Teacher Training and Professional Development: A Descriptive Survey of Secondary School Teachers

Syed Razaur Rahman

Research Scholar, Deptt. of Education, MANUU College of Teacher Education, Darbhanga

Md Jamshed Alam

Research Scholar, Deptt. of Education, MANUU College of Teacher Education, Darbhanga

Dr Mozaffar Islam

Assistant professor, Deptt. of Education, MANUU College of Teacher Education, Darbhanga

ABSTRACT

Training programs for teachers prove more than useful for advancing their skills. They help elevate the overall students' performance as well. The greatest disparity between all other countries and India is highlighted in the National Education Policy. They have made it clear that teachers need to have at least 50 additional hours professionally every year. less time is given to teachers for training in the rural and low performing schools. This was the reasoning behind the identified gap in sequential planning. The intention behind this study is to investigate this disparity. The teacher case centers on the demographic boundaries during the secondary school phase. The objectives address as accurately as possible. A clear gap in the teacher training system was identified. Eleven programs that had an impact in every region were polished for the urban and rural relativity. Focus on teacher's perception of the training objectives and clarity Post completion and in the classroom are as important as the barriers to implementation. Motivation, as well as willful ignorance, will impact the outcome. Aligned systems need to investigate on the hierarchy of teacher training relation to instruction exercised in class. The research was focused on age, school, and teaching during the training. The representation of genders across all answering 220 to a set of active and passive voice questions was 50 percent . Findings revealed that most teachers attended three to five PD programmes annually, with subject-specific training in science and mathematics being predominant. Instructor Paid Developments were noticed to be useful for advancement of skills such as instruction, classroom control, and interaction with learners, althrough there were issues with minimal follow-up support, inadequate PD, gaps in tech support, and issues with time that were more prevalent with rural teachers. This reinforces the necessity for context-sensitive, extended professional development resources, with support for mentorship, peer-supported active professional development with responsive technology, and active PD's to raise the teachers' impact, as well as the Indian secondary school education system as a whole.

Keywords: Training Programs, National Education Policy, Professional Development, Education System, Responsive Technology

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Introduction:

The importance of Teacher Professional Development (TPD) has become increasingly important and regarded as one of the most important factors in improving the effectiveness of a teacher and the teaching and learning process. Development of teaching skills means learning new instructional techniques and improvement of subject matter knowledge and classroom management particularly in today's diverse classroom (OECD, 2019). It does enhance professional competency, but also enhances reflective practice, critical thinking and professional self-image, which in turn are important in transforming the training into practice (Fullan, 2007; Desimone, 2009). According to the Indian context, under NEP 2020, teachers are recommended to participate in structured and continuum professional development and to undertake min. 50 hours of professional learning

in a year (Ministry of Education, 2020). The emphasis of the policy is on learner-centric and competency-based assessment, inclusive technology for teaching and learning (NCERT, 2021). Even with these policies, there are multiple barriers to the successful execution of professional development programmes. Under NEP 2020, it is recommended that the teachers complete at least 50 hours of professional development a year and participate in structured and continuum professional development activities (Ministry of Education, 2020). The policy focuses on competency-based and learner-centred assessment, integration of technology in teaching and learning (NCERT, 2021). Despite the innovative nature of these policies, there are still many gaps which hinder the successful implementation of professional development programmes. The concern about accessibility inequities still remains, especially in isolated rural and underserved regions, while the relevance and contextualization of the training provided is often insufficient to meet the unique needs of the audience of teachers in the classroom (MHRD, 2018; Rao, 2021). Moreover, insufficient follow-up assistance, structural barriers, and workload demands diminish the possible effectiveness of professional development strategies. Global literature suggests that sustained professional development is the most impactful when it is contextually relevant, collaborative, and integrated with overarching goals for school development (UNESCO, 2016; Vangrieken et al, 2015). There is also a body of evidence which suggests that more active, in situ strategies like coaching, mentoring and participation in professional learning communities are more effective at changing instructional practice than singular, one-time workshops or lectures-based sessions. Using a descriptive survey among teachers of all levels, dividing their experience, perception, and engagement with the provided professional development training, was one of the many methods used in the study and its associated development. This collection offered valuable qualitative and quantitative insights from a varied and considerably sized population. This wide collection offered participants insightful patterns of entitlements and privileges, along with barriers, and offered the comparisons of all factors of the participants. The barriers and factors were compared with program activities, and teacher characteristics along with the associated PD outcomes. In the case of India, learning about the barriers and other factors affecting the TPD for the Secondary School Teachers (SSTs) would help in effective policy framing, improving the program structure, and increasing fair availability of professional development learning opportunities for the teachers and students

Literature Review and conceptual Framework :

In exploring the various forms of professional development opportunities for teachers, one must understand the gaps within training that can vastly influence training efficacy within the classroom. When professional development opportunities focus on specific content, involve more active participation, and facilitate collaboration between educators, the opportunities prove most beneficial (Borko, 2004; Desimone, 2009). Research pertaining to professional development opportunities within secondary education demonstrates greater instructional improvements and better student outcomes when the professional development focuses on the specific subject, especially within the more math and science oriented disciplines, versus more generic teaching skills (Kennedy, 2016). More recent work in India has examined perceptions of teachers on professional development and its effectiveness. There is also a focus by international comparative research on the significance of school leadership and peer support in maximizing teacher PD programme effectiveness (Vangrieken et al., 2015). In addition, technology integration within PD has been extensively researched in the post-pandemic scenario. Online and blended professional learning platforms are shown to be effective when they provide interactive, practice-oriented modules rather than passive lectures (Trust & Whalen, 2020; Kopeinik et al., 2022). Evidence also suggests that ongoing coaching, mentoring, and communities of practice significantly increase the likelihood of sustainable instructional change (Van Driel et al.,2014). Such research can provide evidence-based recommendations for improving the design and delivery of TPD programmes.

Research Questions:

1. What types of professional development programmes are attended by secondary school teachers, and how frequently?
2. How do teachers perceive the value and subsequent effects of professional development on their teaching practices?

3. What barriers exist that inhibit the successful use of professional development learning in the classroom?
4. Do teachers change their teaching practice according to the depth of their engagement in professional development?
5. How do teachers' beliefs and experiences of professional development differ based on their teacher experience level, teacher qualifications, and school type?

Objectives:

1. To clarify the types, frequency and length of professional development programmes attended by secondary school teachers.
2. To determine teachers' perceptions of their effectiveness and impact, on teaching practice, within the context of professional development.
3. To identify the barriers faced by teachers when attempting to implement, new learning from professional development.
4. To investigate the relationship between participation in professional development programmes and reported changes in classroom practice by teachers.
5. To investigate, how demographic factors, such as years of experience, education level, and school type, influence teachers' responses, and perceived outcomes of professional development.

Hypothesis:

1. The kinds, frequency, and duration of professional development programmes attended by secondary school teachers show no variation.
2. The difference in perception by teachers regarding the effectiveness of professional development programmes and the impact on their teaching practices is no significant.
3. Teachers face no major obstacles in implementing the professional development programmes new learning.
4. There is no impact of attending professional development programmes on reported shifts in teachers' classroom practices.
5. Respondents' demographic characteristics (years of experience, education level, and school type) do not influence their perceived outcomes of the professional development programmes.

Methodology:

A descriptive survey design best fits the purpose of this research "to systematically examine professional development programmes, perceptions of usefulness, and implementation gaps in the classroom of secondary school teachers." The research being descriptive and in survey format means there is a need for the collection of quantitative and qualitative data from a big sample for the researcher to obtain an overview on the trends, patterns and relationships regarding professional development of teachers and the practices involved. The sample population comprises of teachers in both government and private secondary schools, in urban and rural schools, to ensure there is contextual variation in professional development. Given the variation of the contexts in the population, a stratified random sample will be used to target a population of 220 teachers, which is an acceptable size for both descriptive and inferential analysis, to ensure there is balance in school type, subject area, and years of teaching experience. For the data collection, a questionnaire will be used, while the framework is based on research and studies done on professional development of teachers.

The questionnaire is divided into four primary sections. Section one collects basic demographic details such as age, gender, qualifications, years of teaching, type of school, and subjects taught. The second sections deals with professional development which includes level of participation, type, frequency, duration, and training mode (i.e., online, offline, or blended). The third section is focused on measuring teacher perceptions regarding the worth of professional development, the impact on their practice, and their classrooms via Likert-Scale items. Finally, the fourth section gets at the questionnaire's barriers and challenges using closed and open-ended items. The instrument was developed with input from specialists, and its validity was determined through pilot testing; Likert scale items will be evaluated for reliability with Cronbach's alpha. Ethical clearances to collect the data will be sought from school authorities. The analysis of the data will occur in SPSS, using descriptive statistics. Descriptive statistics-frequency, percentage, mean, or standard deviation, as appropriate--will summarize participation patterns, perceived usefulness, and barriers to participation. The inferential statistic Pearson

correlation will also describe the relationship of participation in professional development to change in classroom practice. Chi-square tests will investigate the demographic variables and their relationships to professional development. If warranted, independent samples t-tests or ANOVA will examine perceptions and barriers based on school type, educational qualifications, and years of teaching experience. Lastly, the open-ended questions will be analyzed through thematic analysis as the researcher looked for common barriers and suggestions for improving educational programming.

Analysis and Interpretations :

Analysis of the data from 220 secondary teachers shows a clear picture of engagement in professional development, attitudes towards professional development, and barriers to implementation. The teachers stated that they had participated in anywhere from three to five professional development opportunities in one school year, with subject-specific programs in mathematics and science being more common than general pedagogy workshops. To complete the survey in its entirety took an average of twenty-five minutes, and while some professional development was longer due to individual program lengths, a few instances of brief learning opportunities were perceived as inadequate for the time. According to teachers, more than 65 percent of respondents indicated agreement that professional development opportunities improved their practice, improved their classroom management, and increased their interactions with students. All subject-specific professional development is consistently rated as more relevant to practice than general pedagogy professional development. Teachers also indicated barriers to implementing what they learned such as no follow-up support, low availability of materials, technology issues with online modules, and limited time due to workload. Barriers were also notably greater for rural teachers when compared to urban teachers, indicating that contextual factors are significant in affecting professional development outcomes. There is a moderate and positive correlation suggested in the correlation between the number of PD programs a teacher attends and changes they report in classroom practices. The more the better, as it relates to teacher attendance and teacher pedagogical practices. ANOVA and chi-square tests also indicate that more educated teachers are able to perceive their professional development as beneficial; however, years of experience are statistically significant in perception of benefit. City school teachers and rural school teachers comparison also indicates the location of the school matters, as it relates to the efficacy of teachers being able to utilize the learnings from PD, and their level of obstacles with regard to PD. The principles tapped into the qualitative analyses from the open-ended were constant, as the teachers felt mentorship (that is long term), professional learning communities, and interactive technology-enhanced learning modules would contribute to sustainable improvement in classroom practices. The teachers suggested the PD is only as efficacious, useful, and meaningful, if it leads to practical application in practice, working with peers to improve collaborative practice, and continuing engagement in PD action - rather than isolated professional development workshops. The finding will become applicable to both policy-makers, and school-level administrators to develop, or improve teacher professional learning and development plans to be more effective, accessible, and more relevant to local contexts.

Discussion and Conclusions:

The findings from this study offer important perspectives on participation, attitudes, and challenges to implementation of professional development among secondary school teachers. The descriptive analysis indicates that teachers in this study engaged in professional development at a relatively high rate. i.e., content specific mathematics and science-based professional development, and described these professional development opportunities as helpful to enhance classroom practice including teaching strategies, classroom management techniques and engaging students. This is consistent with the existing literature, which demonstrates that PD opportunities that are content specific, focus on practice and on practical follow type PD are more effective than broad workshops (Borko, 2004; Desimone, 2009; Kennedy, 2016). Despite high rates of participation and positive attitudes there are substantial barriers to effective implementation of PD learning. Low levels of availability of resources, low follow up, technical issues with the online modules, and time were the most frequently identified barriers, especially among rural teachers. This is consistent with earlier studies that

record contextual variations in PD effectiveness across urban and rural contexts (Rao, 2021; Vangrieken et al., 2015). Therefore, it indicates a need for institutional support, infrastructure and focused and practical follow up to ensure structural change occurs in practice as a result of PD. Overall there is a positive statistical correlation between increased rates of participation and positive change in teaching practice, with PD qualifications and experience increasing teachers' positive ratings of utility. Urban teachers consistently experience fewer barriers, reinforcing the notion of the role of school context as a fundamental factor of professional development impact. Qualitative findings also stress support via building mentorship, collaborative professional learning communities and in the case of instructional reform facilitation, the use of engaging, interactive and technology-supported modules. The combined impact of these findings suggest the need for ongoing and contextualized professional development programs that are supplemented with support at both the systems-level, and from peers. Lastly, while student achievement and teacher performance are considered necessary evidence in professional development, they are dependent on a consideration of program design, the availability of resource, and the training and experience of the teacher or educator, as well as the context in the ways the classroom or institution provides support.

For secondary schools in India, these implications beseech policymakers and school leaders to focus on developing ongoing content-specific, directed professional development, focus on equitable access, with action follow up, and establishing collaborative professional learning communities benefitting the educators in rural areas. If these considerations are addressed, we can take steps to maximize TPD impact, ultimately enhancing teacher development, long-term changes to classroom practice, as well as quality of education overall.

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