

IMPROVING STUDENTS' PEDAGOGICAL EXPERIENCE IN HIGHER EDUCATION IN INDIA

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ABSTRACT

Various reports have established that the quality of higher education in India is suffering from some serious setbacks. These setbacks are identified as the lack of emphasis on practical skill development, which can be applied in the workforce. One of the core factors for such gaps is the absence of project-based learning and effective strategies in the Indian higher education system. To address these setbacks, this research is the strategic proceeding for implementing active learning approaches towards improving students' pedagogical experience in higher education in India.

For this purpose, this research developed the Systematic Literature Review (SLR) of 36 articles selected through Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines. The purpose is to critically evaluate the relevance of Active Learning Approaches for higher education in India and justify their effectiveness to the stakeholders involved in the teaching-learning system. This research also provides an integrated strategic plan in association with the National Education Policy (NEP) 2020, with effect from the 2023- 2024 academic year.

KEYWORDS: pedagogical experience, higher education, improvement strategies, student-centred learning, active learning approaches, technology in education.

INTRODUCTION

There is a huge uproar trending in terms of the employability gap that consistently persists in India. A report by India Today (2023) highlighted that India's swiftly expanding youth population possesses the potential to transform the nation into a global force and a hub of skills on a worldwide scale. With an impressive 65% of the populace aged below 35, this energetic and youthful workforce holds the capacity to propel India into the digital era, largely driven by the Gen Z and millennial demographics. Nevertheless, significant concerns persist concerning the existing skills gap within the workforce, particularly evident in the manufacturing and service sectors. According to a recent LinkedIn survey conducted by TeamLease (2023), it was noted that a staggering 78% of industry leaders believe that the youth still adhere to traditional degrees and lack practical know-how. These individuals lack the awareness of the essential skill sets demanded by emerging industries, resulting in a substantial gap between skill development and employment opportunities. To address this issue, TeamLease (2023) recommends a comprehensive reform of India's educational process, advocating for a curriculum that is skill-oriented, mentor-guided, and closely intertwined with industry-academia collaboration. Furthermore, as highlighted by ET Spotlight (2023), the year 2020 witnessed a shortage of skilled talent in India, with 63% of companies reporting deficits in talented employees, primarily within the realms of IT, engineering services, and sales. These threads lead the matter to the concerns of quality checks in the Higher Education (HE) structure of India.

Unfortunately, the research-based investigation led by Bhatnagar (2021) identified that the quality of HE in India is suffering from some serious setbacks. These setbacks are identified as the lack of emphasis on practical skill development, which can be applied in the workforce. One of the core factors for such gaps is the absence of project-based learning and effective strategies in the Indian HE system (Bhatnagar, 2021). Bhatnagar (2021) noted that instead of fostering project-oriented learning approaches, the prevailing system in India places undue importance on grades, thereby neglecting the cultivation of practical knowledge. Consequently, students encounter difficulties in acquiring the proficiencies necessary for successful professional careers. These gaps are also acknowledged by George and Aji (2022) who investigated the MBA students from India and identified that there is a serious disconnection between employability and skills in these students. With the increasing count of competitiveness, apart from technical competencies, organizations are offering great value to the additional qualities linked to employability (George and Aji (2022). Some of these valuable qualities are noted by George and Aji (2022) as effective communication, emotional intelligence, critical thinking, problem-solving abilities, and interpersonal skills. Unfortunately, MBA students from Indian universities fail to meet these expectations of the organisations and suffer unemployment. These limitations in the HE system refer to the need for active learning provisions in Indian HE.

Thus, following the proceedings of the Systematic Literature Review (SLR), this research will critically evaluate the relevance of Active Learning Approaches for HE in India and will justify its effectiveness to the stakeholders involved in the teaching-learning system.

Background

The development of active learning can be dated back to the Socratic method of ancient Greece. It was Socrates who believed in and practised the engagement of students in interactive sessions of questioning and discussions to stimulate critical thinking and promote the discovery of knowledge in them (Martella et al. 2021, p. 79). The traces of active learning can be also noted during the 19th and 20th centuries when John Dewey advocated student-centric experiential learning and termed it the progressive education movement. It was John Dewey who defined active learning as the provision whereby the learner can construct their concept and can gain a better learning experience, and creates the scopes of being 'more respected'; controlling 'impulses and desires', and meeting the ideal objective of education to 'create intelligent self-control' and empowers the learner 'to engage and work towards developing real solution' (Hui et al 2021, p. 304). This is the core objective that this research paper emphasises and recommends the HE system of India to meet employability gaps.

In an advanced form, in the year 1956, Benjamin Bloom came up with the taxonomy of learning objectives. Bloom classified cognitive skills under higher-order thinking through the active learning process of analysis, synthesis, and evaluation (Chandio et al., 2021, pp. 113-114). Followed by Bloom are the scopes of detecting the power of Peer Instruction by Eric Mazur during 1996 and 1997 made a breakthrough in developing a concept by the students through the so-called ConcepTest, and "to try to convince their neighbours of their answer" (Bauer et al., 2023, p. 427). The evolution of active learning was further enhanced by the introduction of Problem-Based Learning (PBL) in the 1960s, whereby the students were exposed to some critical real-life issues that demanded their deep thinking and were asked to resolve the assigned issue by working in small teams (Nair et al., 2020, p. 109). The skill to resolve real-life issues is marked as the base for active learning, which is lacking in the HE system of India and the gap that this research aims to bridge. Though currently there are active learning classrooms, flipped classrooms, and technologically integrated active learning provisions, still in the case of India the detected concern of the employability gap demands a more specifically constructed strategy, and so is the advent of this research paper.

Research Relevance

Active learning approaches are highly relevant for HE in India. Since active learning can address innumerable challenges of the higher-level learning environment; it can be noted as effective in generative active participation of students through the implementation of discussions, debates, case studies, and hands-on projects, promoting higher levels of engagement and interaction among students (Deloitte, 2021). Through the provisions under active learning, students can be encouraged to gain critical thinking and innovative practices to mitigate complicated concerns. Most importantly, active learning methods can be adapted to incorporate local and cultural contexts, making education more relatable and meaningful for Indian students. This can bridge the gap between theoretical knowledge and practical application.

Research Question

The identified Research Question to be addressed in this research paper is:

- What strategy can be adapted to address the challenges and meet the benefits of active learning approaches for improving the pedagogical experience of students in Higher Education in India?

Research Objectives

In consideration of the aforementioned Research Relevance & to answer the Research Question for improving the pedagogical experience of students in Higher Education (HE), this research concentrates on critically evaluating different kinds of active learning approaches through a systematic literature review. The core research objectives to meet this research aim are:

- To understand the challenges involved in improving the pedagogical experience of students in HE in India.
- To gain insight and critically evaluate different active learning approaches for improving the pedagogical experience of students in HE in India.
- To find and imply the effective strategies of active learning proceedings for improving the pedagogical experience of students in HE in India.

METHODOLOGY

To attain an extensive understanding of the effectiveness of active learning approaches for improving the pedagogical experience of students in HE, this research conducted a systematic literature review (SLR). Under this provision, both theoretical and empirical research works of former scholars were investigated and evaluated to meet the Research Objectives and Questions. Numerous peer-reviewed journal articles and conference papers were collected to accumulate information from multiple types of studies for a clear perception of the selected research topic. A detailed explanation of the selected research methodology of SLR has been explained hereafter.

Inclusion and Exclusion Criteria

The SLR for this research is based on the determined search of secondary data sources based on the inclusion and exclusion criteria decided for this research. Under this SLR, the established Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines were followed to develop authentic and valid search results. These guidelines instruct to adhere to the inclusion and exclusion criteria as per the research objectives and the questions (see Table 1).

Table 1 Inclusion & Exclusion Criteria for Data Collection

	Inclusion Criteria	Exclusion Criteria
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	Only articles published between 2019 to 2023	Articles published before 2019
	Full-text Review with Instructor Strategies	
	English Articles	Non-English Articles
	Articles dealing with the keywords (and/ or)- pedagogical experience, HE, improvement strategies, student-centred learning, active learning approaches, technology in education	Articles not including the specified keywords
	Journal Articles related to Active Learning Approaches and referring to the Pedagogical Experience of Students in HE; particularly in India	Articles which are not all the other pedagogical learning provisions, except for Active Learning Approaches.

As a researcher, I established necessary study protocols and made specific selections of search terms or keywords and the determined databases. Following the inclusion criteria the noted keywords were: pedagogical experience, HE, improvement strategies, student-centred learning, active learning approaches, and technology in education. Any data from 2019 to 2023 were included as per the inclusion criteria. The reason for taking the starting year 2019 is due to the increasing demands of online learning provisions to maintain the flow of education during the pandemic caused by COVID-19. Since the pandemic compelled the HE to focus on student-centric learning provisions through active learning approaches by using technological devices and support systems, this research concentrates on data published after 2019. Moreover, the rest of the data were designated under the exclusion criteria and were not used in this research. A detailed provision of searching and selecting appropriate data for this research is illustrated in Figure 1.

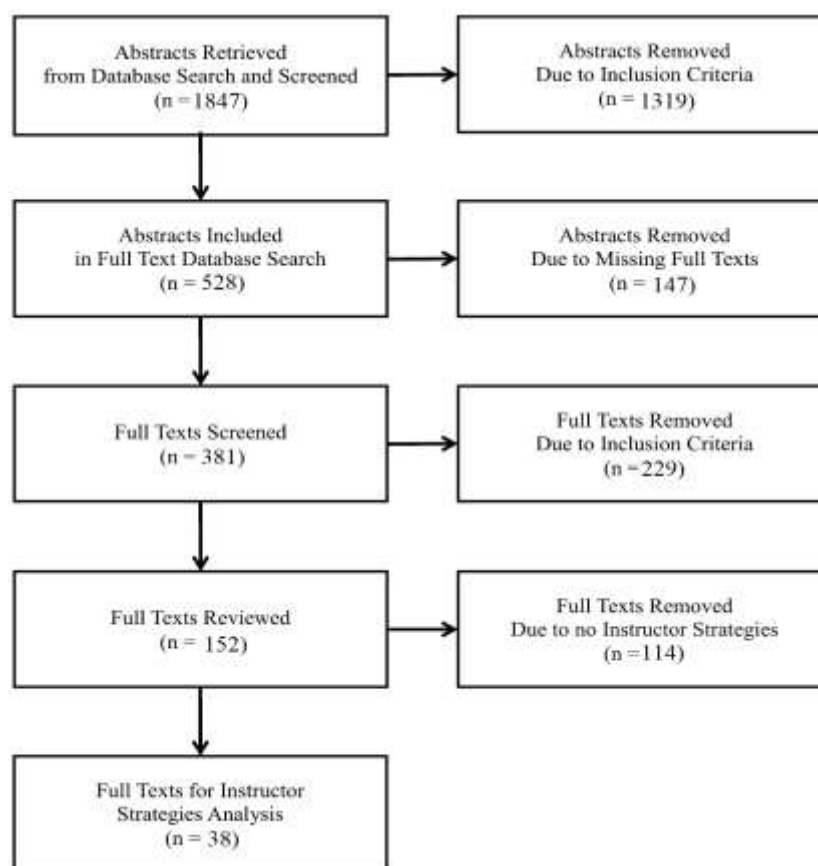


Figure 1 Systematic literature review: PRISMA screening chart (Source: Liberati et al., 2009)

Search Strategy and Databases

The search strategy for this research is based on the inclusion criteria stated in the former sub-section. As the keywords were decided, I started searching the keywords in seven databases. These databases were Google Scholar, Inspec, Academic Search Complete, Compendex, ERIC, Education Source, and Sage Publications. Based on the inclusion criteria 1847 research papers were found to be in alignment with the topic. However, after proper scrutiny 1319 research works were excluded, and 528 studies were found proper for full-text review. In the process, 152 texts were found to be worth the review but out of these 114 were removed due to no instructor strategies. Finally, 38 articles were found appropriate for full-text inclusion in this research.

Study Selection Process

The selection of the studies to be included in this research followed the guidelines as provided by Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) (see Figure 1). The entire screening of the secondary sources was based on the inclusion criteria and articles which were not in confirmation with the inclusion criteria were rejected under the exclusion criteria (Nguyen et al., 2021; pp. 7-9). There were four stages of reviewing the collected data and in every stage, the objective was to check the ways the data could meet the research objectives and the questions. The process started with the inspection of the titles of the articles concerning the current research. Then the Abstracts were investigated and as per the proximity of the research works, necessary articles were kept for further review. Then the full-text reviews were conducted. At this stage, both empirical and theoretical research works were considered for this research and the number of research papers per database (see Table 2) appeared effective in gaining insight into the topic.

Table 2 No. of Research Papers on Research Terms per Database

	⇒							
Research Terms	⇓							
Pedagogical Experience		4	1	3	0	2	2	4
HE		5	2	2	0	1	1	1
Improvement Strategies		4	0	0	1	0	4	2
Student-Centered Learning		3	0	3	0	1	3	5
Active Learning Approaches		6	0	1	2	1	1	3
Technology in Education		3	0	5	0	0	2	2

Finally, following, the articles as specified in Table 2, the independent key points were identified in all the selected articles and with maximum number of similar core contexts with the current article were included in this research for systematic review.

Data Extraction and Analysis Methods

The extraction of data from the selected articles was initiated through an evidence-informed decision-making process. As I reviewed the full texts of the former research works, I also tried to check the relevant methods and the attained results in the selected texts. This approach is identified under the provision of the Research Question. The results were attained through Inclusion and Exclusion Criteria as identified in the articles (Nguyen et al., 2021; pp. 7-9). Necessary judgment for the extraction of data was based on the quality of the provided evidence by the former researchers with the inclusion of the contexts related to the risk of bias.

All the derived data was further synthesised to understand the appropriate active learning approaches to improving the pedagogical experience of students in HE in India. Following the qualitative approach of synthesising data through a narrative approach, all the information will bring the research to a cohesive strategic approach to address the challenges and meet the benefits of active learning approaches for improving the pedagogical experience of students in HE in India.

Findings from Systematic Review

Challenges in HE

From a critical standpoint, Jaysawal and Saha (2023) emphasized the pivotal role of HE in a country's development and addressed that in India the core challenges are access, equity and affordability, inadequate infrastructure and facilities, large vacancies in faculty positions, low student enrolment rate, outmoded teaching methods, declining research standards, unmotivated students, overcrowded classrooms, income, gender, and ethnic imbalances (p.46). These scholars noted that the gross enrolment ratio (GER) of India in HE is just 11% which questions its quality of education (Jaysawal and Saha, 2023).

On the other hand, Mandal (2021) reflected on India's challenges in achieving universal literacy despite progress in HE. Mandal (2021) emphasised the need to address issues like inadequate infrastructure, teaching quality, and inequity in the HE of India. Further, the research led by Prakasha (2022) explored teaching approaches and challenges faced by teacher educators in engaging learners, revealing differences in trainee readiness for active learning. Research-based on descriptive data established that in HE of India, there is a low level of readiness in the domain of teacher trainees, and

ANOVA and t-tests specified that the readiness in terms of accepting active learning differs as per age categories (Prakash, 2022). Considering these challenges this research paper strives to offer an overall strategic way of generating pedagogical experience among students in HE of India.

Teacher Education and Challenges

While referring to the pedagogical experience, Parvin (2021) identified that with the increase in non-government teacher training institutions, there is a deterioration in the quality of the teaching programme; and instructed on the need for a comprehensive overhaul of teacher education in India to address challenges such as outdated teaching methods and inadequate training for educators. Srinivas (2023) provided an overview of global HE quality concerns and highlighted the challenges faced by India, including issues related to access, funding, infrastructure, faculty shortages, and teaching practices. On the other hand, referring to the 21st century international workplace scenario, Raina and Choudhary (2020) advocated the need for including activity-mix pedagogical approaches as per international accreditation standards and adopting innovative approaches like STEAM education, online courses, sustainability initiatives, and experiential learning. In an in-depth approach, Carvalho et al. (2021) analyzed students' and teachers' perceptions of active learning methodologies, contributing to a better understanding of active learning's impact, which is also liable for Indian HE.

Research on Student Engagement

Employing interpretative phenomenological analysis through semi-structured interviews in Delhi NCR, Bhargava (2021) identified the severity of student disengagement during teaching sessions, which was suggested to be enhanced through the participation in actionable strategies for teachers. On the other hand, Sravat and Pathranarakul (2021) explored the potential of 'flipped learning' as an approach to improve student learning in Indian HE. By utilizing mixed-methods approach, Sravat and Pathranarakul (2021) emphasized the importance of management's awareness and willingness to drive the implementation of flipped learning. While concentrating on enhancing and enhancing the overall learning experience in HE, Ferrer et al. (2020) studied the attitude of 574 students at an Australian HE institution toward online learning; and offered a significant provision of developing intrinsic motivation with the inclusion of online learning environments. On the other hand, Armellini and Brenda (2021) discussed the combination of blended learning and active learning, particularly in health sciences, using quantitative methods. Though the emphasis is on active blended learning (ABL) in HE, yet determined strategic implementation is yet to be discovered.

Adapting to Digital Transformation

O'Dea and Stern (2022) discussed the accelerated shift towards digital transformation in HE as has been prompted by the COVID-19 pandemic. O'Dea and Stern (2022) specified that this pandemic crisis is effective in offering opportunities to innovate teaching and learning practices through technology. On the contrary, Gupta et al. (2022) addressed the critical issue of stress management among Indian university students during the pandemic. However, Singh and Meena (2023) emphasized the importance of aligning learning theories with online instructional design for effective online learning experiences in HE. Still, there is a gap in the kind of strategy to be adopted in this frontier.

Enhancing Learning Approaches

Hailikari et al. (2022) researched constructive alignment and its influence on student learning approaches and determined that the current teaching and assessment methods require the inclusion of active engagement. By referring to the relevance of education in Indian growth, Kumar (2023) highlighted that there is a need for adaptation to address global challenges, with a particular focus on quality improvement efforts in Indian HE. On an advanced periphery, Indhu (2022) introduced a policy for increasing enrolment in HE and implementing various reforms, including the establishment of a National Research Foundation (NRF) in the Indian education system. However, this reformation also needs to emphasise on developing the pedagogical experience of students.

Adapting to Online Learning

Dutta (2020) conducted 15 interviews and focus group discussions with 18 students from three Indian universities and confirmed the relevance of the shift to online learning during the COVID-19 pandemic in Indian HE. By emphasising online classes and e-learning pedagogy Dutta (2020) established the need for practically active learning and teaching provisions. On the other hand, based on survey reports accumulated from the professional institutes of Jaipur, Mishra et al. (2019) addressed the need for application-oriented education in India's traditional rote-learning system, emphasizing the importance of bridging the skills gap. In the context of the active learning system to the HE, Archer-Kuhn et al. (2020) established the effectiveness of inquiry-based learning (IBL) among undergraduate and graduate students in the UK, and noted that the active learning system is highly successful in enhancing critical thinking and student engagement. On a further edge, Fazio et al. (2021) conducted active learning practices by involving students in theatrical activities over topics of physics and established the contextualized feature of active learning. Fazio et al. (2021) identified that active learning can have an impact on skills development, and its role in twenty-first-century education. In consideration of a course comprising 83 students, of which 60.8% of participants were postgraduate students, Rossi et al. (2021) showed the lead of active learning in establishing the transition from lecture-centric passive learning to student-centred learning. Ribeiro-Silva et al. (2022) emphasized the benefits of active learning, including academic recognition and enhanced well-being, in preparing students for future challenges.

Professional Development and Gamification

There were diversified provisions identified for the development of active learning among students from HE. Fernandes et al. (2023) evaluated a pedagogical training program's impact on teacher professional development in a Portuguese HE institution. On the other hand, Murillo-Zamorano et al. (2021) investigated the impact of gamification in active learning setups on skills development, academic achievement, and student satisfaction. Kaddoura and Al Hussein (2021) explored the transition from lecture-based to interactive learning in HE in the UAE, emphasizing the positive impact of interactive learning on motivation and engagement. These aspects establish the need for active learning as an effective way of developing cognitive skills under higher-order thinking among the students enrolled in Indian HE.

Student Engagement and Learning Technologies

On the path of resolving the common challenges, and generating solutions to the hindrances created by the COVID-19 pandemic, Panda (2023) highlighted the importance of considering pedagogical aspects in integrating with technology and enhancing the learning experience through active learning. Based on the implementation of 'sentiment analysis' through the usage of Python programming, added by the usage of NVivo tools, Pande (2023) emphasised Open Educational Resources (OER) integrated technology-enhanced learning (TEL) for HE in India.

Chatur et al. (2022) initiated a cross-sectional analytical study among 64 students from 1st year medical students (2013-14) in the Department of Physiology, Pravara Institute of Medical Sciences (DU), Maharashtra, India and recommended the need to incorporate Active Learning Methods (ALM) alongside conventional approaches to enhance comprehension of experimental amphibian physiology in small group settings. Munna and Kalam (2021) analysed 50 higher education level 3-7 students and established the factors affecting student engagement in HE and the influence of active learning pedagogies on engagement levels. The results stood in favour of practical knowledge impartation mechanisms, as represented by collaborative learning, gamification, and peer learning to attain cognitive capabilities and enhance emotional behaviour of the students & specifically boosting their engagement in the learning process. As for Sprenger and Schwaninger (2021), the scholars analysed our digital learning technologies, which were classroom response systems, e-lectures, classroom chat, and mobile virtual reality and derived the importance of interactive and engaging teaching methods for better learning results. On the other hand, Livingston-Galloway and Robinson-Neal (2021) reviewed the literature and discussed the concept of inclusive pedagogy in HE, proposing dimensions for implementing inclusive pedagogy in practice. On an effective note, Vezne et al. (2023) engaged 293 teachers from a Turkey state university and applied Partial least squares structural equation modelling (PLS-SEM) to establish the effects of remote learning attitude and goal orientation on online engagement among teacher candidates in Turkey.

National Education Policy (NEP) for Educational Transformation

Darbar (2021) conducted a conceptual focus group discussion and identified the impact of the NEP 2020 in transforming Indian HE through the set up of start-up incubation centres, centres for technology development, centres in frontier areas of research, industry-academic linkage, and centres for interdisciplinary research. Further based on secondary data and exploratory review, Sonwal (2021) established that NEP, 2020, established on July 29th 2020 with effect from the 2023-2024 academic year; is committed towards transforming the country into a knowledge society with equitable and sustainable education. On the other hand, Kumar (2021) established that NEP 2020 is highly ambitious in increasing the count of student enrolment. Kumar (2022) provided predictive proposals for various aspects of the New Education Policy 2020, emphasizing the need for effective execution to position India as a global education hub.

CONCLUSION

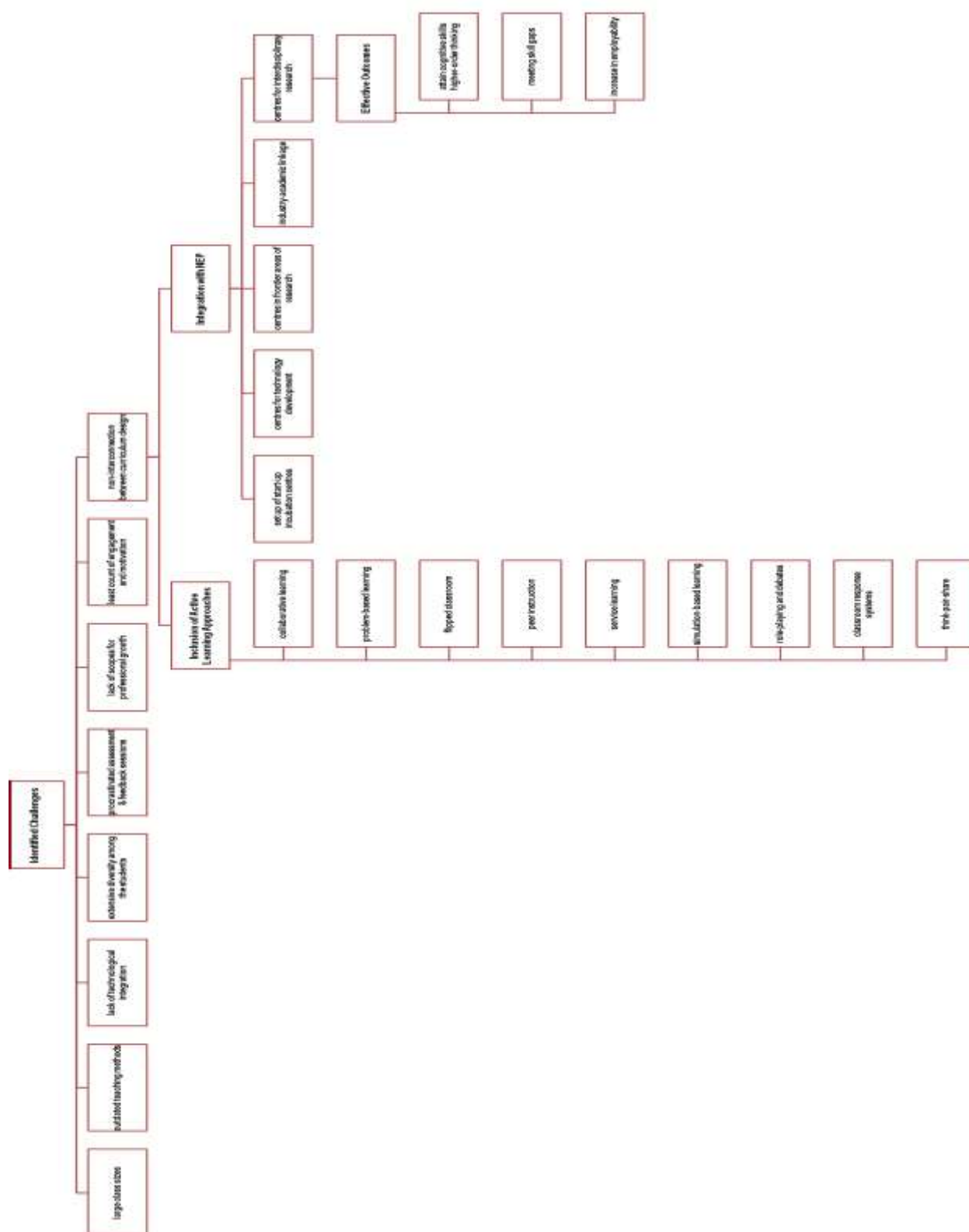
Eventually, the core contexts attained from the systematic review developed by this research are that student engagement and disengagement factors in Indian HE should be explored by using pedagogical strategies and interpretative phenomenological analysis. It is important to implement flipped learning and pedagogical innovations in Indian HE with project-based and practical effectiveness implications. Further emphasis is on the adaptation of integrated technology in the post-COVID phase in Indian HE, which should rely on technological communication, integrated learning platforms, learning-teaching approach with adequate flexibility for student well-being. Inclusion of pedagogy and diversity in Indian HE must promote and implement equality amidst diversity and finally the technology-enabled learning provisions and extensive student engagement in Indian online and offline classrooms must be highly encouraged.

Based on the identified key points from the thirty-six (36) research-based journal articles (see Appendix 1), this research identified the scope of the active learning approaches for improving students' pedagogical experience in HE in India. Considering the Research Question (RQ), this research met the answer by addressing Research Objectives (ROs) through the proceedings as mentioned in Table 2.

In terms of RO 1, the challenges involved in improving the pedagogical experience of students in HE in India were identified as large class sizes, outdated teaching methods, lack of technological integration, extensive diversity among the students, procrastinated assessment and feedback sessions, lack of scope for professional growth, least count of engagement and motivation, and interconnection between the curriculum design.

To meet RO 2, the attained key points focused on the collection of the different active learning approaches and found the effectiveness of collaborative learning, problem-based learning, flipped classroom, peer instruction, service learning, simulation-based learning, role-playing and debates, classroom response systems, and think-pair-share; for improving the pedagogical experience of students in HE in India. Finally, while trying to collect the key points for the context of RO 3, this SLR finalised the strategic development of learning-teaching approaches for generating awareness for active learning by the use of technology, scopes for personalized learning, on-time feedback and assessment results, development of the faculty, inclusive mode of education, inclusion of flipped classroom, interdisciplinary approach, experiential learning,

continuous support from the department, getting involved in learning communities, engaging guest speakers, student-driven research, transparent grading criteria, and adequate flexibility with the research-based courses. For effective usage of the aforementioned strategic initiative, this research recommended the integrated strategy of combining active learning in the New Education Policy of 2020 (see Figure 2).



Source: Created by the Researcher

Figure 2 The Integrated Strategy: Improving Students' Pedagogical Experience in Higher Education (HE) in India through Active Learning Approaches

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Appendix 1 Key Points in Selected Articles

1. Bhargava (2021)	Student engagement/disengagement, Higher Education, Pedagogical strategies, interpretative phenomenological analysis
2. Sravat & Pathranarakul (2021)	flipped learning, pedagogy, Higher Education, total interpretive structural modelling, Total Interpretive Structural Modelling (TISM) technique, India
3. Singh & Meena (2023)	post-COVID, Higher Education, flexibility, adaptability, technology integration, student engagement, equity, well-being
4. Livingston-Galloway & Robinson-Neal (2021)	inclusion, inclusive practice, pedagogy, inclusive pedagogy, educational practice, Higher Education, diversity
5. Sprenger & Schwaninger (2021)	chat, E-lectures, Mobile virtual reality, E-learning, Digital learning technologies, Technology acceptance, Perceived ease of use, Perceived usefulness, Behavioral intention, Classroom response system, Classroom
6. Ferrer et al. (2020).	Student engagement, Motivation, Higher Education, Attitude to online learning, Study mode
7. Panda (2023)	technology-enabled learning, pedagogic affordances, Open Educational Resources, quality assurance frameworks
8. O'Dea & Stern (2022)	Virtual learning, Online Higher Education, post-Covid-19, virtual teaching.
9. Vezne et al (2023)	Online engagement, Student engagement, Higher Education, Remote learning attitude, Motivation, Extrinsic and intrinsic goal orientation
10. Kumar (2021)	NEP 2020, India, Higher Education institution (HEI), gross enrollment ratio (GER), employment.
11. Kumar (2022)	Indian Higher Education Policy, Implementation Strategies, Indian Higher Education System, Research and Innovation focus.
12. Rossi et al (2021)	active learning, biology course, COVID-19 pandemic, critical thinking, e-learning, Higher Education
13. Prakasha (2022)	challenges, teacher, educators, learner engagement
14. Gupta et al (2022)	Stress, mental health, indian Higher Education, embodied conversational agent
15. Ribeiro-Silva et al (2022)	sustainability, active methodologies, university, well-being, review
16. Murillo-Zamorano, et al (2021)	Gamification, Active learning, Digital society, Skills, Academic achievement, Satisfaction
17. Kaddoura & Al Hussein (2021)	Interactive learning, Higher Education, student-centred learning, Nearpod
18. Munna & Kalam (2021).	Active learning; engagement; game-based learning; pedagogical approach
19. Fernandes, et al (2023)	Higher Education; pedagogical training; teacher professional development; university teachers; perceived impacts; teaching practices
20. Fazio et al. (2021)	Active Learning, Improve Student Learning, Attitudes, Physics
21. Jaysawal & Saha (2023)	Higher Education, Gross-enrolment Ratio, Remedies, Global Quality Standards.

22. Archer-Kuhn, et al (2020)	inquiry-based learning, deep learning, social work education, group study program
23. Mishra et al (2019).	Higher Education, Bridging the Skill Gap, Economy, Professional and Technical Education
24. Mandal (2021)	Opportunities and Challenges, Enrolment, Privatization, Self-sustainability, Financing, Education system, Issues, Quality, Quantity, Solution, Global standards, Government
25. Dutta (2020)	COVID-19, Novel Coronavirus, Pandemic, Indian Higher Education, Impact of Social Media, Online Learning, Videoconferencing, Digital Media, Teaching Pedagogy, UGC, ICT Initiative, Digital Repository, Open Educational Resources, Lockdown, Semester, Graduation and Post-Graduation Education
26. Carvalho et al (2021)	Knowledge, Pedagogical innovation, Higher Education, Tourism, Flexibility, Active learning methodologies
27. Raina & Choudhary (2020)	technologies; and fostering experiential learning pedagogy, talent pool, skill and competency, Indian Higher Education system, STEAM approach, multi-disciplinary teaching-learning methodologies, sustainability'; exposure to new-age
28. Indhu (2022)	National Research Foundation (NRF), Gross Enrolment Ratio (GER), National Education Policy 2020
29. Darbar (2021)	National Education Policy, Higher Education, universalisation, impact on teachers
30. Sonwal (2021)	Higher Education, SWAYAM, GER, Holistic Multidisciplinary Education, HECI.
31. Hailikari et al (2021)	Constructive alignment, students' active involvement, deep approach,
32. Armellini & Brenda (2021).	blended learning, active learning, pedagogical approach, higher-order thinking tasks
33. Chatur et al (2022)	Amphibian practical, Chalk and board method, Finger signal method, Pen grabbing method
34. Parvin (2021)	Teacher Education, Professional Development, Infrastructural Constraints, Quality Concern, Teacher's Proficiency
35. Srinivas (2023)	Quality, Concerns, Higher Education
36. Kumar (2023)	Indian Education, Challenges, Issues