
INVESTIGATING THE ROLE OF TEACHER TRAINING IN DEVELOPING LEARNER-CENTRIC PEDAGOGICAL COMPETENCIES FOR STRENGTHENING THE QUALITY, RELEVANCE, AND EFFECTIVENESS OF TEACHER EDUCATION

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ABSTRACT

Teacher education plays a critical role in determining the quality, relevance, and effectiveness of school education. The changing nature of learners, rapid technological developments, increasing diversity in classrooms, and the shift towards competency-based and learner-centric education require teachers to continuously develop and update their professional competencies. Although teacher-training programs have expanded considerably in India, concerns remain regarding their relevance, continuity, practical orientation, and impact on classroom practices. A major challenge is the persistence of conventional training approaches that emphasize the transmission of information rather than the development of competencies that teachers can apply in authentic classroom contexts.

The present paper investigates the role of teacher training in developing learner-centric pedagogical competencies and examines the perceptions of teacher educators regarding professional development programs. The paper adopts a descriptive survey approach supplemented by qualitative inputs from school heads (30) associated with the internship of pre-service teachers. Data were collected from teacher educators in Delhi and Haryana through a self-developed questionnaire administered using Google Forms. The study examines awareness and participation in professional development programs, perceived contribution of training to professional knowledge and pedagogical competencies, preferences for practice-oriented and collaborative professional learning, perceived effectiveness of existing programs, challenges affecting participation, and suggestions for improving professional development.

The findings indicate a positive orientation towards continuous professional development. Respondents perceived professional development as important for strengthening subject knowledge, pedagogical skills, classroom engagement, and professional growth. However, they also identified limitations related to time, workload, institutional support, financial constraints, access to quality training, and inadequate opportunities for sustained practice and follow-up. Participants expressed a preference for hands-on workshops, collaborative learning, peer interaction, mentoring, blended learning, research-oriented programs, and regular refresher courses.

Drawing upon the empirical findings, policy provisions under the National Education Policy (NEP) 2020 and the National Curriculum Framework for School Education (NCF-SE) 2023, relevant literature, and selected international practices, the paper proposes a Learner-Centric Teacher-Training Framework based on need identification, competency development, experiential learning, school-based practice, mentoring, reflection, technology integration, action research, and continuous feedback. The paper argues that teacher training needs to move beyond episodic workshop-based models towards sustained, contextualized, practice-embedded and competency-oriented professional learning. Such an approach can strengthen teacher agency, pedagogical effectiveness, and ultimately the quality and relevance of teacher education in India.

Keywords: Teacher Education, Teacher Training, Learner-Centric Pedagogy, Pedagogical Competencies, Continuous Professional Development, Capacity Building, Mentoring, Action Research, NEP 2020

1. INTRODUCTION

Quality school education is closely associated with the quality of teachers and the effectiveness of teacher education. Teachers work in increasingly complex educational environments characterized by diverse learner needs, rapid technological change, competency-based curricula, new approaches to assessment, and growing expectations regarding the holistic development of learners. Consequently, teacher education can no longer be viewed as a one-time process of acquiring professional qualifications. It needs to be understood as a continuum of professional learning extending from pre-service preparation to induction, in-service professional development, mentoring, reflection and career-long learning.

The history of teacher education in India reflects a gradual movement from apprenticeship-based learning towards institutionalized professional preparation. During the colonial period, organized teacher-training institutions emerged in major centers, while subsequent committees and policy initiatives emphasized the importance of trained teachers and in-service professional development. The Hartog Committee (1929), for example, highlighted the need for refresher and in-service training for teachers. Later policy initiatives, including the National Policy on Education (1986), the Programs of Action (1992), the National Curriculum Framework (2005), and the National Education Policy (2020), further emphasized teacher quality, professional development, reflective practice, and continuous learning.

The nature of teaching, however, has changed considerably. Contemporary classrooms require teachers not merely to transmit knowledge but to facilitate learning, create opportunities for inquiry, encourage collaboration, respond to individual differences, use assessment information to support learning, integrate technology appropriately, and promote the cognitive, social-emotional, physical, linguistic and creative development of learners.

This shift necessitates a corresponding transformation in teacher training. Training programs need to move from a predominantly trainer-centered model, in which knowledge is transmitted to teachers through lectures and workshops, towards a learner-centric and practice-oriented model in which teachers actively construct professional knowledge, experiment with pedagogical strategies, reflect on their practice, collaborate with colleagues and use evidence to improve classroom processes.

At the school level, initiatives such as Continuous and Comprehensive Evaluation (CCE), competency-based assessment, performance-based assessment, projects, case studies, experiential learning and other learner-centered approaches have sought to make teaching and assessment more meaningful. More recently, NEP 2020 has strengthened the emphasis on competency-based education, continuous professional development, technology-enabled learning, mentoring, professional standards and reflective practice.

Institutions such as the State Councils of Educational Research and Training (SCERTs), District Institutes of Education and Training (DIETs), Universities and teacher-education institutions have an important role in translating these policy directions into professional learning opportunities for teachers.

In this context, the present paper examines the role of teacher- training in developing learner-centric pedagogical competencies and explores how professional development can become more relevant, contextualized, practice-oriented and sustainable.

2. CONCEPTUALIZING LEARNER-CENTRIC TEACHER EDUCATION

Learner-centric education places the learner at the Centre of the teaching-learning process. It recognizes learners as active participants who construct knowledge through interaction, inquiry, experience, collaboration and reflection rather than as passive recipients of information.

A learner-centric teacher therefore, requires a broad repertoire of pedagogical competencies, including the ability to understand learners and their diverse needs, design meaningful and competency-oriented learning experiences, facilitate inquiry and problem-solving, employ collaborative and experiential learning strategies, differentiate instruction, promote inclusion and participation, integrate appropriate digital technologies, use formative assessment to understand learner progress, provide meaningful feedback, support socio-emotional development, reflect on classroom practices, and use evidence and action research to improve teaching.

Thus, learner-centric teacher education should not merely provide teachers with information about learner-centered pedagogy. It should provide opportunities for teachers to experience, practice, reflect upon and apply such pedagogy.

This distinction is fundamental. A teacher may know about collaborative learning theoretically but may not necessarily possess the competency to design and facilitate effective collaborative learning in a classroom. Teacher training therefore needs to bridge the gap between knowledge of pedagogy and enactment of pedagogy.

3. TEACHER TRAINING AND DEVELOPMENT OF PEDAGOGICAL COMPETENCIES

Teacher training contributes to professional competence through the development of three interconnected dimensions:

3.1 Professional Knowledge

3.2 Professional Skills

3.3 Professional Dispositions

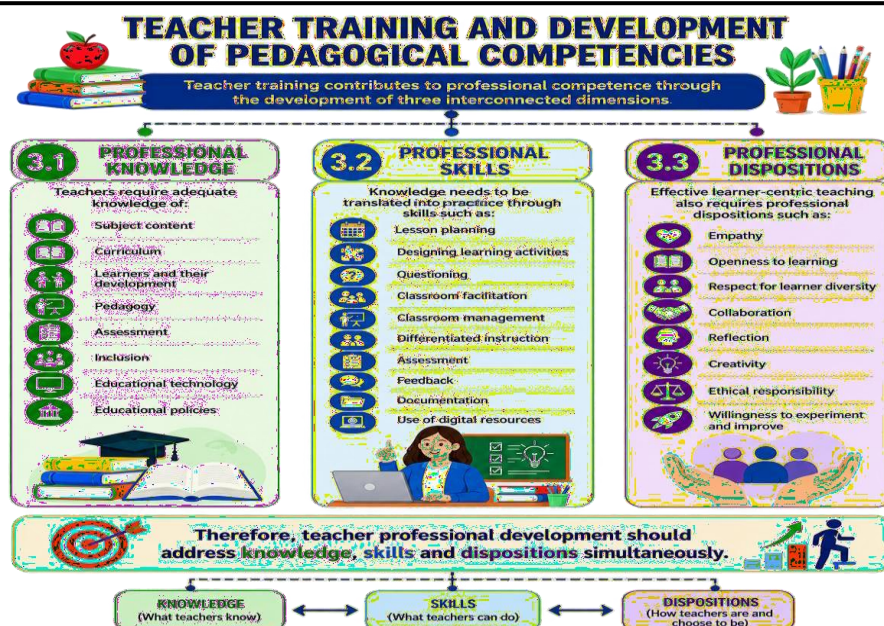


Figure 1. Teacher Training and Development of Pedagogical Competencies

4. POLICY CONTEXT

4.1 National Education Policy 2020

NEP 2020 places teachers at the Centre of educational transformation and recognizes teacher education and continuous professional development as essential components of quality education.

The policy proposes a restructuring of teacher education, including the four-year integrated B.Ed. programs, stronger school-based preparation, professional standards for teachers, mentoring, and continuous professional development. It also emphasizes the use of technology-enabled platforms and resources to support professional learning.

An important implication of NEP 2020 is the movement from viewing teacher training as an occasional intervention towards viewing teacher learning as a continuous professional process.

4.2 National Curriculum Framework for School Education, 2023

NCF-SE 2023 reinforces the movement towards competency-based, experiential, inclusive and learner-centered education. It places emphasis on understanding rather than rote memorization and on providing opportunities for learners to demonstrate competencies in authentic contexts.

This requires teachers to develop corresponding competencies in curriculum transaction, pedagogy and assessment.

4.3 National Professional Standards for Teachers

The National Professional Standards for Teachers (NPST) provides a competency-oriented framework for understanding teacher professionalism across career stages. Such standards can serve as an important reference point for designing teacher preparation, professional development and career progression.

Taken together, NEP 2020, NCF-SE 2023 and NPST indicate the need for a teacher-development system that is:

Continuous → competency-oriented → practice-based → reflective → collaborative → contextualized

5. REVIEW OF RELATED LITERATURE

Research on teacher professional development increasingly suggests that the effectiveness of training depends not merely on the number of hours completed but, on the quality, and design of professional learning.

Darling-Hammond and colleagues have highlighted the importance of coherent teacher preparation, strong pedagogical knowledge, active learning and opportunities to connect theory with practice. Research on effective professional development similarly identifies content focus, active learning, collaboration, coherence, sustained duration and follow-up support as important features.

The literature also indicates that one-time workshops often have limited impact when teachers do not receive opportunities to practice newly acquired strategies, obtain feedback and adapt them to their classroom contexts.

Reflective practice provides another important dimension. Schön (1983) emphasized the role of reflection in professional learning, while action research provides teachers with a systematic means of identifying classroom problems, implementing interventions and examining their effects.

Recent literature shows that teacher education can either support or hinder learner-centered teaching. Therefore, teacher education should model the learner-centered practices that teachers are expected to use in classrooms.

The emerging literature therefore points towards a shift:

Conventional Training	Learner-Centric Professional Learning
One-time workshops	Continuous learning
Trainer-centred	Teacher-centred
Lecture-based	Experiential
Generic content	Context-specific
Knowledge transmission	Competency development
Individual participation	Collaboration
Limited follow-up	Mentoring and coaching
Theory-oriented	Practice-oriented
Compliance	Professional autonomy
Training attendance	Demonstrated application

This shift provides the conceptual foundation for the present study.

6. EMERGING MODELS OF TEACHER PROFESSIONAL DEVELOPMENT

Several approaches appear particularly relevant for developing learner-centric pedagogical competencies.

6.1 Practice-Based Professional Development

Training should include demonstrations, simulations, classroom application, observation and feedback.

6.2 Mentoring and Coaching

Experienced teachers, teacher educators and school leaders can support teachers in implementing new pedagogical practices.

6.3 Collaborative Professional Learning

Professional learning communities, peer observation, collaborative lesson planning and peer sharing can facilitate collective improvement.

6.4 Action Research

Action research enables teachers to identify context-specific classroom problems, develop interventions and examine evidence of improvement.

6.5 Blended Professional Development

Online resources, MOOCs, webinars and digital platforms can complement face-to-face learning and provide flexibility.

6.6 Career-Long Professional Learning

Professional development should be linked with teachers' career stages and evolving professional responsibilities.

Several approaches appear particularly relevant for developing learner-centric pedagogical competencies.

7. INTERNATIONAL PERSPECTIVES

International education systems provide useful insights into the organization of teacher professional learning.

7.1 Finland

Finland gives teachers strong professional training, autonomy, and trust. Teachers use their knowledge and professional judgement to adapt teaching according to learners' needs.

An important lesson for India is that teacher autonomy needs to be accompanied by high-quality preparation, professional trust, continuous learning and institutional support.

7.2 Singapore

Singapore provides an example of a system that places considerable emphasis on structured professional development and continuous learning. Teacher development is linked to professional growth, leadership and system-level priorities.

The relevance for India lies in developing career-long professional learning pathways rather than treating training as isolated events.

7.3 United States

Teacher education in the United States is relatively decentralized. Professional development varies across states and institutions, but several models emphasize mentoring, school-based professional learning and collaboration.

These international experiences suggest that no single model can simply be transplanted into India. Instead, relevant principles need to be adapted to local institutional and educational contexts.

8. OBJECTIVES OF THE STUDY

The study was undertaken with the following objectives:

1. To examine the role of teacher training in promoting learner-centric education within teacher-education programmes.
2. To identify the pedagogical competencies required for teachers to effectively implement learner-centric teaching-learning practices.
3. To analyse the perceptions of teacher educators regarding learner-centric approaches and professional development programmes.
4. To explore the challenges and opportunities associated with integrating learner-centric practices into teacher-training programmes.
5. To propose a learner-centric teacher-training framework for strengthening the quality, relevance and effectiveness of teacher education in alignment with NEP 2020 and NCF-SE 2023.

9. RESEARCH DESIGN

The study adopted a descriptive survey design with a mixed-method orientation to examine the role of teacher training in developing learner-centric pedagogical competencies. The quantitative component examined teacher educators' perceptions of professional development programmes, their contribution to professional knowledge and pedagogical competencies, preferred modes of learning, perceived effectiveness, and participation-related challenges.

The quantitative sample comprised **52 teacher educators** from teacher-education institutions in Delhi and Haryana, selected through convenience/purposive sampling. Data were collected through a self-developed structured questionnaire administered via Google Forms. The questionnaire covered awareness and participation in professional development, professional knowledge, pedagogical competencies, need for continuous professional development, preferred training approaches, effectiveness, challenges, and suggestions. The questionnaire was reviewed for relevance and alignment with the study objectives. Data were analyzed using frequencies and percentages.

For the qualitative component, an **interview schedule was administered to about 40 school heads** associated with the internship/school-experience component of B.Ed. and D. El. Ed. programs. The interviews explored trainee preparedness, professional competencies, practical requirements, and challenges in implementing learner-centric practices.

The proposed Learner-Centric Teacher-Training Framework was developed by synthesizing: (a) findings from the survey of 52 teacher educators, (b) qualitative themes, (c) provisions of NEP 2020, NCF-SE 2023 and NPST, and (d) relevant literature and selected international practices. The framework is therefore a conceptually and empirically informed proposal, rather than a tested causal or predictive model.

10. FINDINGS AND DISCUSSION

10.1 Awareness and Participation in Professional Development

The findings indicate that most respondents were aware of professional development opportunities and a substantial proportion had participated in training programmes or workshops during the preceding three years.

This suggests that professional learning has become an accepted component of teacher educators' professional responsibilities. However, participation alone does not necessarily indicate professional growth. The effectiveness of training depends on its relevance, quality, duration, opportunities for application and follow-up.

10.2 Perceived Contribution of Professional Development

Most respondents selected **Agree** or **Strongly Agree** regarding the contribution of professional development to their knowledge and pedagogical skills.

The findings suggest that teacher educators perceive professional development as contributing to:

- Subject Knowledge;
- Pedagogical Knowledge;
- Teaching Strategies;
- Classroom Engagement; And
- Professional competence.

This positive perception provides a strong foundation for strengthening institutional professional-development systems.

10.3 Importance of Continuous Professional Development

Respondents demonstrated strong agreement regarding the importance of continuous professional development.

This finding is consistent with the changing nature of education. Curriculum reforms, competency-based education, digital technologies, new assessment practices and diverse learner needs require teachers to continuously update their knowledge and skills.

Professional development therefore needs to be understood as a **career-long process rather than a periodic training requirement**.

10.4 Need for Collaborative and Practice-Oriented Training

A particularly significant finding was the strong preference for practical and collaborative professional development.

Approximately **45% of respondents strongly agreed and 40% agreed** that greater emphasis should be placed on collaborative and practice-oriented professional learning, while only a small proportion disagreed.

The finding suggests that teacher educators prefer:

- Hands-On Activities;
- Workshops;
- Peer Learning;
- Collaborative Tasks;
- Demonstrations;
- Interactive Sessions; And
- Opportunities to apply new knowledge.

This has important implications for training design. If teachers are expected to implement learner-centric pedagogy, professional development itself should model learner-centric principles.

10.5 Perceived Effectiveness of Existing Programs

Most respondents rated professional-development programs around the Average to Good range, while very few rated them as poor.

The findings indicate that existing programs are viewed as useful but have scope for improvement. Participants particularly indicated the need for:

- Greater Practical Relevance;
- Better Implementation;
- Contextualized Content;
- Follow-Up Support;

- Institutional Encouragement; And
- Opportunities to apply learning.

Thus, the central issue is not simply increasing the number of training programs but improving their quality, relevance and continuity.

10.6 Challenges Affecting Professional Development

The major challenges identified by respondents were:

1. Lack of time;
2. Heavy workload;
3. Limited institutional support;
4. Financial constraints; and
5. Limited access to quality training.

These challenges demonstrate that professional development cannot be improved solely through better course design. Institutional conditions also influence participation and implementation.

A teacher may receive high-quality training but may be unable to implement the acquired competencies because of workload, inadequate resources, limited administrative support or lack of follow-up.

10.7 Preferred Strategies for Improving Professional Development

Respondents suggested the following strategies:

- More Hands-On Workshops;
- Flexible Online And Blended Programs;
- Research-Oriented Training;
- Institutional Encouragement;
- Regular Refresher Courses;
- Peer Sharing And Networking;
- Mentoring;
- Follow-Up Support; And
- Context-specific professional learning.

The strongest preference was for hands-on and practical training, indicating the need to move beyond predominantly lecture-based professional development.

11. QUALITATIVE INSIGHTS FROM EDUCATORS

The qualitative responses reinforced the quantitative findings. Participants emphasized that professional development should be:

Need-based + Continuous + Practical + Interactive + Collaborative + Contextualized + Supported by Follow-up

Several respondents recommended one-to-one discussion with teachers, peer sharing, networking, mentoring and school-based application.

There was also a strong emphasis on experiential learning and technology-enabled professional learning. Participants suggested that training should address teachers' actual professional problems rather than focus primarily on theoretical concepts.

The findings also highlighted the value of:

- Professional Learning Communities;
- Peer Mentoring;
- Collaborative Workshops;
- Classroom Observation;

- Coaching;
- Feedback;
- Action Research; And
- Reflective Practice.

These suggestions are consistent with contemporary approaches to effective professional development.

12. ROLE OF ACTION RESEARCH IN DEVELOPING TEACHER COMPETENCIES

Action research is a valuable strategy for learner-centric teacher development, enabling teachers to systematically identify classroom problems, implement interventions, and improve practice through evidence and reflection.

Action Research Cycle:

Identify → Plan → Implement → Observe → Reflect → Modify → Re-implement

It develops key professional competencies, including:

- Problem identification and inquiry
- Evidence collection and analysis
- Reflective thinking
- Pedagogical experimentation
- Decision-making
- Professional autonomy

Action research is particularly relevant to learner-centric pedagogy as it enables teachers to respond to specific learner needs, test context-appropriate strategies, and evaluate their effectiveness in authentic classroom settings.

The work of Srivastava on action research by practicing teachers and pre-service trainees provides a useful example of how teacher inquiry can contribute to school improvement and professional learning. (*Srivastava, S. (2011), Srivastava, S. (2016), Srivastava, S. (2022)

13. PROPOSED LEARNER-CENTRIC TEACHER-TRAINING FRAMEWORK

Based on the literature, policy context, empirical findings and international perspectives, the paper proposes a Learner-Centric Teacher-Training Framework, designed to make teacher professional development need-based, competency-oriented, experiential, collaborative, reflective, and practice-embedded.

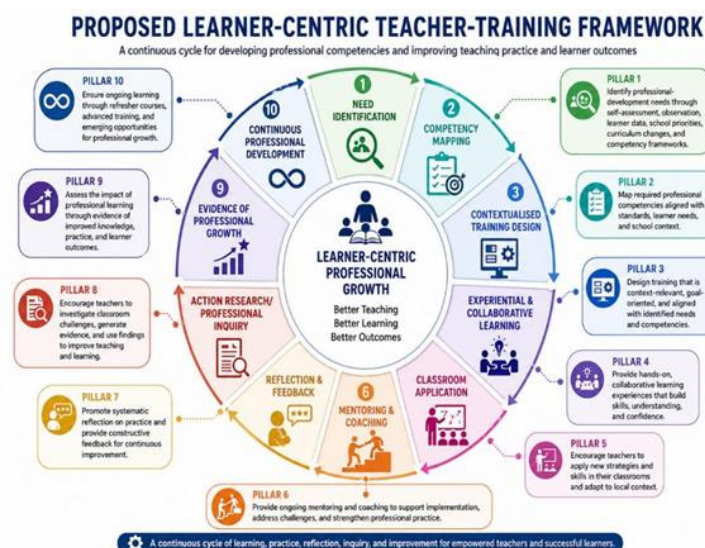


Figure 2. Proposed Learner-Centric Teacher-Training Framework

Need Identification → Competency Mapping → Contextualized Training Design → Experiential & Collaborative Learning → Classroom Application → Mentoring & Coaching →

Reflection & Feedback → Action Research/Professional Inquiry → Evidence of Professional Growth → Continuous Professional Development

The framework rests on **ten** interconnected pillars.

Pillar 1: Need-Based Training

Identify professional-development needs through self-assessment, classroom observation, learner evidence, school priorities, curriculum changes, and competency frameworks.

Pillar 2: Competency-Oriented Training

Focus professional development on the acquisition, application, and demonstration of specific professional competencies rather than theoretical knowledge alone.

Pillar 3: Contextualized Training Design

Design training that is context relevant, goal oriented and aligned with identified with needs and competencies

Pillar 4: Experiential and Collaborative Learning

Provide opportunities to practise, design, implement, simulate, and reflect on learner-centric teaching approaches. Promote peer learning, professional learning communities, collaborative workshops, and shared professional inquiry

Pillar 5: School-Based Application

Enable teachers to apply professional learning directly within their classroom and school contexts.

Pillar 6: Mentoring and Coaching

Provide sustained mentoring, coaching, and implementation support to address classroom challenges and strengthen practice.

Pillar 7: Reflection and Feedback

Promote systematic reflection on teaching practices and the use of constructive feedback for continuous improvement.

Pillar 8: Action Research and Professional Inquiry

Encourage teachers to critically examine their practices, investigate classroom challenges, and use evidence to improve teaching and learning.

Pillar 9: Evidence of Professional Growth

Assess the impact of professional learning through evidence of improved knowledge, classroom practice, learner engagement, and learner outcomes.

Pillar 10: Continuous professional development

Ensure ongoing learning through refresher courses, advanced training and emerging opportunities for professional growth

Overall, the framework positions teacher professional development as a continuous cycle of need identification, competency development, classroom application, support, reflection, evidence-based improvement, and further professional learning. It therefore seeks to move teacher training beyond one-time workshops towards sustained, contextualized, collaborative, and practice-oriented professional learning.

14. IMPLICATIONS FOR TEACHER-EDUCATION INSTITUTIONS

The findings have implications for B.Ed. colleges, SCERTs, DIETs, Universities and school systems.

14.1 Strengthen School-College Partnerships

Teacher-education institutions should establish sustained partnerships with schools rather than limiting interaction to internship periods.

14.2 Redesign Practicum

The practicum during pre-service teachers training should provide student teacher with opportunities to engage in a range of meaningful and reflective professional experiences, including observation, co-teaching, lesson planning, classroom inquiry, learner profiling, assessment, reflection, and feedback. These experiences should be integrated to help student teachers connect theoretical knowledge with classroom practice and develop the skills required for effective teaching and continuous professional improvement.

14.3 Develop Mentoring Systems

Teacher educators and experienced school teachers should be prepared as mentors.

14.4 Establish Professional Learning Communities

Regular professional-learning groups can provide opportunities for collaborative planning, peer learning and problem-solving.

14.5 Integrate Technology

Digital platforms should supplement rather than replace face-to-face professional learning.

14.6 Institutionalize Action Research

Action research should become a meaningful component of pre-service and in-service professional development.

14.7 Evaluate Training Beyond Attendance

The effectiveness of professional development should not be measured only through: number of teachers trained × number of training hours.

Instead, evaluation should examine whether training leads to changes in professional practice and learner experiences.

15. RECOMMENDATIONS

Based on the findings, the following recommendations are proposed:

1. Shift from one-time training to continuous professional learning.
2. Conduct systematic training-needs assessments before designing programmes.
3. Align training with professional competencies and career stages.
4. Increase the proportion of hands-on and practice-oriented activities.
5. Introduce structured post-training mentoring and coaching.
6. Strengthen peer learning and professional learning communities.
7. Promote school-based action research.
8. Expand flexible blended professional-learning opportunities.
9. Provide institutional time and administrative support for professional development.
10. Develop context-specific training materials and teacher manuals.
11. Strengthen school–college partnerships for pre-service teacher preparation.
12. Develop mechanisms to evaluate the impact of training on classroom practice.
13. Use teacher self-assessment and professional portfolios to document professional growth.
14. Integrate learner-centric pedagogies into teacher education through modelling, not merely through theoretical instruction.
15. Strengthen digital integration in teacher professional development through platforms to support online training, professional learning, participation tracking, access to digital resources, and continuous monitoring of teachers' professional growth.
16. Provide orientation on AI to teachers/teacher educators as to how to make judicious use in their teaching - learning pedagogies.

16. CONCLUSION

Teacher education is undergoing a significant transformation in response to changing learner needs, technological developments, competency-based education and the policy vision articulated in NEP 2020. In this context, the effectiveness of teacher training cannot be determined merely by the number of programs organized or teachers participating in them. Its real value lies in the extent to which professional learning develops teachers' capacity to understand learners, design meaningful learning experiences, facilitate active participation, assess learning, provide feedback and continuously improve their practice.

The present study indicates that teacher educators have a positive orientation towards professional development and recognize its contribution to professional knowledge and pedagogical competence. At the same time, the findings highlight the need for greater practical relevance, collaboration, institutional support, flexibility and sustained follow-up.

The central argument emerging from the study is that teacher training must itself become learner-centric. Teachers are unlikely to consistently implement learner-centred practices when their own professional learning is dominated by passive participation, information transmission and one-time workshops.

A transformative model of teacher education therefore needs to move:

From training to professional learning; from transmission to participation; from theory to practice; From isolated workshops to continuous support; from individual learning to collaborative inquiry; from compliance to professional agency; and From attendance-based evaluation to evidence of professional growth.

The proposed Learner-Centric Teacher-Training Framework provides a pathway for achieving this transition through need identification, competency development, experiential learning, classroom application, mentoring, collaboration, reflection, action research and continuous feedback.

For India, and particularly for teacher-education institutions and academic support organizations such as SCERTs and DIETs, the challenge is therefore not merely to provide more training, but to create better professional learning systems that are sustained, contextual, practice-embedded and responsive to teachers' and learners' needs. Such a transformation can contribute significantly to strengthening the quality, relevance and effectiveness of teacher education and to realizing the broader vision of NEP 2020.

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