

Advancing Teaching Methods: Innovative Pedagogy for Learners with Diverse Needs.

Dr. M. Nithya¹, Dr. M. Thirumagal Vijaya², Vinay M³, Dr. N. Anuradha⁴, Dr. Sujata Umesh Bolake⁵, Dr. Hakalyah Palaparthi⁶

¹ Assistant Professor, Department of Commerce, PSG College of Arts & Science, Civil Aerodrome Post, Coimbatore – 641014, Tamil Nadu, India.
Email: nithyamani28@gmail.com

² Associate Professor & Head, Department of Commerce, PSG College of Arts & Science, Coimbatore – 641014, Tamil Nadu, India.
Email: thirumagalvijaya@psgcas.ac.in

³ Assistant Professor, Department of Commerce, Dayananda Sagar College of Arts, Science and Commerce, Kumaraswamy Layout, Bengaluru – 560111, Karnataka, India.
Email: vinaymanju111@gmail.com

⁴ Assistant Professor, Department of Education, Sri Padmavati Mahila Vishvavidyalayam, Tirupati, Andhra Pradesh, India.
Email: nanuradha@spmrv.ac.in

⁵ Associate Professor, Department of Management, Ramachandran International Institute of Management (RIIM), Behind Crystal Honda Showroom, Sunarwadi, Bhunde Vasti, Bavdhan, Pune – 411021, Maharashtra, India.
Email: sujata.rt@gmail.com

⁶ Assistant Professor, Department of Psychology, Telangana University, Telangana, India.
Email: palaparthihakalya@gmail.com

ABSTRACT

Education in the twenty-first century demands teaching approaches that recognize the diversity of learners in terms of abilities, backgrounds, learning styles, languages, cultures, and socio-economic conditions.. The article explores the importance of innovative teaching methods, the challenges faced in implementing inclusive pedagogies, and practical strategies for enhancing learning outcomes. A simple random sampling technique was employed to select the respondents. The study included 120 respondents, who were selected randomly from the target population. The sample size was considered adequate to conduct descriptive and inferential statistical analyses. This method ensured that every member of the population had an equal chance of being selected, thereby minimizing selection bias and improving the representativeness of the sample. Traditional teaching methods often fail to address the varied needs of students, resulting in unequal learning opportunities and reduced academic achievement. Innovative pedagogy offers learner-centered strategies that promote inclusion, engagement, creativity, and critical thinking while ensuring that every student receives equitable access to quality education. By integrating technology, differentiated instruction, collaborative learning, project-based learning, and Universal Design for Learning (UDL), educators can create flexible learning environments that accommodate diverse learners. It concludes that adopting innovative pedagogical practices is essential for building inclusive classrooms that prepare learners for lifelong learning and active participation in society....

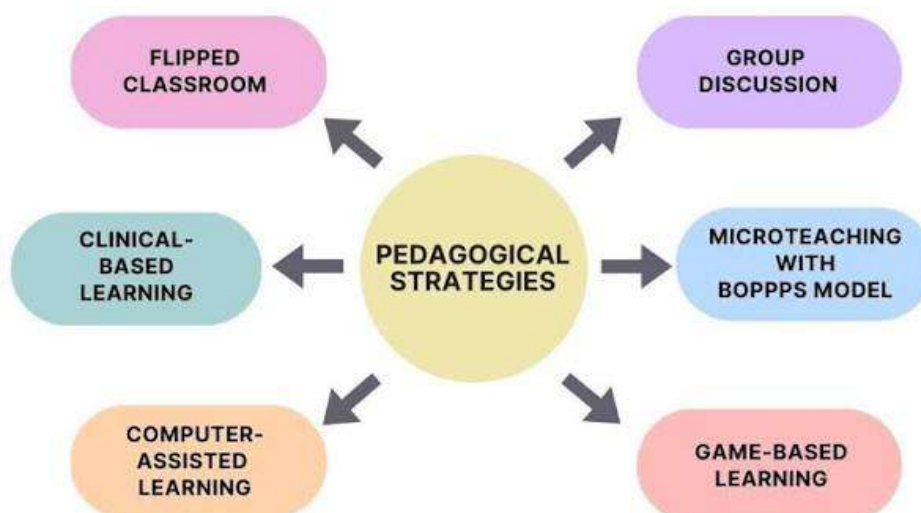
Keywords: Innovative pedagogy, Inclusive education, Diverse learners, Differentiated instruction, Universal Design for Learning, Educational technology and Student-centered learning...

INTRODUCTION

Education constitutes an essential human right and serves as a potent instrument for societal change. Contemporary classrooms exhibit growing diversity, comprising students with varying intellectual capacities, learning styles, cultural heritages, languages, and physical or cognitive impairments. Thus, instructors need to transcend conventional lecture-oriented pedagogy and embrace novel instructional strategies that guarantee significant learning for all learners.

Progressive teaching methods prioritise engagement, teamwork, inventiveness, and individualised education. It urges educators to promote learning instead of simply delivering facts. These methodologies facilitate the enhancement of students' advanced cognitive skills, problem-solving capabilities, communicative proficiency, and digital literacy. Inclusive pedagogical approaches also mitigate educational disparities by guaranteeing that students with varied requirements have suitable assistance and chances for success.

Figure: 1



Understanding Diverse Learners

The integration of digital technologies, artificial intelligence, multimedia resources, and adaptive learning systems has further expanded the possibilities for inclusive education. As educational systems continue to evolve, adopting innovative pedagogical practices becomes essential for improving educational quality and promoting lifelong learning.

Diverse learners include students who differ in terms of:

Learning styles (visual, auditory, kinesthetic, reading/writing)

Intellectual abilities and academic readiness

Physical and learning disabilities

Cultural and linguistic backgrounds

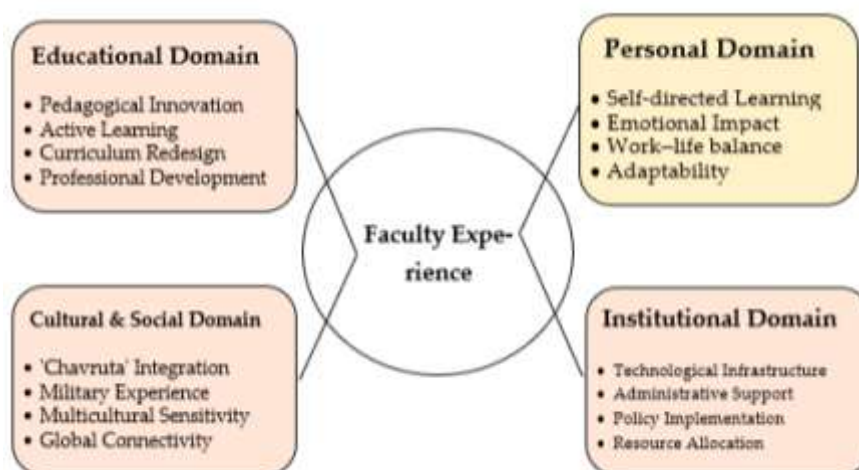
Socio-economic status

Emotional and behavioral characteristics

Gifted and talented abilities

Recognizing these differences allows teachers to design instruction that accommodates varying learning needs while fostering equity and inclusion.

Figure :2



Principles of Innovative Pedagogy

1. **Learner-Centered Approach:** A learner-centered approach places students at the heart of the teaching and learning process. Instead of relying solely on lectures, teachers encourage students to actively participate through discussions, inquiry, problem-solving, and experiential activities. This approach recognizes that every learner has unique abilities, interests, and learning styles. Teachers act as facilitators who guide students in constructing knowledge rather than simply delivering information. Learner-centered pedagogy promotes independent thinking, creativity, collaboration, and self-reflection while increasing motivation and engagement. It

also encourages students to take responsibility for their own learning by setting goals, monitoring progress, and evaluating outcomes. Ultimately, this approach creates meaningful learning experiences that improve academic achievement, confidence, and lifelong learning skills in diverse educational environments.

2. **Inclusivity:** Inclusivity is a fundamental principle of innovative pedagogy that ensures every learner has equal opportunities to participate and succeed regardless of their abilities, backgrounds, language, gender, culture, or socio-economic status. Inclusive teaching recognizes learner diversity and adopts flexible instructional

methods, accessible learning materials, and supportive classroom practices to meet varied educational needs. Teachers create respectful learning environments where all students feel valued, accepted, and encouraged to contribute. Strategies such as differentiated instruction, Universal Design for Learning, collaborative learning, and assistive technologies help eliminate barriers to education. Inclusive pedagogy not only improves academic performance but also promotes empathy, social cohesion, mutual respect, and equal participation, preparing students to thrive in diverse and inclusive societies.

3. Collaboration: Collaboration is a key principle of innovative pedagogy that encourages learners to work together in groups to achieve shared educational goals. Through cooperative learning, peer discussions, group projects, and problem-solving activities, students develop communication, teamwork, leadership, and interpersonal skills. Collaborative learning allows learners to exchange ideas, appreciate diverse perspectives, and build knowledge collectively. Teachers facilitate meaningful interactions by designing activities that require cooperation, mutual support, and shared responsibility. This approach also strengthens critical thinking and decision-making as students learn to negotiate, resolve conflicts, and evaluate different viewpoints. Collaboration creates an engaging and supportive learning environment where students actively participate, learn from one another, and develop essential social and professional competencies for future success.

4. Flexibility: Flexibility is an essential principle of innovative pedagogy that enables teachers to adapt instructional methods, learning activities, assessments, and educational resources according to the diverse needs of students. Recognizing that learners progress at different rates and possess varying strengths, flexible teaching encourages personalized learning pathways and multiple methods of demonstrating understanding. Teachers may modify lesson plans, incorporate technology, provide varied learning materials, or adjust assessment strategies to ensure equitable learning opportunities. Flexible classrooms encourage student choice, self-paced learning, and continuous improvement while accommodating different learning preferences and abilities. By responding to individual needs and changing educational contexts, flexibility enhances learner engagement, academic achievement, confidence, and overall educational effectiveness in inclusive learning environments.

5. Continuous Assessment: Continuous assessment is an integral principle of innovative pedagogy that focuses on evaluating students throughout the learning process rather than relying solely on final examinations. It involves regular quizzes, assignments, classroom observations, projects, presentations, peer assessments, self-assessments, and constructive feedback to monitor learning progress. Continuous assessment helps teachers identify students' strengths, learning gaps, and areas requiring additional support, enabling timely instructional adjustments. Students also benefit by receiving ongoing feedback that promotes self-reflection, motivation, and academic improvement. This approach encourages active participation, reduces examination anxiety, and supports

personalized learning experiences. By emphasizing learning as an ongoing process, continuous assessment contributes to improved educational outcomes, higher achievement, and the holistic development of every learner.

Innovative Teaching Methods for Diverse Learners

1. Differentiated Instruction: Differentiated instruction is an innovative teaching method that recognizes the diverse learning needs, abilities, interests, and readiness levels of students. Instead of delivering the same lesson in the same way to every learner, teachers modify content, instructional strategies, classroom activities, and assessments to suit individual learning profiles. This approach enables students to learn at an appropriate pace while receiving the support or challenge they need. Teachers may use flexible grouping, varied teaching materials, and multiple assessment methods to accommodate differences in learning styles. Differentiated instruction promotes active participation, improves academic performance, builds confidence, and reduces learning barriers. It creates an inclusive classroom environment where every student has an equal opportunity to succeed and reach their full potential.

2. Universal Design for Learning (UDL): Universal Design for Learning (UDL) is an inclusive educational framework that aims to provide equal learning opportunities for all students by reducing barriers to learning. It encourages teachers to present information in multiple ways, offer different methods for students to express their understanding, and provide varied opportunities for engagement. By accommodating diverse learning preferences, abilities, and disabilities, UDL supports equitable participation and academic success. Teachers use multimedia resources, interactive activities, assistive technologies, and flexible assessments to meet individual learning needs. This learner-centered approach enhances accessibility, motivation, and independence while promoting meaningful participation. UDL creates an inclusive classroom where every learner can achieve educational goals regardless of their background or ability.

3. Project-Based Learning (PBL): Project-Based Learning (PBL) is a student-centered instructional method in which learners acquire knowledge and skills by working on meaningful, real-world projects over an extended period. Instead of memorizing information, students investigate authentic problems, conduct research, collaborate with peers, and develop practical solutions. Teachers act as facilitators by guiding inquiry, encouraging critical thinking, and providing continuous feedback throughout the project. PBL promotes creativity, communication, teamwork, and problem-solving skills while connecting classroom learning to real-life situations. It also accommodates diverse learning styles by allowing students to demonstrate their understanding through various formats such as presentations, reports, models, or digital products. This approach increases student engagement, motivation, and deeper understanding of concepts.

4. Flipped Classroom: The flipped classroom is an innovative teaching approach that reverses the traditional

learning process by introducing instructional content outside the classroom and using classroom time for interactive learning activities. Students study lesson materials such as videos, readings, or digital presentations before attending class. During classroom sessions, teachers facilitate discussions, problem-solving exercises, collaborative activities, and individualized support rather than delivering lengthy lectures. This approach encourages active learning, self-paced study, and greater student responsibility for learning. It also allows teachers to address individual learning needs and provide immediate feedback. The flipped classroom enhances student engagement, improves conceptual understanding, promotes critical thinking, and creates a more collaborative and learner-centered educational environment.

5. Technology-Enhanced Learning: Technology-enhanced learning integrates digital tools and educational technologies to improve teaching effectiveness and accommodate the diverse needs of learners. Teachers use online learning platforms, educational software, multimedia resources, virtual classrooms, artificial intelligence, mobile applications, and interactive simulations to create engaging and personalized learning experiences. Technology enables students to access learning materials anytime and anywhere, supporting self-paced and flexible learning. It also provides assistive technologies such as screen readers, speech-to-text applications, and translation tools that improve accessibility for learners with disabilities or language barriers. By encouraging collaboration, creativity, communication, and digital literacy, technology-enhanced learning prepares students for the demands of modern education and the rapidly evolving digital world.

6. Collaborative Learning: Collaborative learning is a teaching method that encourages students to work together in small groups to achieve common learning objectives. Through group discussions, cooperative projects, peer teaching, and shared problem-solving activities, students actively construct knowledge while learning from one another. This approach develops essential skills such as communication, teamwork, leadership, negotiation, and conflict resolution. Collaborative learning also exposes students to diverse perspectives, fostering respect, empathy, and social inclusion. Teachers play a facilitating role by organizing meaningful group tasks, monitoring participation, and ensuring equal opportunities for contribution. By promoting interaction and shared responsibility, collaborative learning enhances critical thinking, increases student engagement, strengthens academic achievement, and prepares learners for collaborative professional environments.

7. Gamification: Gamification is an innovative teaching method that incorporates game elements such as points, badges, leaderboards, rewards, levels, and challenges into educational activities to increase student engagement and motivation. By making learning enjoyable and interactive, gamification encourages active participation, healthy competition, and sustained interest in academic tasks. Teachers design educational games, quizzes, simulations, and problem-solving activities that align with learning

objectives while promoting critical thinking and creativity. Gamification also provides immediate feedback, helping students monitor their progress and improve their performance. This approach supports diverse learners by accommodating different learning preferences and encouraging collaboration. Ultimately, gamification enhances learning outcomes, knowledge retention, confidence, and overall classroom participation.

METHODOLOGY

Research Design

The study adopted a descriptive research design to examine the factors influencing the advancement of teaching methods through innovative pedagogical approaches for learners with diverse needs. The design was appropriate as it enabled the researcher to describe respondents' perceptions and analyze the relationship between demographic variables and teaching method factors.

Population of the Study

The population of the study consisted of educators involved in implementing innovative teaching practices for learners with diverse needs in the selected study area.

Sampling Technique

A simple random sampling technique was employed to select the respondents. This method ensured that every member of the population had an equal chance of being selected, thereby minimizing selection bias and improving the representativeness of the sample.

Sample Size

The study included 120 respondents, who were selected randomly from the target population. The sample size was considered adequate to conduct descriptive and inferential statistical analyses.

Data Analysis

The collected data were coded and analyzed using SPSS. The following statistical tools were employed:

Descriptive Statistics (Mean and Standard Deviation) to summarize respondents' perceptions of the factors influencing advancing teaching methods.

Kruskal-Wallis Test to examine whether significant differences existed among age groups regarding the identified teaching method factors.

Analysis and Results

Teachers play a central role in implementing innovative pedagogy by creating inclusive, engaging, and learner-centered educational environments that address the diverse needs of students. Rather than serving solely as providers of knowledge, teachers act as facilitators, mentors, guides, and motivators who encourage active learning, critical thinking, and collaboration. They design flexible lesson plans, integrate technology, and employ differentiated instructional strategies to accommodate varying learning styles, abilities, and interests. Teachers continuously assess student progress, provide constructive feedback, and adapt teaching methods based on individual learning needs. They also foster creativity,

problem-solving, communication, and lifelong learning skills through interactive and experiential activities. By promoting inclusivity, encouraging student participation, and maintaining a supportive classroom atmosphere, teachers help learners build confidence, independence, and academic competence. Furthermore, teachers engage in continuous professional development to stay updated

with emerging educational technologies, innovative teaching practices, and curriculum reforms. Their commitment to reflective practice and lifelong learning ensures that education remains relevant, equitable, and responsive to the changing demands of society, ultimately preparing students to become responsible, skilled, and adaptable global citizens.

TABLE 1

DESCRIPTIVE STATISTICS

Dimensions		
	Mean	Std. Deviation
Educational software	2.12	.818
Learning Management Systems (LMS)	2.43	1.105
Artificial Intelligence tools	2.38	.980
Virtual Reality (VR)	2.41	.912
Augmented Reality (AR)	2.11	1.044

Table 1 presents the descriptive statistics of the factors influencing the advancement of teaching methods. The mean values indicate the average level of respondents' agreement with each factor, while the standard deviation reflects the variability in their responses.

Among the five dimensions, Learning Management Systems (LMS) recorded the highest mean score (Mean = 2.43, SD = 1.105), indicating that respondents perceived LMS as the most influential factor in advancing teaching methods. This was closely followed by Virtual Reality (VR) (Mean = 2.41, SD = 0.912) and Artificial Intelligence (AI) tools (Mean = 2.38, SD = 0.980), suggesting that these technologies are also considered important contributors to modern teaching practices.

In contrast, Educational Software (Mean = 2.12, SD = 0.818) and Augmented Reality (AR) (Mean = 2.11, SD =

1.044) recorded comparatively lower mean scores, indicating relatively lower perceived influence on advancing teaching methods.

Regarding response variability, Learning Management Systems (LMS) exhibited the highest standard deviation (1.105), suggesting greater differences in respondents' opinions about its importance. Conversely, Educational Software had the lowest standard deviation (0.818), indicating that respondents' views on this factor were relatively more consistent.

Overall, the descriptive statistics reveal that Learning Management Systems, Virtual Reality, and Artificial Intelligence tools are perceived as the most influential technologies for advancing teaching methods, whereas Educational Software and Augmented Reality are viewed as comparatively less influential.

TABLE 2 RELATIONSHIP BETWEEN THE AGE AND FACTORS INFLUNCING ADVANCING TEACHING METHODS- Kruskal Wallis Test

Factors	Age group	N	Mean Rank	Test	Result
Educational software	Young	42	55.51	Chi-Square	3.267
	Middle	48	59.17	df	2
	Old	30	69.62	Sig.	.195
Learning Management Systems (LMS)	Young	42	51.87	Chi-Square	10.813
	Middle	48	57.74	df	2
	Old	30	77.00	Sig.	.004
Artificial Intelligence tools	Young	42	55.60	Chi-Square	2.327
	Middle	48	65.98	df	2

	Old	30	58.60	Sig.	.312
Virtual Reality (VR)	Young	42	58.90	Chi-Square	1.666
	Middle	48	65.00	df	2
	Old	30	55.53	Sig.	.435
Augmented Reality (AR)	Young	42	65.43	Chi-Square	1.413
	Middle	48	58.27	df	2
	Old	30	57.17	Sig.	.493
	Total	120			

The Kruskal–Wallis test was conducted to examine whether respondents belonging to different age groups (Young, Middle, and Old) differed significantly in their perceptions of factors influencing advancing teaching methods. The results indicate that Educational Software did not show a statistically significant difference across age groups ($\chi^2 = 3.267$, $p = 0.195$). Although the older age group obtained the highest mean rank (69.62), followed by the middle-aged group (59.17) and the young group (55.51), these differences were not statistically significant. This suggests that perceptions regarding the importance of educational software are similar across all age groups.

For Learning Management Systems (LMS), a statistically significant difference was observed among the age groups ($\chi^2 = 10.813$, $p = 0.004$). The older respondents recorded the highest mean rank (77.00), followed by the middle-aged group (57.74), while the young group had the lowest mean rank (51.87). This finding indicates that age significantly influences perceptions of LMS, with older respondents assigning greater importance to LMS in advancing teaching methods.

The analysis of Artificial Intelligence (AI) tools revealed no statistically significant difference among age groups ($\chi^2 = 2.327$, $p = 0.312$). Although the middle-aged respondents had the highest mean rank (65.98), followed by the old (58.60) and young (55.60) groups, these differences were not statistically significant. Therefore, respondents across different age categories exhibit comparable views regarding the role of AI tools in teaching.

Similarly, Virtual Reality (VR) showed no significant variation among age groups ($\chi^2 = 1.666$, $p = 0.435$). The middle-aged respondents reported the highest mean rank (65.00), followed by the young (58.90) and old (55.53) respondents. However, these differences were not statistically significant, indicating a similar level of acceptance of VR across age groups.

For Augmented Reality (AR), the Kruskal–Wallis test also indicated no significant difference among age groups ($\chi^2 = 1.413$, $p = 0.493$). The young respondents had the highest mean rank (65.43), followed by the middle-aged (58.27) and old (57.17) respondents, but the differences were not statistically significant.

Overall, the findings reveal that age has a significant relationship only with perceptions of Learning Management Systems (LMS), while Educational Software, Artificial Intelligence tools, Virtual Reality, and Augmented Reality do not differ significantly across age groups. This suggests that age influences the adoption and perception of LMS more than other technology-based teaching tools.

Future Directions

Future educational systems should increasingly integrate artificial intelligence, adaptive learning technologies, virtual laboratories, personalized learning analytics, and data-driven instructional planning. Continuous teacher training, inclusive educational policies, and research on evidence-based pedagogical practices will remain essential. Educational institutions should also prioritize social-emotional learning, sustainability education, and interdisciplinary learning to prepare students for future societal and workplace challenges.

CONCLUSION

Innovative pedagogy has transformed the educational landscape by creating learning environments that recognize and celebrate learner diversity. Student-centered teaching methods, differentiated instruction, Universal Design for Learning, collaborative learning, project-based learning, and educational technology enable educators to address the varied needs of learners effectively. Although challenges such as limited resources, inadequate teacher training, and technological disparities remain, strategic investments and supportive educational policies can facilitate successful implementation. By embracing innovation, educators can foster inclusive, engaging, and equitable learning experiences that empower every student to achieve their full potential. Advancing teaching methods is therefore not merely an educational reform but a commitment to ensuring quality education for all learners in an increasingly diverse and interconnected world....

REFERENCES

1. Adeleye, O. O., Eden, C. A., & Adeniyi, I. S. (2024). Innovative teaching methodologies in the era of artificial intelligence: A review of inclusive educational practices. *World Journal of Advanced Engineering Technology and Sciences*, 11(2), 069-079.

How to cite : Dr. M. Nithya, Dr. M. Thirumagal Vijaya, Vinay M, Dr. N. Anuradha, Dr. Sujata Umesh Bolake, Dr. Hakalyah Palaparthi.. Advancing Teaching Methods: Innovative Pedagogy for Learners with Diverse Needs.. *Advances in Consumer Research*. 2026;3(8): 418-424

2. Ajay, S.; Potluri, A.; George, S.; Gaurav, R.; Anusri, S. Indian sign language recognition using random forest classifier. In Proceedings of the 2021 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), Bangalore, India, 9–11 July 2021; pp. 1–6.
3. Barak, M. Are digital natives open to change? Examining flexible thinking and resistance to change. *Comput. Educ.* 2018, 121, 115–123.
4. Fernández-Raga, M.; Aleksić, D.; İkiz, A.K.; Markiewicz, M.; Streit, H. Development of a Comprehensive Process for Introducing Game-Based Learning in Higher Education for Lecturers. *Sustainability* 2023, 15, 3706.
5. García-Tudela, P.A.; Prendes-Espinosa, M.P.; Solano-Fernández, I.M. Aulas del Futuro en España: Un análisis desde la perspectiva docente. *Pixel-Bit Rev. Medios Y Educ.* 2023, 67, 59–86.
6. Higuera-Rodríguez, L.; García-Vita, M.d.M.; Medina-García, M. Analysis of Training Offers on Active Methodologies for University Teachers in Spain. *Eur. J. Educ. Res.* 2020; 9, 1223–1234.
7. Hodges, C.; Moore, S.; Lockee, B.; Trust, T.; Bond, A. The difference between emergency remote teaching and online learning. *Educ. Rev.* 2020, 27, 1–12.
8. Lee, H.Y.; Ramsay, C.M.; Robert, J. The Effects of Furnishings and Technology on Pedagogical Agility and Student Engagement across Flexible Learning Spaces. *J. Learn. Spaces* 2023, 12, 1.
9. Lata, K. (2026). Inclusive Pedagogy: Rethinking Teaching Methods for a Diverse India. In *Breaking Structural Inequality and Enhancing Social Justice in Higher Education* (pp. 211-232). IGI Global Scientific Publishing.
10. Marinoni, G.; Van't Land, H.; Jensen, T. The Impact of COVID-19 on Higher Education around the World; IAU Global Survey Report; International Association of Universities: Las Vegas, NV, USA, 2020.
11. Palau, R.; Fuentes, M.; Mogas, J.; Cebrián, G. Analysis of the implementation of teaching and learning processes at Catalan schools during the COVID-19 lockdown. *Technol. Pedagog. Educ.* 2021, 30, 183–199.
12. Srivastava, N., Sharma, R., & Tiwari, M. K. (2024). Change & Effect of Teaching and Teaching methods: With special reference to Indian Scenario. *Library of Progress-Library Science, Information Technology & Computer*, 44(3), 8798.
13. Tømte, C.E.; Lazareva, A. Educating for Professional Digital Competence? Exploring Teacher Education in a New Learning Space. In *Digital Transformations in Nordic Higher Education*; Springer: New York, NY, USA, 2023; pp. 77–96..