



Continuous Professional Development in the Age of Emerging Technologies: Challenges for Indian Teacher Training Institutions

Priyabrata Sau¹ & Laylee Chakraborty²

1. Assistant Professor of Indian Institute of Education
2. Assistant Professor of Swami Vivekananda College of Education for Women

Abstract: *In the contemporary educational landscape, emerging technologies are transforming the roles, responsibilities, and skill requirements of teachers. Continuous Professional Development (CPD) is therefore essential for Teachers training institution in India to ensure that Teacher remain relevant and effective. However, the integration of technological advancements into CPD practices presents significant challenges. These include gaps in digital infrastructure, varying levels of technological proficiency among teachers, limited institutional capacity, and disparities in access to technology across regions. Moreover, rigid training structures, time constraints, and insufficient alignment between technology use and pedagogical objectives often hinder meaningful professional learning. This study emphasizes the importance of reimagining CPD frameworks that are flexible, inclusive, and responsive to technological change. Strengthening institutional support systems, promoting digital competence, and fostering a culture of lifelong learning are crucial for enabling Indian teacher training institutions to prepare Teachers for a technology-driven educational environment. Indian teacher training institutions face multiple challenges in effectively integrating them into CPD frameworks. Key challenges include inadequate digital infrastructure, limited technological competence among teacher educators, uneven access to resources between urban and rural institutions, insufficient funding, and a lack of coherent policy alignment between technological innovation and pedagogical goals. Additionally, resistance to change, heavy workloads, and limited time for sustained professional learning further constrain meaningful CPD engagement. This abstract highlights the need for context-sensitive CPD models that emphasize digital literacy, pedagogical innovation, institutional support, and continuous mentoring. Addressing these challenges is essential for empowering Indian teachers to adapt to technological change and to ensure quality, equity, and relevance in teacher education in the digital era.*

Keywords: *Continuous Professional Development, Emerging Educational Technologies, Teachers Training Institutions, Indian Teacher Education.*

Introduction: The rapid advancement of emerging technologies has brought profound changes to education systems worldwide, redefining how knowledge is delivered, accessed, and assessed. Technologies such as artificial intelligence, online learning platforms, virtual classrooms, learning management systems, and data-driven instructional tools have become increasingly integral to teaching and learning processes. In this evolving context, teachers are expected not only to possess subject expertise but also to demonstrate digital competence, adaptability, and innovative pedagogical skills. As a result, Continuous Professional Development (CPD) has emerged as a vital mechanism for equipping teachers with the knowledge and skills required to meet contemporary educational demands.

In India, teacher training institutions play a central role in shaping the quality of the teaching workforce. These institutions are responsible for preparing pre-service teachers and supporting in-service teachers through ongoing professional learning opportunities. However, the integration of emerging technologies into CPD practices remains uneven and challenging. Many institutions struggle with inadequate infrastructure, limited access to digital resources, and insufficient training for teacher educators themselves. Additionally, disparities between urban and rural institutions, coupled with financial and administrative constraints, further complicate the effective implementation of technology-enabled CPD.

Despite these challenges, emerging technologies offer significant potential to enhance CPD by enabling flexible learning models, collaborative professional networks, and personalized learning experiences. Harnessing these opportunities requires a shift from traditional, one-time training programs to continuous, reflective, and practice-oriented professional development approaches. This study explores the challenges faced by Indian teacher training institutions in implementing CPD in the age of emerging technologies and underscores the need for sustainable, context-specific strategies to strengthen teacher professional learning in a rapidly changing educational environment.

Conceptual Clarification

Continuous Professional Development (CPD): Continuous Professional Development refers to an ongoing, structured, and reflective process through which teachers continuously enhance their professional knowledge, pedagogical skills, and competencies throughout their careers. In the Indian context, CPD moves beyond sporadic in-service training to emphasize sustained learning aligned with classroom realities, institutional goals, and national educational reforms.

Emerging Technologies in Education: Emerging technologies include rapidly advancing digital tools such as artificial intelligence, online learning platforms, learning analytics, virtual and augmented reality, and open educational resources. These technologies reshape teaching, learning, assessment, and professional collaboration, requiring teachers to develop not only technical skills but also pedagogical and critical capacities for meaningful integration.

CPD and Indian Teacher Training Institutions: Indian teacher training institutions—such as DIETs, CTEs, IASEs, universities, and NCTE-recognized colleges—play a central role in supporting CPD for both pre-service and in-service teachers. In the age of emerging technologies, these institutions are expected to facilitate continuous, technology-enabled, and practice-oriented professional learning.

Challenges in the Age of Emerging Technologies: The major challenges faced by Indian teacher training institutions include inadequate digital infrastructure, limited technological capacity among teacher educators, rigid training models, digital inequities, and resistance to pedagogical change. These constraints often result in superficial technology adoption rather than deep instructional transformation.

Key Emerging Technologies Influencing CPD

- **Digital Learning Platforms & LMS** (e.g., DIKSHA, SWAYAM): Enable flexible, self-paced, and continuous professional learning for teachers.
- **Artificial Intelligence & Learning Analytics:** Support personalized CPD by identifying teachers' learning needs and progress.
- **Virtual and Augmented Reality (VR/AR):** Provide immersive training experiences through classroom simulations and practice-based learning.
- **Mobile Technologies & Educational Apps:** Facilitate anytime-anywhere professional development, especially in remote areas.

- **Open Educational Resources (OERs) & Online Professional Learning Networks:** Promote collaboration, knowledge sharing, and continuous upskilling among teachers.
- **Cloud Computing:** Ensures easy access to shared learning resources and content storage.
- **Collaborative Digital Tools:** Promote peer learning through webinars and online communities.
- **Assistive Technologies:** Support inclusive and accessible professional development.

Significance of the Study: The study is significant as it provides a clear conceptual understanding of Continuous Professional Development (CPD) in the context of emerging technologies within Indian teacher education. It highlights the challenges faced by teacher training institutions in adopting technology-integrated CPD practices, thereby offering insights for institutional improvement. The study is also professionally relevant, as it emphasizes the need for continuous, technology-enabled learning to enhance teachers' pedagogical effectiveness. Additionally, it holds policy significance by supporting efforts to strengthen CPD frameworks aligned with national priorities in education.

Statement of the Research Problem: Although emerging technologies are increasingly influencing education, Continuous Professional Development (CPD) for teachers in India remains largely fragmented and inadequately aligned with technological and pedagogical needs. Indian teacher training institutions face persistent challenges in effectively integrating technology into CPD practices. This study addresses the problem of understanding and clarifying these challenges in the context of emerging technologies. So the present study entitled as-"continuous professional development in the age of emerging technologies: challenges for Indian Teacher training institutions".

Objectives of the Study

1. To find out the availability and adequacy of technological infrastructure for CPD programs.
2. To find out Teachers' awareness, attitude, and readiness towards technology-based CPD.
3. To find out the relationship between emerging technology use and effectiveness of CPD among Teachers.
4. To identify the major challenges faced by Indian Teacher training institutions and Teachers in implementing Continuous Professional Development (CPD) through emerging technologies.
5. To find out the role of institutional support (leadership, funding, policy) in strengthening CPD.

Research Hypotheses

1. H01: There is no Significant difference in CPD participation between teachers from Govt. and Private Teacher Training Institutions.
2. H02: There is no Significant relationship between Teachers' digital awareness, attitude, and readiness and their participation in technology-based CPD
3. H03: There is no Significant relationship between availability of technological infrastructure and effectiveness of CPD Programs.
4. H04: There is no significant difference in perception of CPD Challenges based on Teaching Experience (below 5 years, 5-10 years and above 10 years)
5. H05: There is no significant relationship between institutional support and successful implementation of technology based CPD,

Methodology: The present study is Descriptive Survey type research. This method was used by the researcher to study -"Continuous professional development in the age of emerging technologies: challenges for Indian Teacher training institutions".

Population of the Study: The population of the present study consisted of all Teachers working in B.Ed. / D.El.Ed. / M.Ed. teacher training institutions in India.

Sample of the Study: The sample for the present study comprised 200 Teachers of Govt. and Private Teacher Training Institutions.

Out of the total sample:

- 100 Teachers were selected from Govt. Teacher Training Institutions, and
- 100 Teachers were selected from Private Teacher Training Institutions.

Sampling Technique: The sample was selected using the simple random sampling technique to ensure equal representation of Teachers and to reduce sampling bias. This technique provided every Teacher an equal opportunity to be included in the study.

Variables of the Study

| Independent Variables | Dependent Variables |
|--|--------------------------------------|
| Infrastructure, Digital Readiness, Institutional Support | CPD Participation, CPD Effectiveness |

Control Variables: Institution Types, Experience, Location, Gender

Tools used: The present study employed both primary data collection instruments and statistical tools to examine continuous professional development in the age of emerging technologies: challenges for Indian Teachers training institution. For present study researcher used Questionnaire and Likert-type Scale for necessary investigation covering:

- Teacher’s Awareness, attitude, and readiness.
- CPD participation level
- Effectiveness of CPD
- Institutional Support

Proceedure for Data Collection-

Primary Data Collection: After procuring the standardized tools, researcher went to some Teacher Training Institutions for data collection. Researchers clarify their identifications for data collection. They are very much co-operate with Researcher. The valid information was given by them.

Secondary Data Collection: Researchers go through Journals, Books and Articles on Women’s Empowerment to gather some knowledge on it.

Data Analysis And Interpretation

Objective wise analysis and interpretation

Objective-1: To find out the availability and adequacy of technological infrastructure for CPD programs

| Facilities | Yes (f) | Yes (%) | No (f) | No (%) |
|-------------------|---------|---------|--------|--------|
| Smart Classroom | 120 | 60% | 80 | 40% |
| Computer Lab | 145 | 72.5% | 55 | 27.5% |
| Stable Internet | 110 | 55% | 90 | 45% |
| ICT Support Staff | 85 | 42.5% | 115 | 57.5% |
| LMS Platform | 95 | 47.5% | 105 | 52.5% |

Table No. 1 Showing the availability and adequacy of technological infrastructure for CPD programs

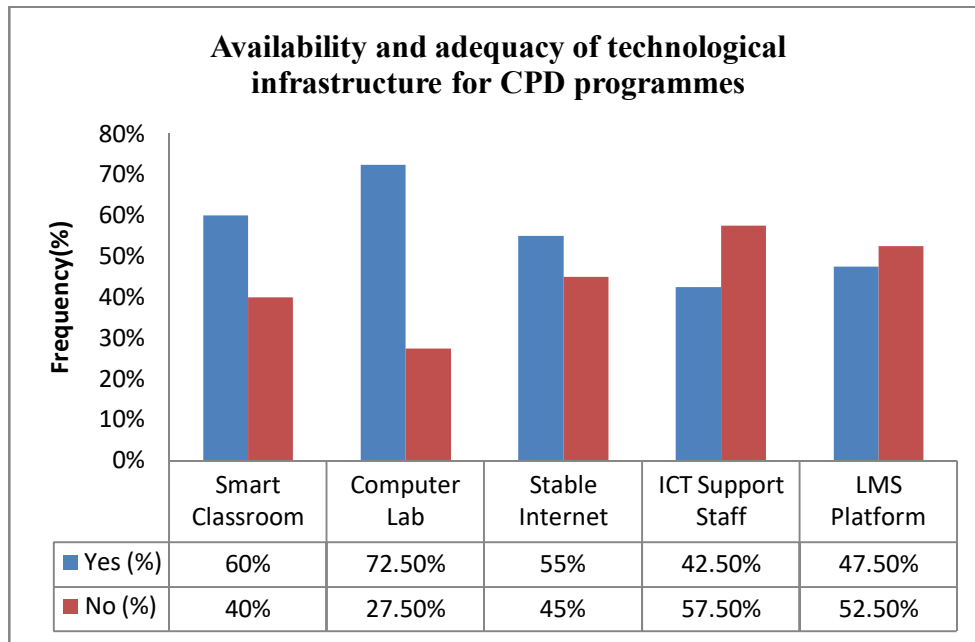


Fig. No.1- the availability and adequacy of technological infrastructure for CPD programs.

Interpretation

Most institutions have **computer labs (72.5%)**, but **stable internet (55%)** and **ICT support staff (42.5%)** are inadequate. This suggests that infrastructure exists but support systems are weak. Although most institutions have basic facilities such as computer labs and smart classrooms, stable internet connectivity and ICT support staff remain inadequate. This reduces the smooth functioning of online CPD programs.

Hypothesis: There is no significant difference in CPD participation between Govt. and Private institutions.

Group Statistics

| Group | N | Total Score | Mean | SD | df | MD | SEM | SED | t-ratio | P Value | Table Value | Remarks |
|------------|-----|-------------|-------|-------|-----|------|------|------|---------|---------|----------------------|--------------------------|
| Government | 100 | 7020 | 70.20 | 10.50 | 198 | 4.40 | 1.05 | 1.44 | 3.05 | 0.003 | 1.97 (at 0.05 level) | Null hypothesis rejected |

| | | | | | | | | | | | | |
|---------|-----|------|-------|------|--|--|------|--|--|--|----------------------|-----------------------------------|
| Private | 100 | 7460 | 74.60 | 9.80 | | | 0.98 | | | | 2.60 (at 0.01 level) | and Research hypothesis accepted. |
|---------|-----|------|-------|------|--|--|------|--|--|--|----------------------|-----------------------------------|

Table No. 2 Showing Mean Difference in CPD participation between Govt. and Private Teacher Training institutions.

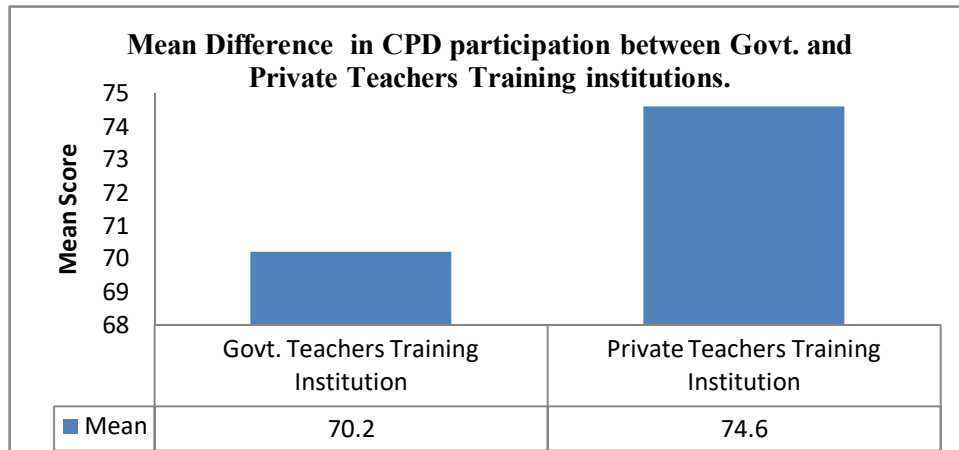


Fig. No. 2- Mean Difference in CPD participation between Govt. and Private Teacher Training institutions

Interpretation: The Mean score of **Private Teacher Training institutions** (M=74.60, SD=9.80) is higher than that of **Govt. Teacher Training institutions** (M=70.20, SD=10.50). The Calculated t-value(3.05) exceeds the critical values at both 0.05 and 0.01 levels of significance. Thus, the null hypothesis is rejected. There is a significant difference in CPD Participation between Govt. and Private Teacher Training Institutions. As per result Private Teacher Training Institutions show higher CPD Participation.

Objective-2: To find out teachers' awareness, attitude, and readiness towards technology-based CPD.

Hypothesis: H02: There is no Significant relationship between teachers' digital readiness and their participation in technology-based CPD

Correlation

| Category | No. Of Sample | Df(N-2) | r Value | Correlation |
|--|---------------|---------|---------|---------------------------------------|
| Teacher's awareness, attitude, and readiness | 200 | 198 | 0.68 | Moderate to high positive correlation |
| CPD Participation | 200 | 198 | | |

Table No 3. Showing Correlation Coefficient r Value of relationship between teacher's digital awareness, attitude, and readiness and their participation in technology-based CPD

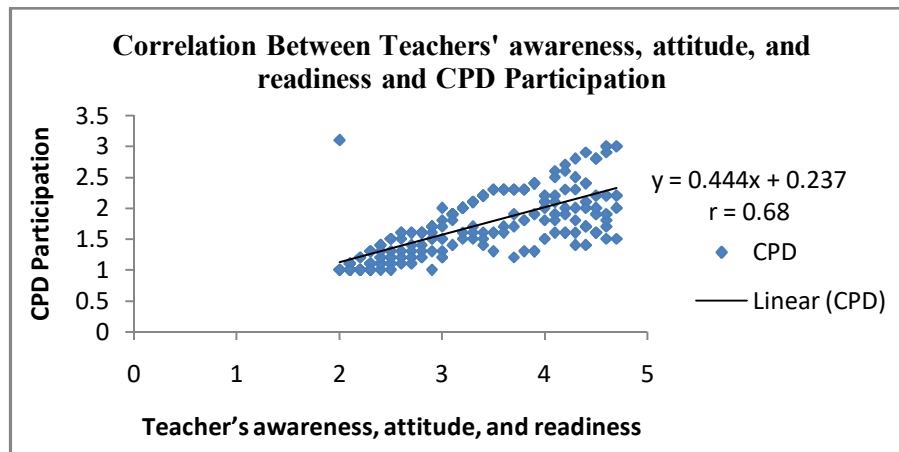


Fig. No.3- Correlation Coefficient r Value of relationship between teachers’ digital awareness, attitude, and readiness and their participation in technology-based CPD

Interpretation: The obtained correlation coefficient($r=0.68$) between teachers’ digital awareness, attitude, and readiness and their participation in technology-based CPD is positive and statistically significant, as it exceeds the critical table value at both 0.05 and 0.01 levels of significance. Hence, the null hypothesis is rejected, and alternative hypothesis is accepted.

A **moderate positive correlation ($r=0.68$)** shows that higher digital readiness leads to greater CPD participation. Teacher reported moderate awareness and readiness, suggesting that many educators are willing to adopt digital CPD but require further skill enhancement and confidence-building support.

Objective-3: To find out the relationship between emerging technology use and effectiveness of CPD among Teachers.

Hypothesis: H03: There is no Significant relationship between availability of technological infrastructure and effectiveness of CPD Programs.

| Category | No. Of Sample | Df(N-2) | r Value | Correlation |
|--|---------------|---------|---------|---------------------------------------|
| Availability of technological infrastructure | 200 | 198 | 0.73 | Moderate to high positive correlation |
| Effectiveness of CPD Programs | 200 | 198 | | |

Table No 4. Showing Correlation Coefficient r Value of between availability of technological infrastructure and effectiveness of CPD Programs.

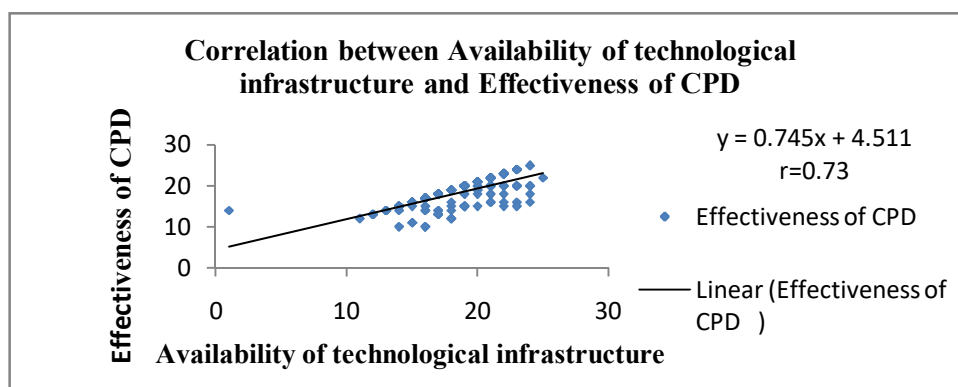


Fig. No.4 Correlation Coefficient r Value of between availability of technological infrastructure and effectiveness of CPD Programs

Interpretation: The obtained correlation coefficient($r=0.73$) between Availability of technological infrastructure and Effectiveness of CPD is positive and statistically significant, as it exceeds the critical table value at both 0.05 and 0.01 levels of significance. Hence, the null hypothesis is rejected, and alternative hypothesis is accepted.

A **moderate positive correlation ($r=0.73$)** shows that higher Availability of technological infrastructure leads to greater Effectiveness of CPD.

Objective-4: To identify the major challenges faced by Indian teachers training institutions and Teacher’s in implementing Continuous Professional Development (CPD) through emerging technologies.

Hypothesis: H04: There is no significant difference in perception of CPD Challenges based on Teaching Experience (below 5 years, 5-10 years and above 10 years)

Challenges Faced by Teachers in Adopting Emerging Technologies

| Challenges | Frequency (f) | Percentage (%) |
|--|---------------|----------------|
| Lack of training in emerging technologies | 156 | 78.0% |
| Poor internet connectivity | 142 | 71.0% |
| Time constraints / workload | 128 | 64.0% |
| Lack of digital infrastructure | 134 | 67.0% |
| Lack of institutional motivation / support | 119 | 59.5% |

Table No. 5 Challenges Faced by Teachers in Adopting Emerging Technologies

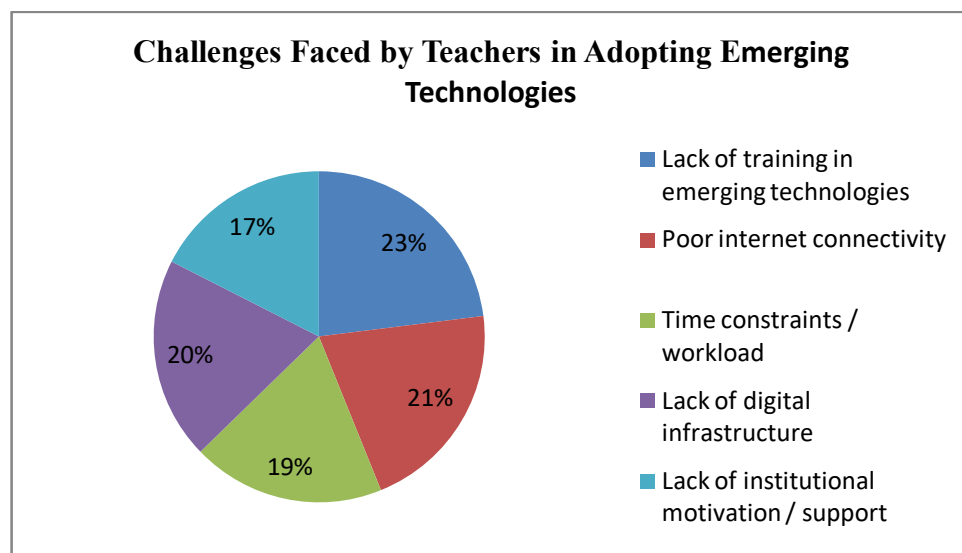


Fig No.5 Challenges Faced by Teachers in Adopting Emerging Technologies

Interpretation: The highest ranked challenge is **lack of training in emerging technologies 78%** followed by **poor internet connectivity 71%**. This indicates that skill gaps and infrastructure barriers are major obstacles in technology-integrated CPD. The mean ranking shows that lack of training in emerging technologies, poor internet connectivity, and workload pressure are the most common barriers. This indicates that CPD implementation is limited not only by infrastructure but also by human resource preparedness

Anova Table:

| Source of Variation | SS | Df | MS | F ratio | Result |
|---------------------|-------|-----|-------|---------|-------------|
| Between Groups | 1734 | 2 | 867 | 13.15 | Significant |
| Within Groups | 12987 | 197 | 65.93 | | |
| Total | 14721 | 199 | | | |

Table No.6 significant difference in perception of CPD Challenges based on Teaching Experience (below 5 years, 5-10 years and above 10 years)

| Teaching Experience | N | Mean | SD |
|---------------------|----|-------|------|
| <5 years | 70 | 74.20 | 8.40 |
| 5-10 years | 65 | 78.10 | 7.90 |
| >10 years | 65 | 81.30 | 8.10 |

Table No.7-Mean Difference of CPD Challenges among Teaching Experience (below 5 years, 5-10 years and above 10 years)

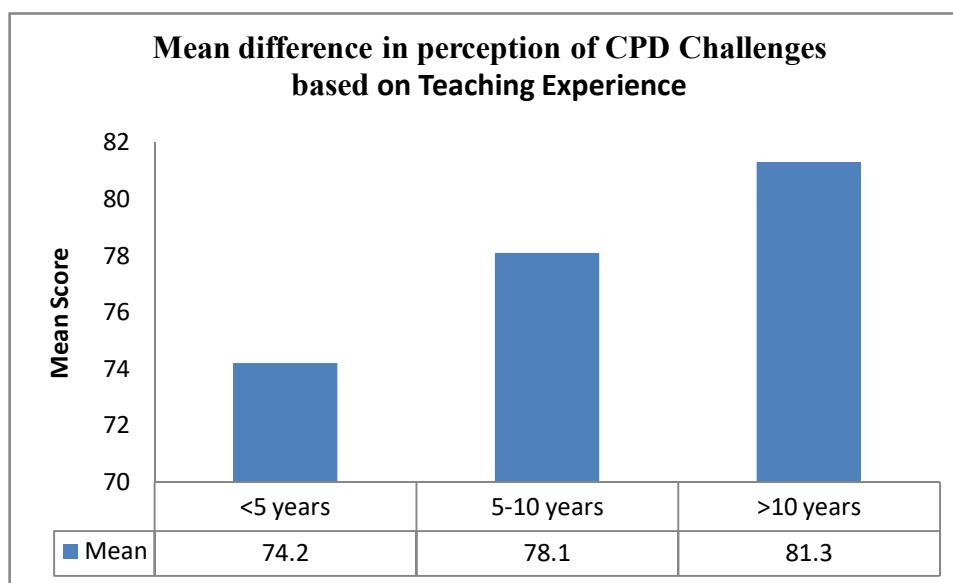


Fig. No.6 Mean Difference of CPD Challenges among Teaching Experience (below 5 years, 5-10 years and above 10 years)

Mean Difference and t Test

| Comparision | N | Mean | SD | MD | Df | T Ratio | Result |
|-------------|----|-------|------|------|-----|---------|-------------|
| <5 years | 70 | 74.20 | 8.40 | 3.90 | 133 | 2.77 | Significant |
| 5-10 years | 65 | 78.20 | 7.90 | | | | |

Table No.8 Mean difference between Teaching Experience below 5 years and 5-10 years

| Comparision | N | Mean | SD | MD | Df | T Ratio | Result |
|-------------|---|------|----|----|----|---------|--------|
|-------------|---|------|----|----|----|---------|--------|

| | | | | | | | |
|-----------|----|-------|------|------|-----|------|-------------|
| <5 years | 70 | 74.20 | 8.40 | 7.10 | 133 | 4.97 | Significant |
| >10 years | 65 | 81.30 | 8.10 | | | | |

Table No.9 Mean difference between Teaching Experience below 5 years and above 10 years.

| Comparision | N | Mean | SD | MD | Df | T Ratio | Result |
|-------------|----|-------|------|------|-----|---------|-------------|
| 5-10 Years | 65 | 78.10 | 7.90 | 3.20 | 128 | 2.28 | Significant |
| >10 years | 65 | 81.30 | 8.10 | | | | |

Table No.10 Mean difference between Teaching Experience 5-10 years and above 10 years

Interpretation: There is a significant difference in the perception of CPD challenges among Teachers based on teaching experience. One way ANOVA revealed that the difference was statistically significant ($F=13.15$, $p<0.01$). Further analysis showed that teachers with above 10 years of experience reported higher CPD Challenges compared to those with 5-10 years and below 5 years of experience. Pairwise t-testss also confirmed significant mean differences across all three groups.

Objective-5: To find out the role of institutional support (leadership, funding, policy) in strengthening CPD.

Hypothesis: H05: There is no significant relationship between institutional support and successful implementation of technology based CPD,

To analyze role of institutional support

| Institutional Support Factors | Yes | % | No | % |
|--|-----|------|-----|------|
| Institution provides regular CPD opportunities | 120 | 60 | 80 | 40 |
| Financial support for training is provided | 70 | 35 | 130 | 65 |
| Leadership motivates teachers for CPD | 110 | 55 | 90 | 45 |
| Technical support is available when needed | 95 | 47.5 | 105 | 52.5 |
| Policy support exists for tech-based CPD | 90 | 45 | 110 | 55 |

Table No.11- analyze role of institutional support

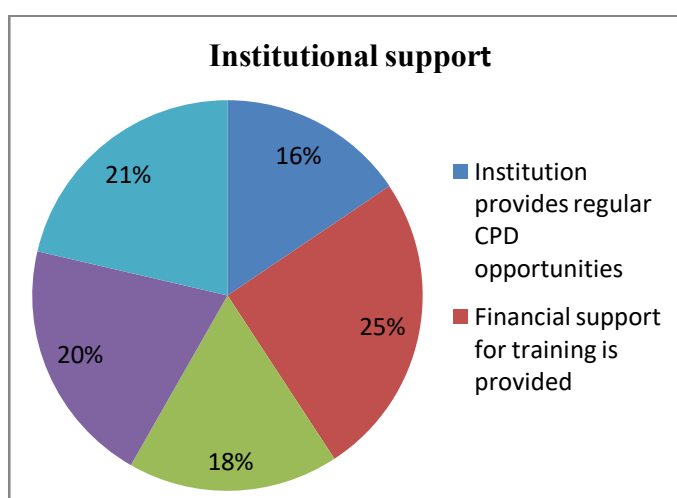


Fig. No.7- analyze role of institutional support

Institutional Support & Successful Implementation (Correlation)

Correlation

| Category | No. Of Sample | Df(N-2) | r Value | Correlation |
|-----------------------|---------------|---------|---------|---------------------------------------|
| Institutional Support | 200 | 198 | 0.68 | Moderate to high positive correlation |
| CPD Implementation | 200 | 198 | | |

Table No 12. Showing Correlation Coefficient r Value of Institutional Support & Successful Implementation

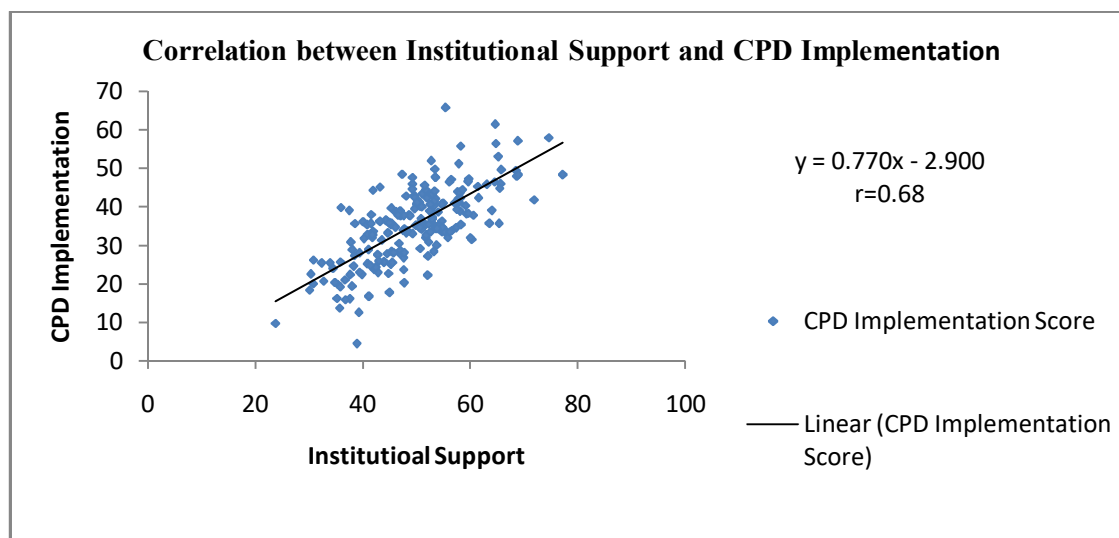


Fig. No8- Correlation between Institutional Support and CPD Implementation

Interpretation: The obtained correlation coefficient($r=0.68$) between Institutional Support and CPD Implementation is positive and statistically significant, as it exceeds the critical table value at both 0.05 and 0.01 levels of significance. Hence, the null hypothesis is rejected, and alternative hypothesis is accepted.

The scatter diagram reveals a clear upward trend, indicating a moderate to high positive relationship between institutional support and successful implementation of technology-based CPD. The fitted regression line slopes upward, confirming that as institutional support (leadership motivation, funding, policy, and technical assistance) increases, the level of CPD implementation also increase. Institutional support has a significant positive impact on CPD implementation.

Findings:

- Finding related to Objective 1:** The analysis revealed that most teacher training institutions possess basic technological facilities, but their adequacy and support systems are insufficient. This finding indicates that while infrastructure exists in many institutions, weak digital support systems and connectivity issues limit the effective implementation of technology-based CPD programs.
- Finding related to Objective 2:** The correlation analysis showed a moderate to high positive relationship between teachers' digital readiness and their participation in technology-based CPD. This finding suggests that teachers with higher awareness, positive attitudes, and better digital readiness are more likely to participate actively in CPD programs. It reflects a growing willingness among teachers to adopt technology-enabled professional learning, though further capacity-building is needed.
- Finding related to Objective 3:** The study found a moderate positive relationship between the availability of technological infrastructure and the effectiveness of CPD programs. This indicates that

institutions with better technological infrastructure tend to conduct more effective CPD programs, highlighting the critical role of infrastructure in enhancing professional learning outcomes.

4. Finding related to Objective 4: The analysis identified several major challenges hindering technology-integrated CPD: Lack of training in emerging technologies, Poor internet connectivity, Lack of digital infrastructure, Time constraints/workload, Lack of institutional motivation/support.

There is a significant difference in the perception of CPD challenges among Teachers based on teaching experience. Teachers with above 10 years of experience reported higher CPD Challenges compared to those with 5-10 years and below 5 years of experience. Pairwise t-test also confirmed significant mean differences across all three groups.

5. Finding related to Objective 5: The findings showed that institutional support plays a crucial role in successful CPD implementation. Correlation analysis revealed a moderate to high positive relationship between institutional support and successful CPD implementation: This confirms that leadership support, funding, policy backing, and technical assistance significantly enhance the effectiveness and sustainability of technology-based CPD programs.

Educational Implications

1. Technology-based CPD must be made accessible to all teacher educators through regular training programs.
2. Institutional leaders should prioritize digital transformation and motivate teacher educators for continuous learning.
3. Policy makers should ensure the availability of infrastructure, stable internet and LMS platforms.
4. Teacher training institutions must integrate emerging technologies in both pre-service and in-service teacher education.
5. CPD programs should focus on improving digital pedagogy, AI tools, blended learning and online assessment skills.

Recommendations / Suggestions

1. **Regular training workshops** should be organized on emerging technologies such as AI tools, LMS, smart teaching aids, and digital assessment systems.
2. Institutions should ensure **stable internet connectivity** and upgrade digital infrastructure for effective CPD participation.
3. A dedicated **ICT support team** should be appointed in teacher training institutions to provide technical assistance.
4. Institutions must introduce **LMS platforms** and structured online CPD modules for continuous learning.
5. Teacher educators should be provided **time allocation** and workload adjustment to participate in CPD without pressure.
6. Government institutions should receive special support and funding to bridge the CPD participation gap compared to private institutions.

7. Peer learning communities and mentoring systems should be promoted to support less experienced teacher educators.
8. CPD programs should be aligned with **NEP 2020**, digital education initiatives, and teacher competency frameworks.

Conclusion: The study concludes that continuous professional development in the age of emerging technologies is necessary for improving teacher education quality in India. However, several challenges such as inadequate training, infrastructure limitations, lack of institutional support, and workload pressure hinder effective CPD implementation. Strengthening digital readiness, ensuring stable technological resources, and providing supportive institutional policies can significantly improve CPD participation and effectiveness. Therefore, a combined effort from institutions, educators, and policy makers is required to create sustainable and inclusive CPD models aligned with modern educational needs.

References

- Desimone, L. M. (2009). Improving impact studies of teachers' professional development: Toward better conceptualizations and measures. *Educational Researcher*, 38(3), 181–199.
- Fullan, M. (2016). *The new meaning of educational change* (5th ed.). Teachers College Press.
- Government of India. (2020). *National Education Policy 2020*. Ministry of Education.
- Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for teacher knowledge. *Teachers College Record*, 108(6), 1017–1054.
- OECD. (2019). *Teaching and learning international survey (TALIS 2018): Teachers and school leaders as lifelong learners*. OECD Publishing.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, 9(5), 1–6.
- Redecker, C. (2017). *European framework for the digital competence of educators (DigCompEdu)*. Publications Office of the European Union.
- UNESCO. (2018). *ICT competency framework for teachers*. UNESCO.
- Voogt, J., Erstad, O., Dede, C., & Mishra, P. (2013). Challenges to learning and schooling in the digital networked world. *Journal of Computer Assisted Learning*, 29(5), 403–413.
- Zhao, Y. (2012). *World class learners: Educating creative and entrepreneurial students*. Corwin Press.

Citation: Sau. P. & Chakraborty. L., (2026) “Continuous Professional Development in the Age of Emerging Technologies: Challenges for Indian Teacher Training Institutions”, *Bharati International Journal of Multidisciplinary Research & Development (BIJMRD)*, Vol-4, Issue-04(3), April-2026.