Professional Development of Elementary School Teachers: The Influence of In-Service Training

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ABSTRACT

This investigation assesses the consequences of in-service training for the professional development of elementary school teachers in Pakistan. The need for teachers to have continuous and profound professional development as necessary and sufficient conditions for high-quality teaching and improved student outcomes has never been clearer. Using a qualitative research design, the study gets at the perceptions of some key stakeholders—teachers, policymakers, tool developers, and data collectors—about the COT framework that was rolled out to assess and support the professional competencies of teachers in this study. Through the use of semi-structured interviews and some thematic analysis, the study's authors try to identify some strengths and weaknesses of COT as a developmental instrument. The findings underscore the need for refining COT to be more context-sensitive, formative, and participatory. Recommendations include integrating mentorship, peer evaluations, and ongoing professional support to ensure the tool genuinely fosters meaningful growth in teachers' instructional practices.

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Introduction

Any society depends on education, which plays a crucial part in molding individuals and furnishing them with the essential knowledge and abilities to let those people contribute to their communities. The academic voyage of students begins with elementary education, which is their first step toward lifelong learning. This stage is critically important because it lays the foundation for all that comes after. Elementary-level teachers hold an enormous responsibility for the instilling of necessary, rudimentary cognitive and social skills in their students. These skills are fundamental to the development of both the student's intellect and their emotional maturity. To effectively play this role, teachers must learn and evolve in step with the changing dynamics of education (Nzarirwehi & Atuhumuze, 2019).

Keeping high standards in education means teachers have to be something special. Teachers have to keep learning, not just what they teach but how they teach. Today, educational practices, technological developments, and the theories of pedagogy are more sophisticated than ever. For teachers, that makes the need for in-service training far more critical, and the training itself far more consequential. Because it is the vehicle through which teachers receive the most current teaching methodologies, subject knowledge, and classroom management techniques, in-service training serves as a crucial educator device (Quilapio & Callo, 2022).

Teacher professional development programs in many countries, like Pakistan, are often neglected. The neglect is due to limited resources and their absence is also due to the lack of a structured, coherent framework for training teachers, as well as poor policy implementation. Simply put, there's no roadmap for where we want to go. Despite the efforts of some educational institutions and government agencies to push forward the development of the programs, there's still a substantial gap between what teachers learn in the programs and how they teach once they're back in the classroom. And that's kind of the crux of the matter right there when it comes to professional development (Qaisra & Haider, 2023).

Teaching quality is affected directly by in-service training, which is a key part of a teacher's current professional development. Teaching is highly complex, and many teachers know quite well that this is true only after having several years of experience. Even though most teachers enter the classroom with a well-understood set of pedagogical principles, they often find that their actual lived experience across many different contexts shapes their understanding of these principles in hard ways to predict both for the teachers and for the educational system that employs them (Egert et al., 2018).

In-service teacher training is hugely significant; it extends way beyond the individual development of a teacher and, instead, impacts the growth of an institution and even affects national educational standards. Training programs for teachers that are effective help improve the way a teacher delivers instruction, manage their classroom, and engage with the students in their class. In addition to that, these programs help teachers update themselves with the curriculum, the strategies they use for assessment, and the tools they use to teach and to understand better (Uysal, 2012).

For a long time, the teacher quality, outmoded teaching methodologies, and classroom strategy ineffectiveness have rendered Pakistan's education system problem-plagued. There was no credible authority to maintain the acceptable standards necessary for the education sector, and as a result, our teachers and their methods remained in the dark ages. Teacher training programs with perfectly designed curricula now exist (Ayvaz-Tuncel & Çobanoğlu, 2018).

The rationale of this study comes from the need to bridge the gap between teacher training and professional effectiveness. Various in-service training programs exist, but their actual impact on teachers' professional growth remains uncertain. Many teachers participate in training sessions, yet we have limited empirical evidence to suggest that these

programs translate into improved teaching performance and, more importantly, better student outcomes. Thus, the aim of this study is twofold: first, to shed some light on the influence of in-service training on elementary school teachers, and second, to provide some insight into the effectiveness of professional development initiatives (Karagiorgi & Charalambous, 2006).

In addition, a large number of educators in Pakistan and other developing countries have very little formal training beyond their original teacher education programs. The curriculum for these programs is often set a decade or more in advance and with little input from current teachers, and so it can be of limited relevance to the lives of those who mainly teach in elementary and secondary schools. Even in affluent countries, teacher training programs have been criticized for their ineffectiveness and for the poor quality of the mentoring that is offered (Saleem & Zamir, 2016).

Another key aspect to look at is the kind of in-service training programs that are available and their relevance to the actual needs and concerns of teachers. Not all professional development programs have the same heft or transcendent quality, and a few, perhaps, might as well be scrap paper for all the good they do in addressing teachers' virtually lived, practical challenges. But even supposing all the programs are aboveboard and allegedly effective, which are the most effective (Saiti & Saitis, 2006).

This research also holds significance for fostering a culture of lifelong learning among teachers. Encouraging teachers to engage in continuous professional development can lead to a more dynamic and responsive education system that prioritizes student success. By exploring the influence of in-service training, this study will contribute to enhancing the quality of education at the elementary level and support efforts to strengthen Pakistan's education system.

1. Objectives of the Study

The primary objective of this study is to examine the impact of in-service training on the professional development of elementary school teachers. The specific objectives include:

- To analyze the role of in-service training in enhancing the teaching skills and competencies of elementary school teachers.
- To investigate the relationship between in-service training and teachers' ability to implement innovative instructional strategies.
- To evaluate the extent to which in-service training contributes to teachers' professional confidence and motivation.
- To explore teachers' perceptions regarding the effectiveness of in-service training programs.
- To identify challenges faced by teachers in accessing and applying knowledge gained through in-service training.
- To provide recommendations for improving the structure and delivery of in-service training programs.

2. Research Questions

This study seeks to answer the following research questions:

- How does in-service training influence the professional development of elementary school teachers?
- What specific teaching skills and competencies are enhanced through in-service training programs?
- To what extent do teachers find in-service training effective in improving their instructional practices?
- How does in-service training impact teachers' confidence and motivation in the classroom?
- What are the key challenges teachers face in participating in and applying knowledge from in-service training programs?
- What strategies can be implemented to improve the effectiveness of in-service training for elementary school teachers?

The in-service training is a crucial part of the picture when it comes to something as important as the professional development of teachers. This is mostly because the way that

in-service training works, alongside the just-in-time nature of its delivery, means that it can almost be anything that a teacher needs at that moment. In this study, our main focus is on the influences that in-service training has on the professional growth of teachers. We examined (1) the nature of the in-service training in the school where this study was conducted; (2) the influences that this in-service training has on the professional growth of the teachers in this school; and (3) the challenges and benefits of this in-service training. We concluded this study with (4) areas for improvement. This research will provide valuable insights for policymakers, educational administrators, and teacher training institutions. The findings will help these entities design professional development programs that are not only more effective but also much more akin to what teachers need. Even with existing policies affecting teacher training, this research is crucial because it highlights certainly regrettable and unsupportable gaps primarily between inception and conclusion mandates.

Literature Review

For a long time, the teaching profession has associated itself with what is potentially the quality of its educational offerings. Providing quality education has been many teachers' long-running hope, dream, and sometimes obsession. The expression of that aspiration has- in some times and places- taken the form of insistence on rigorous teacher training and teacher certification ceremonies. More recently, the path to providing quality education has taken on elements that prioritize continuous personal and professional development for teachers (Egert et al., 2018).

The effects of in-service training on teachers' instructional skills and pedagogical competencies have been examined by several researchers. These poorly structured training programs rarely affect teachers' practices. Indeed, they sometimes result in teachers adopting "innovative practices" that are decidedly non-innovative because what makes them non-innovative is that they are taught to countless teachers across the country. These practices include supposedly engaging direct instruction and lesson planning that somehow

meets the diverse learning needs of many different kinds of students (Uysal, 2012).

The literature explores another key aspect of the relationship between in-service training and teacher motivation. The research suggests that the opportunities for professional development, including in-service training, have a positive impact on teachers' motivation, job satisfaction, and self-efficacy. This impact seems to occur because when teachers receive continuous training, they seem to feel more confident in their abilities. This confidence seems to translate into a somewhat increased enthusiasm for teaching and a somewhat increased commitment to their profession. When teachers perceive that they are receiving adequate support and professional growth opportunities, they seem to remain engaged and motivated in their roles. In contrast, when they receive inadequate training and support, it seems to lead a number of them into a period of stagnation and burnout (Ayvaz-Tuncel & Çobanoğlu, 2018).

Fostering technological proficiency among teachers is another significant area of study. With the incorporation of technology in education, teachers should be proficient in using digital tools, online learning platforms, and educational software. This proficiency doesn't happen by accident. In-service training (theory-based and practical) is necessary for the effective use of technology by teachers. Furthermore, certain training programs have demonstrated significant positive outcomes and serve as models for what can happen under the right conditions. Training on blended learning has helped teachers understand how to use that model effectively; it has also encouraged them to explore technology further. Their understanding has deepened. They have also benefited from training in flipped classrooms and online assessment methods (Mede & Işık, 2016).

In-service training can also be organized, and have a powerful influence on the changing of the teaching practices. However, the systematic way of doing it is important. Rather than invite teachers to one-off workshops, schools planning to hold development activities for teachers should ensure these

events occur regularly and are part of a longer-term plan for professional development. Pay more attention to participatory models and training human resources who can carry out 'hands-on' development activities for teachers. As opposed to training human resources who can only lecture, extend what is essentially a 'classroom' experience to invite more opportunities for reflective practice and more events for 'sharing is caring' among the teachers (Dunst et al., 2015).

Another key variable of in-service training success is the institutional support teachers receive. Research shows that professional development programs work best when they are backed by school leadership and the educational policy community. Teachers who are encouraged by their principals to pursue professional development, and who have access to mentoring and coaching, are much more likely to act on what they have learned and to implement experimental practices in their classrooms. On the other hand, if teachers work in schools that lack a "supportive climate" and the kinds of resources necessary for the schools to function as laboratories for teaching reforms, then the kind of doubtful impact that in-service training has in the existing research gets confirmed (Nawab, 2017).

In different educational contexts, studies find variations in the availability, quality, and impact of in-service training. In developed countries, professional development frameworks are often well structured. In these contexts, teachers often work in professional learning communities, attend international conferences, and have access to a diverse set of training resources. In contrast, many developing countries, such as Pakistan, face significant challenges in rolling out effective in-service training programs for teachers. These challenges include inadequate funding, poor access to trained facilitators, logistical snafus—large training classes in far-flung places, for instance, when resources are needed in specific localities, training resistance of some teachers, reform needed in the in-service training process itself and systemic changes in the society that will help the reforms stick (Onalan & Gursoy, 2020).

Another area that is vitally important to research is the effect of in-service training on student learning outcomes. A vast array of studies suggests professional development for teachers has a direct and positive effect on student performance. The positive correlation between professional development for elementary school teachers and student performance is now well documented. In the wake of these findings, states and educational agencies have invested a considerable amount of capital—both intellectual and monetary—into professional development programs for teachers. In the very guise of these development programs, much of that capital has also been earmarked for in-service training programs (Karagiorgi & Symeou, 2007).

It is evidenced through the literature that In-service training has many benefits. Nonetheless, it has not lived up to its full potential, and some challenges hinder it from being everything it could be. One of the challenges about in-service training is that it seems disconnected from the real world of teaching—that it is, in a sense, impractical. Teachers indicate that they have received precious little help in figuring out how to make the types of changes to their teaching that the training was designed to produce. Furthermore, even when teachers do find the training to be somewhat helpful, they often find themselves in just a plain predicament of being unable to apply what they learned in their classrooms. As training participants return to their worlds of teaching, they face the same old set of fairly rigid conditions that previously got in the way of them applying what they learned (Sotoudeh Moghadam et al., 2024).

Another issue is the sustainability of professional development efforts. Research has shown that in-service training has a longer-lasting and more widespread impact when there is follow-up support, monitoring, and evaluation. Teachers benefit when there is a system of continuous, directed, and thoughtful professional development that includes some combination of mentoring, cohort groups, action research, and the use of those pretty well guaranteed to be hit-and-miss strategies (Millinga, 2014).

In-service training is also crucial for equity and inclusion in education. Teachers must be skilled in handling diverse classrooms, supporting students with special needs, and implementing inclusive teaching strategies. Our studies emphasize that professional development programs focusing on inclusive education, cultural responsiveness, and gender sensitivity contribute to a more equitable learning environment. Training sessions that cover curricula such as differentiated instruction, social-emotional learning, and trauma-informed teaching enable teachers to more effectively meet the range of learning needs present in all classrooms. Unfortunately, research also indicates that many professional development programs suffer from insufficient inclusivity focus. We believe that, too often, teachers emerge from these programs underprepared to effectively lead diverse classrooms (Schelling & Rubenstein, 2023).

In-service teacher training is important for the professional development of elementary school teachers. The literature is quite clear on this. What is not so clear, however, is what it takes for in-service teacher training to be of high quality and to be a sustainable part of the lives of teachers, to fit into their working lives and into the lives of the schools where they work. We know even less about the kinds of in-service training that produce sustainable changes in both the thinking and the behavior of teachers that lead to improvements in both the quality of teaching and the kinds of learning that children do when they are in the care of elementary school teachers. In-service training is not an answer. The in-service training is an answer to a question not asked for so long that it is the question that begs the answer (Yirci et al., 2021).

Methodology

This research uses a qualitative research design to study the Classroom Observation Tool (COT) as it assesses teachers' performance and works with a kind of tool that is expected in best practice to help bring about the professional development of the teachers being assessed. The COT is a relatively new tool, and this study is very much in line with the best practices of gathering insights from various stakeholders—teachers, policymakers, tool developers, and data collectors—that assess the effectiveness of a tool like the COT. This study favors obtaining participant insights over using the quantitative insights that research often cites as evidence for a practice's effectiveness (Willis, 2008).

As per Boddy (2016), the study's participants were carefully selected via purposive sampling to ensure that key stakeholders were included. These are people who either directly engage with the COT or are influenced by it. The sample is a diverse one: it includes 15 elementary school teachers who had been observed using the COT. Their professional development may be in some way affected by the COT. We also included 5 policymakers from the Quaid-e-Azam Academy for Educational Development (QAED), Punjab. These folks are responsible for shaping the policies that relate to teacher evaluation and professional growth. We involved 5 development team members, i.e., COT developers. These are educationists who played a central role in designing and creating the tool. Lastly, we included 10 data collectors. These are the people who are tasked with conducting the observations and collecting the relevant data using the COT. To gather in-depth insights, semi-structured interviews were conducted with each participant group. This method allowed for flexibility in exploring various dimensions of the Classroom Observation Tool while ensuring that core aspects were consistently addressed across all interviews.

The interviews carried out for this study were not of the one-size-fits-all variety but were custom-made for each group of participants, whose members occupy unique roles and hold distinct perspectives on the Classroom Observation Tool (COT). This was especially important because the groups had unique and varied experiences with the COT; thus, the COT is not even close to being an excel-lent observation tool for all of them. Teachers were interviewed for this study, obviously. Michelle and I sat down with them and asked them about their experiences with the COT-based observations. We particularly wanted to

know—and attempted to probe deeply into—the matter of whether the feedback the teachers were receiving in association with the COT was in fact good for them and their teaching, and whether they believed the COT was a good measure of their teaching performance. And also, it is essential for the story of this study to say, a lot was at stake for the teachers in what they were about to tell us in these interviews.

Data Analysis

Thematic analysis was used to process the qualitative data collected through interviews. The analysis followed the following steps:

1. Transcription and Familiarization – The recorded interviews were transcribed verbatim, and repeated readings were conducted to gain familiarity with the data.
2. Coding – Key phrases and responses were categorized into codes based on recurring themes.
3. Theme Development – Similar codes were grouped into broader themes, highlighting patterns related to the effectiveness, limitations, and potential improvements of the COT.
4. Interpretation – The themes were analyzed in the context of existing literature and study objectives to draw meaningful conclusions.

Ethical Considerations

The research maintained ethical standards to secure the rights and privacy of participants. All the interviewees gave informed consent before being interviewed. They were guaranteed anonymity, and their replies were guaranteed to be used only for research. The study also received the necessary thumbs-up from the appropriate institutional review board. To guarantee the dependability and trustworthiness of the results, the investigation included triangulation. It used various types of data (from teachers, policymakers, tool developers, and data collectors) to confirm the results. Furthermore, it employed member checking. This technique allows the researchers to share the main findings with the persons who provided the data (the study participants). The participants go over the findings and make sure that the researchers got

it right (Munhall, 1988).

This methodological manner of approach delivers a thorough assessment of the Classroom Observation Tool, by assembling an array of perspectives. When we look at the tool through so many eyes, we can see its faults and follies, if it has any, in a way that isn't possible when we look at an object with only a few pairs of eyes. This is not the main reason why this approach is good, but it is one good reason to be on the lookout for faults and follies.

A qualitative data analysis method that concentrated on thematic analysis was used to process the information gathered from the interviews. This method was chosen for its strength in identifying patterns, insights, and themes in the participants' experiences and perspectives. The thematic analysis proceeded along a quite structured yet fluid path and culminated in a very thorough understanding of the COT and its impact on teachers' professional development. Components of the analysis included data transcription, coding, theme development, and careful interpretation.

The initial phase of the analysis was to transcribe the recorded interviews word-for-word to guarantee the exactness of retaining participant experiences and viewpoints. The transcripts were then reviewed several times to achieve thoroughness in understanding the material. This was an important stage for reaching deep insights into what was being conveyed—in terms of basic content, as well as in key emotional and other nuances.

During this process, several recurring phrases and patterns began to emerge. Teachers often expressed **appreciation** for the tool but also pointed out areas where they felt it could be improved. One teacher, for example, highlighted that:

"The tool helps in structuring classroom observations, but sometimes it feels like it only focuses on surface-level aspects of teaching rather than the deeper pedagogical methods we use."

Similarly, data collectors shared their concerns about **the rigidity of the tool**, with one noting:

"While COT provides a standardized way of assessing teachers, it does not always capture the context of the classroom. Teaching in an urban school is very different from teaching in a rural school, but the same checklist is used for both."

These early observations guided the subsequent steps in the analysis, shaping the themes that were later developed.

The data was coded next. This means that key phrases and responses were sorted into categories of meaningful segments. Each of the interview transcripts was looked at systematically, and each was assigned codes for sections of text that represented specific ideas or concerns. The coding process was both inductive and deductive. Some codes emerged from the data itself, while others were based on pre-existing literature and the objectives of the study.

Commonly occurring codes included:
- Effectiveness of COT in evaluating teaching practices
- Limitations of the tool in capturing teacher performance
- Impact of COT feedback on professional development
- Challenges faced by data collectors
- Perceptions of policymakers regarding COT's role in teacher improvement
- Need for refinement or modifications in the tool

One of the policymakers interviewed emphasized the intended purpose of the tool, stating:

"COT was designed to provide structured feedback to teachers, but whether that feedback translates into actual improvements depends on how seriously it is taken by both teachers and administrators."

Similarly, a teacher pointed out how the feedback mechanism worked in practice:

"We do get feedback after observations, but it is often very generic. If the tool could provide more individualized feedback, it would be more helpful for our professional growth."

These coded segments helped form the

foundation for the development of broader themes.

Once the coding process was completed, **similar codes were grouped into broader themes**, allowing for an organized and coherent understanding of the data. The following key themes emerged:

1. Effectiveness of COT in Assessing Teachers' Performance

Many participants acknowledged that the Classroom Observation Tool provides a structured and standardized way to assess teachers. The tool ensures that **evaluations are not subjective** and that all teachers are assessed using the same criteria. A data collector remarked:

"Before COT, classroom evaluations were highly subjective. Now, at least there is a common framework that all observers follow."

However, while the tool was seen as effective in capturing **general teaching behaviors**, some participants questioned whether it truly reflected **the depth and complexity of teaching practices**. A policymaker mentioned:

"A good teacher does more than just follow structured lesson plans. Creativity, adaptability, and student engagement are hard to quantify, and I am not sure if COT fully captures those aspects."

2. Limitations of COT in Capturing Teachers' Professional Development

A recurring concern among teachers was that the **tool focused too much on observation and not enough on development**. Many teachers expressed a desire for **more actionable feedback and follow-up support** after being observed. One teacher stated:

"It's one thing to be told what you're doing right or wrong, but what's next? We need workshops or mentorship programs to actually improve where we are lacking."

Similarly, another teacher emphasized the **need for a more formative rather than summative approach**, saying:

"COT feels more like an inspection rather than a developmental tool. If it's meant to help us

grow, there should be ongoing support, not just a checklist evaluation."

3. Challenges Faced by Data Collectors in Using COT

Data collectors, who play a crucial role in implementing the tool, faced **several challenges** related to logistics, teacher resistance, and the **one-size-fits-all nature** of the tool. Some reported difficulty in applying the tool across different school environments. One data collector explained:

"Classroom dynamics in an overcrowded public school are very different from those in a well-resourced private school. But the tool does not account for these differences."

Additionally, some data collectors mentioned that **teachers were sometimes hesitant or defensive** during observations, fearing that their performance evaluations could negatively impact their careers.

"Many teachers see the observation process as a judgment rather than an opportunity for growth. This makes it difficult to have open discussions after the evaluation."

4. The Need for Refinement and Improvement of COT

A significant theme that emerged was the **need to refine the tool to make it more adaptable, developmental, and context-sensitive**. Many participants believed that while the tool serves an important function, it could be **improved by incorporating teacher feedback, making it more formative, and allowing for context-based modifications**.

A policymaker suggested:

"The tool is a good starting point, but it needs continuous refinement. We should involve teachers in the process of updating it so that it becomes more relevant to their real classroom challenges."

Similarly, a teacher recommended that:

"Instead of just an observer filling out a form,

why not include peer observations or self-reflections? That way, teachers can also assess their own progress."

Conclusion/Recommendations

The interviews were analyzed and the following was suggested by them. The Classroom Observation Tool helps and it is very useful. It is a streamlined observation tool that gives a kind of standardized framework for what the teacher is doing. The problem comes when the COT tries to give helpful feedback that goes along with what kind of improvement the teacher ought to be making. The feedback tends to be too generic and not dumbed down enough; it could stand to be much more simplistic and easily accessible for the teacher to gather the meat of the suggestion as a viable way to improve.

Moreover, the tool fails to account for adequately the contextual differences that exist among various schools and classrooms, which leads to inconsistent effectiveness across different educational settings. Despite these inadequacies, the research findings do indicate that the tool has succeeded in bringing some degree of uniformity and objectivity to teacher evaluations. However, the researchers also found that it badly needs refinement before it can serve the intended purpose of providing professional development to teachers. Integrating developmental mechanisms into the COT framework is a key recommendation from the analysis. Examples of these mechanisms are mentorship programs, peer evaluations, and customized feedback sessions. Also, involving teachers in the refinement of the COT could enhance its effectiveness and make it a more user-friendly, growth-oriented instrument. To sum up, the Classroom Observation Tool is a useful but incomplete instrument. Improvements and a transition toward a more developmental and supportive approach could significantly increase its impact on teaching and learning.

Conflict of Interest

The authors showed no conflict of interest.

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