditions are applicable as mentioned in the GR Dated 12/11/2021 form Higher and Technical Education Department of Government of Maharashtra.

18. Please note that the recruitment procedure initiated by this advertisement is subject to the decision by Hon. Bombay High-court, Aurangabad Bench in writ petition No. 12051/2015.

19. This is University approved advertisement.

Chairman/Secretary
Jai Jagdamba Bahuuddeshiya Sanstha, Sarjapur
Tal-Barshi, Dist-Solapur. 413402

Shahu Shikshan Sastha, Pandharpur
Vasundhara Kala Mahavidyalaya, Jule Solapur
22 MHADA Shahu Marg Juel Solapur (Maharashtra) Pin code 413004
(Affiliated to Punyasholk Ahilyadevi Holkar Solapur University, Solapur)

NON–MINORITY

(AIDED)

Applications are invited for the post of **PRINCIPAL** from the academic year 2025-2026:

Sr. No	Subject / Designation	Total Vacant Post
01	Principal	01

Conditions:-

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

2. Educational Qualification, Service Conditions & Pay Scale will be applicable as per existing rules prescribed by the UGC Notification Date 18 July 2018 Govt. of Maharashtra Regulation No. Misc 2018 /C.R.56/18UNI-1Date- 8th March 2019 and University circular No. PAHSUS/ Est./7th pay 2019/2285 date 25 March 2019.

3. Candidates should submit their academic research score (Academic Performance indicator) report with related Documents- (Only for the post of Principal).

4. A relaxation of 5 % shall be allowed at the Bachelors as well as the Masters level for the Candidates belonging to SC/ST/ OBC (Non – Creamy Layer) Differently baled for the purpose of eligibility and assessing good academic record for direct Recruitment.

5. Reserved candidates, who are domiciled out of Maharashtra State will be treated as open Category candidate.

6. Reserved Candidates should also send a copy of their application to the Deputy Registrar Special Cell. Punyashlok Ahilyadevi Holkar Solapur University, Solapur.

7. Application received after the last date will not be considered. The college will not be responsible for postal delay if any.

8. Reservation for women and disable person will be as per the Govt. norms.

9. Reserved category candidates shall produce the Caste Validity Certificates as per the directives issued by the State Government vide circular No BCC - 201/ Pra. Kra. 1064/2011/168 Date 12/12/2011.

10. Reserved Category candidates (Except SC/ST)shall   produce Non - Creamy Layer certificate at the time of interview.

11. Applicants who are in service must send their application through proper channel.

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

13. T.A.D.A will not be paid for attending the interview.

14. Application with full details should reach to the **Secretary Shahu Shikshan Sastha, Pandharpur 22 MHADA Shahu Marg Jule Solapur. Pin 413004 within 30 days** from the date of publication of this Advertisement, incomplete applications will not be entertained.

15 This is University approved Advertisement.

Place :- Jule Solapur.

Secretary / President
Shahu Shikshan Sastha Pandharpur

Your Guide to making payment for Advertisement Tariff online

- Open the AIU Website: **https://aiu.ac.in**
- Go to the AIU Payment Gateway Option (payment.aiu.ac.in)
- Click on the **Advertisement Tariff** section of the Payment Portal
- Fill up the required details and make the payment for the Advertisement Tariff
- **Insertion** means your advertisement is printed in one issue of University News

UPI ID: 10342296000975@cnrb

1	**Bank Account No.**	**0158101000975 (Saving)**
2	Beneficiary Name	**Association of Indian Universities**
3	Address	16, Comrade Indrajit Gupta Marg New Delhi – 110 002
4	Bank & Branch Name	CANARA BANK DDU MARG
5	Bank's Address	"URDU GHAR" 212, Deen Dayal Upadhayaya Marg New Delhi – 110 002
6	MICR Code	110015005
7	Branch Code	0158
8	IFSC Code	CNRB 0000158
9	PAN NO.	AAATA0407F
10	GST Regn No.	07AAATA0407F1ZG

For the case of Transfer via NEFT/RTGS, the proof of payment may please be communicated on E-mail ID: advtun@aiu.ac.in for its linking and settlement at our end.

Association of Indian Universities: Your Partner in Higher Education   ISSN-0566-2257

UNIVERSITY NEWS
A Weekly Journal of Higher Education

Association of Indian Universities

AIU

- Association of Indian Universities, a century old premium organization and the world's largest Universities network dedicated to fostering academic excellence and quality of enhancing higher education in India.
- Provides voluntary service to Higher Education Sector with a Non-Profit initiative.
- At the forefront of shaping higher education policy since its establishment in 1925.
- Plays proactive role in the areas of Equivalence Degrees/ qualification of Indian and Foreign Universities, Research, Sports and Youth Affairs.
- Membership of 1022 universities including 16 international universities.
- Rich legacy is adorned with visionary leaders like Dr Sarvepalli Radhakrishna, Dr. Shyama Prasad Mookerjee, Dr. Zakir Hussain, and Dr AL. Mudaliar, who have served as Presidents of AIU.

"University News"

- Boasts a circulation of 5,000 plus.
- Available in print and e-copy.
- Unique opportunity to connect with a rapidly growing and engaged audience across higher education in India and abroad.
- Has a large readership from Universities and colleges.
- Sought after Journal by all academicians.

WHY ADVERTISE WITH AIU?

WIDE REACH AND INFLUENCE

COMPREHENSIVE CONTENT WITH RICH ARTICLES ON HIGHER EDUCATION

TARGETED AUDIENCE OF EDUCATORS, LEADERS, GOVERNMENT, EDUCATIONAL RESEARCHERS AND FACULTY OF HIGHER EDUCATION

HIGHER ENGAGEMENT THROUGH PRINT AND E-COPY

COST EFFECTIVE ADVERTISING COMES AT EXTREMELY COMPETITIVE RATES COMPARED TO OTHER FORMS OF ADVERTISEMENT

WHAT CAN WE ADVERTISE?

ADMISSION NOTICES	PUBLICATIONS
RECRUITMENT NOTICES	FACULTY PROGRAMMES
WORKSHOPS	INTERNATIONAL CONFERENCES
FDPs	SPORTS PROGRAMMES

Your Call to Action

- Spotlight your University's events, faculty programs, publications, or services through advertisements in a publication that directly reaches decision-makers and influencers within India's leading universities and educational institutions.
- Can gain maximum visibility at minimal costs

For any assistance with your advertisement needs, please feel free to contact the undersigned:

Ranjana Parihar
Joint Secretary, Association of Indian Universities
16, Comrade Indrajit Gupta Marg New Delhi- 110 002
Telephone: 011-23230059 (Ext. 208, 213)
Mobile: 9818608651
Emails: publicationsales@aiu.ac.in,
advtun@aiu.ac.in (for advertisements),
subsun@aiu.ac.in (for University News Subscription)