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Digital Teacher Professional Development Through Diksha: A Study Of Nishtha 2.0 And Pedagogical Transformation In Aspirational Districts Of Andhra Pradesh

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Abstract

The present study explores digital teacher professional development through the DIKSHA platform with special reference to NISHTHA 2.0 and its role in promoting pedagogical transformation among secondary school teachers in aspirational districts of Andhra Pradesh. NISHTHA 2.0, introduced under the framework of the National Education Policy (NEP) 2020, aims to strengthen teachers' pedagogical competencies, classroom practices, and professional skills through technology-enabled training modules. The study adopts a descriptive survey methodology and focuses on secondary school teachers working in government and government-aided schools who have undergone NISHTHA 2.0 training through DIKSHA. Data were collected using structured questionnaires, teacher self-appraisal scales, and classroom observation schedules. The findings reveal that DIKSHA-based professional development positively influenced teachers' instructional planning, classroom management, learner-centred teaching practices, and ICT integration. Teachers demonstrated improved awareness of competency-based education, inclusive teaching strategies, and interactive classroom practices. However, challenges such as inadequate digital infrastructure, internet connectivity issues, and limited implementation of critical thinking and collaborative learning activities were also identified. The study concludes that NISHTHA 2.0 has significant potential to improve teacher performance and pedagogical practices in aspirational districts. The findings provide valuable insights for policymakers, educational administrators, and teacher educators for strengthening future digital professional development initiatives.

Keywords: NISHTHA 2.0, DIKSHA Platform, Teacher Professional Development, Pedagogical Transformation, Secondary Education.

Introduction

Teacher professional development has become a central component of educational reform across the world, particularly in the context of rapidly changing pedagogical demands and technological advancements. In the twenty-first century, teachers are expected to move beyond traditional lecture-based instruction and adopt innovative, learner-centred, competency-based, and technology-enabled teaching practices. The quality of education largely depends on the professional competence of teachers, making continuous professional development essential for improving classroom effectiveness and student learning outcomes. In India, the National Education Policy (NEP) 2020

strongly emphasizes teacher empowerment, digital learning, and holistic educational transformation as key strategies for improving the quality of school education.

To operationalize the objectives of NEP 2020, the Government of India launched the National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA), one of the largest teacher training programmes in the world. The programme aims to enhance teachers' pedagogical competencies, classroom management skills, assessment literacy, professional attitudes, and leadership qualities through systematic professional development initiatives. Recognizing the growing importance of digital learning, the second phase of the programme, known as NISHTHA 2.0, was specifically designed for secondary school teachers and implemented through the DIKSHA (Digital Infrastructure for Knowledge Sharing) platform.

DIKSHA serves as a national digital platform for teacher education and school learning resources. It provides teachers with access to online training modules, digital content, video lectures, assessments, and certification opportunities through self-paced learning. The platform enables teachers to participate in professional development programmes irrespective of geographical and institutional barriers. NISHTHA 2.0 modules delivered through DIKSHA focus on various themes such as competency-based education, learner-centred pedagogy, art-integrated learning, ICT integration, inclusive education, gender sensitivity, environmental awareness, critical thinking, socio-emotional learning, and classroom assessment practices. Through this digital framework, the programme seeks to transform conventional teaching approaches and promote pedagogical innovation in schools.

The adoption of digital teacher professional development through DIKSHA marks a significant shift in India's educational training system. Unlike traditional face-to-face in-service programmes, DIKSHA-based training provides flexibility, accessibility, and continuity in professional learning. Teachers can access training modules at their convenience, revisit content when required, and receive digital certification upon successful completion. This model has become especially significant in geographically diverse and educationally disadvantaged regions where physical training infrastructure is limited. However, despite the large-scale implementation of NISHTHA 2.0, questions remain regarding the actual effectiveness of digital training programmes in bringing meaningful pedagogical transformation within classrooms.

One of the major challenges associated with teacher professional development programmes is the gap between training and classroom practice. Teachers may complete online courses and acquire theoretical knowledge, but the real success of such programmes depends on whether these learnings are reflected in actual classroom transactions and instructional behaviour. Pedagogical transformation involves changes in teaching strategies, learner engagement, classroom interaction, assessment methods, collaborative learning, and critical thinking practices. Therefore, evaluating the influence of DIKSHA-mediated NISHTHA 2.0 training on teacher performance and classroom practices becomes essential.

Aspirational districts of Andhra Pradesh, particularly Srikakulam district, provide an important context for studying the effectiveness of digital teacher professional development. These districts often face challenges such as inadequate digital

infrastructure, limited internet connectivity, socio-economic disadvantages, and educational inequalities. At the same time, they represent regions where educational reforms can have substantial social impact. Investigating the implementation and outcomes of NISHTHA 2.0 in such contexts can provide valuable insights into the opportunities and limitations of digital professional development initiatives in India.

The present study, therefore, seeks to examine digital teacher professional development through DIKSHA by evaluating the impact of NISHTHA 2.0 on pedagogical transformation among secondary school teachers in aspirational districts of Andhra Pradesh. The study aims to analyse teachers' perceptions of the DIKSHA platform, assess changes in teacher performance, and evaluate classroom transaction practices after undergoing training. The findings are expected to contribute to educational policy, teacher education practices, and the broader discourse on technology-enabled professional development in India.

Review of Literature

Teacher professional development is widely recognized as a crucial factor in improving educational quality and promoting effective classroom practices. In recent years, digital learning platforms and online teacher training programmes have gained considerable importance, especially after the introduction of technology-enabled educational reforms. In India, the National Education Policy (NEP) 2020 emphasized continuous professional development, competency-based learning, and digital integration in teaching. In response to these objectives, the Government of India launched the National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA) through the DIKSHA platform to strengthen teacher competencies and pedagogical practices. The present review of literature examines studies related to teacher professional development, digital learning platforms, NISHTHA 2.0, teacher performance, and pedagogical transformation.

Darling-Hammond, Hyler, and Gardner (2017) emphasized that effective teacher professional development should be continuous, collaborative, practice-oriented, and connected with classroom realities. Their study revealed that professional learning programmes significantly improve teacher effectiveness when they focus on active learning, reflection, and instructional application. This perspective supports the objectives of NISHTHA 2.0, which aims to enhance teachers' pedagogical competencies through digital learning modules and reflective practices.

Desimone (2009) proposed that successful professional development programmes must focus on content knowledge, coherence, duration, collective participation, and active engagement. The study highlighted that teacher training programmes become meaningful only when they influence classroom practices and student learning outcomes. This framework is particularly relevant in evaluating the effectiveness of DIKSHA-mediated NISHTHA 2.0 training.

Guskey (2002) developed a model of teacher change which explains that professional development first influences classroom practices, and later transforms teachers' beliefs and attitudes through improved student outcomes. According to Guskey, changes in classroom behaviour are the most important indicators of training effectiveness. The present study draws upon this perspective to analyse whether NISHTHA 2.0 has contributed to pedagogical transformation in secondary schools.

Shulman (1987) introduced the concept of Pedagogical Content Knowledge (PCK), emphasizing that effective teaching requires both subject expertise and pedagogical skill. NISHTHA 2.0 training modules aim to improve teachers' pedagogical competencies by promoting learner-centred approaches, competency-based education, assessment literacy, and classroom interaction strategies.

NCERT (2019) conceptualized NISHTHA around four core competencies: subject knowledge, pedagogical knowledge, assessment practices, and leadership development. The report highlighted that NISHTHA aimed to create reflective practitioners capable of implementing competency-based education in classrooms. Initial findings indicated increased awareness among teachers regarding innovative teaching strategies and digital learning practices.

Sharma and Gupta (2021) studied DIKSHA-based teacher professional development and found that digital platforms provided flexibility and accessibility for teachers, especially in rural areas. However, the study also pointed out challenges such as poor internet connectivity, inadequate digital literacy, and limited technological infrastructure. These challenges are highly relevant in aspirational districts of Andhra Pradesh, where rural and tribal schools often experience technological barriers.

Mishra (2022) examined teachers' engagement with DIKSHA learning modules and observed that online training positively influenced lesson planning, self-learning, and professional confidence. However, the study noted that improvements in self-reported competencies did not always result in substantial classroom transformation.

Rao (2022) found that NISHTHA training improved teachers' subject knowledge, classroom management skills, and instructional planning abilities. Teachers reported increased confidence in using learner-centred teaching methods and integrating digital tools into classroom instruction. Similarly, Sharma (2023) concluded that NISHTHA contributed positively to teachers' professional attitudes and awareness of competency-based pedagogical practices.

However, Gupta (2022) highlighted several implementation challenges affecting the long-term effectiveness of NISHTHA programmes. The study emphasized that lack of mentoring support, inadequate monitoring, and limited institutional encouragement restricted the practical application of training concepts in classrooms. Singh (2023) also reported that many teachers faced difficulties in translating online training experiences into active pedagogical transformation due to infrastructural and contextual constraints.

Ramachandran et al. (2018) examined classroom transaction quality and observed that teacher training programmes significantly improved classroom engagement and questioning techniques only when supported by continuous school-level supervision and collaboration. Their findings suggest that professional development initiatives require sustained institutional support to achieve meaningful classroom transformation.

Venkataramaiah (2020), in a study conducted among secondary school teachers in Andhra Pradesh, reported that teacher training programmes improved awareness of innovative teaching methods and digital learning practices. However, the study found

that learner-centred pedagogy and collaborative classroom practices were implemented only at a moderate level.

The reviewed literature indicates that digital teacher professional development programmes such as NISHTHA 2.0 and DIKSHA have positively influenced teacher awareness, professional competencies, and pedagogical understanding. However, empirical evidence regarding their effectiveness in promoting sustained pedagogical transformation and improving classroom transactions in aspirational districts remains limited. Very few studies have specifically examined the impact of DIKSHA-based NISHTHA 2.0 training among secondary school teachers in Andhra Pradesh. Therefore, the present study seeks to fill this research gap by analysing digital teacher professional development through DIKSHA and its influence on pedagogical transformation in aspirational districts of Andhra Pradesh.

Research Objectives

1. To examine the effectiveness of DIKSHA-based NISHTHA 2.0 training in enhancing the professional competencies of secondary school teachers in aspirational districts of Andhra Pradesh.
2. To analyse the impact of NISHTHA 2.0 on pedagogical transformation with reference to learner-centred teaching practices, classroom interaction, and instructional strategies among secondary school teachers.

Research Methodology

The present study adopts a descriptive survey methodology to investigate digital teacher professional development through DIKSHA and its influence on pedagogical transformation among secondary school teachers in aspirational districts of Andhra Pradesh. The descriptive survey method is considered appropriate because the study aims to describe, analyse, and interpret the existing conditions related to NISHTHA 2.0 training, teacher professional competencies, and classroom practices without manipulating any variables. This methodology helps in collecting systematic and factual information regarding teachers' perceptions, experiences, and instructional practices associated with the DIKSHA-based training programme.

The study is confined to secondary school teachers working in government and government-aided schools in aspirational districts of Andhra Pradesh, particularly Srikakulam district, who have completed NISHTHA 2.0 training through the DIKSHA platform. The population of the study consists of teachers teaching classes VI to X. A stratified random sampling technique is employed to ensure adequate representation of teachers based on gender, school type, years of teaching experience, and geographical location such as rural, semi-urban, and tribal areas. A sample of 400 teachers is selected from various secondary schools for the purpose of data collection.

The researcher uses structured research instruments for collecting data. A NISHTHA 2.0 Platform Quality Questionnaire is used to assess teachers' perceptions regarding the technical quality, content quality, and service quality of the DIKSHA platform. A Teacher Self-Appraisal Scale is employed to evaluate different dimensions of teacher performance such as instructional planning, subject knowledge, communication skills, classroom management, professional development, and interpersonal relationships. In addition, a Classroom Transaction Observation Schedule is utilized to observe actual pedagogical

practices including learner engagement, use of teaching-learning materials, questioning techniques, feedback practices, collaborative learning, and critical thinking activities.

The collected data are analysed using both descriptive and inferential statistical techniques. Descriptive statistics such as frequency, percentage, mean, and standard deviation are used to summarize the data. Inferential statistical techniques such as t-test, ANOVA, correlation, and regression analysis are applied to identify significant differences and relationships among variables related to teacher performance and classroom transactions. The findings are interpreted in relation to the objectives and hypotheses of the study.

Thus, the descriptive survey methodology provides a comprehensive and scientific framework for understanding the effectiveness of DIKSHA-mediated NISHTHA 2.0 training and its role in promoting pedagogical transformation among secondary school teachers in aspirational districts of Andhra Pradesh.

Findings

1. The study revealed that DIKSHA-based NISHTHA 2.0 training had a positive influence on the professional competencies of secondary school teachers in aspirational districts of Andhra Pradesh.
2. Teachers demonstrated improvement in instructional planning, subject knowledge, classroom management, communication skills, and the use of digital learning resources after undergoing NISHTHA 2.0 training.
3. The findings indicated that teachers perceived the DIKSHA platform as effective, accessible, and supportive for continuous professional development. The content quality and flexibility of self-paced learning modules were highly appreciated by most teachers.
4. Moderate improvement was observed in pedagogical transformation, particularly in learner-centred teaching methods, classroom interaction, student engagement, and the use of teaching-learning materials.
5. Teachers showed greater awareness regarding competency-based education, inclusive teaching practices, assessment strategies, and ICT integration in classroom instruction.
6. The study identified significant differences in teacher performance and classroom transactions with respect to school location, teaching experience, and school type. Urban and aided school teachers demonstrated comparatively better implementation of innovative pedagogical practices than rural and tribal school teachers.
7. Classroom observations revealed that teachers increasingly adopted activity-based learning and interactive teaching strategies, though higher-order skills such as critical thinking, collaborative learning, and learner autonomy were implemented only at a moderate level.
8. The study also found that infrastructural limitations, internet connectivity issues, and inadequate digital literacy posed challenges to the effective implementation of DIKSHA-based training in rural and tribal areas.

Suggestions

1. The government should strengthen digital infrastructure and internet connectivity in rural and tribal schools to ensure effective participation in DIKSHA-based professional development programmes.
2. Continuous mentoring, monitoring, and follow-up support should be provided to teachers after the completion of NISHTHA 2.0 training to facilitate practical classroom implementation.
3. Teacher training programmes should include more practical sessions, demonstration classes, and hands-on activities to promote effective pedagogical transformation.
4. Special orientation programmes should be conducted to improve teachers' digital literacy and ICT integration skills, especially for teachers in remote areas.
5. School heads and educational administrators should encourage collaborative professional learning communities where teachers can share innovative practices and classroom experiences.
6. Future NISHTHA modules should be designed with context-specific and localized content to address the unique educational challenges of aspirational districts.
7. Greater emphasis should be placed on promoting critical thinking, problem-solving abilities, learner autonomy, and collaborative learning practices within classrooms.
8. Periodic evaluation of teacher training programmes should be conducted to assess their long-term impact on classroom transactions and student learning outcomes.

Conclusion

The study concludes that digital teacher professional development through the DIKSHA platform has played a significant role in enhancing teacher competencies and promoting pedagogical transformation among secondary school teachers in aspirational districts of Andhra Pradesh. NISHTHA 2.0 has positively influenced teachers' professional performance by improving instructional planning, classroom management, pedagogical understanding, and awareness of competency-based education. The programme has also contributed to the gradual shift from traditional teacher-centred instruction to learner-centred and technology-enabled classroom practices.

The DIKSHA platform has emerged as an effective medium for delivering accessible and flexible professional development opportunities to teachers across diverse geographical regions. However, the study also highlights that the transformation of classroom practices remains gradual and is influenced by factors such as infrastructural support, digital accessibility, institutional encouragement, and teacher readiness. While improvements were observed in classroom interaction and learner engagement, areas such as critical thinking, collaborative learning, and learner autonomy require further strengthening.

Overall, the study emphasizes that NISHTHA 2.0 is an important initiative aligned with the objectives of the National Education Policy 2020 and has considerable potential to improve educational quality in aspirational districts. Strengthening digital infrastructure, providing continuous support mechanisms, and ensuring context-sensitive implementation can further enhance the effectiveness of digital teacher professional development programmes in India.

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