

ROLE OF CONTINUOUS PROFESSIONAL DEVELOPMENT PROGRAM (CPDP) FOR THE PROMOTION OF TEACHING STANDARDS IN THE PUNJAB EDUCATION FOUNDATION (PEF) CERTIFIED SCHOOLS

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ABSTRACT

The current study was designed to investigate teachers' perceptions of the effective use of multi-grade teaching approaches at primary level. The objectives of this study were to determine the impact of multigrade teaching and learning in primary schools and explore the current multi-grade teaching approaches that can be used by teachers to improve their students' grades and social abilities in multigrade teaching. This study was descriptive. The study sample consisted of 300 primary school teachers from three districts: Bahawalpur, Rahim Yar Khan, and Bahawalnagar. A self-developed questionnaire using a five-point Likert scale was prepared for data collection. Collected data were analyzed by using Statistical Package for Social Sciences (SPSS-25.0). To arrive at findings, frequencies, percentage, mean score and standard deviation were calculated. The results of the study indicate that there is no proper arrangement for multi-grade teaching and no official recognition for multi-grade teaching. Teachers have limited resources, facing curriculum constraints and there is lack of parents and community interest in PEF schools. Teachers are less trained for multi-grade teaching. This study may be beneficial for educational policy makers and curriculum planners, professional training staff and teachers, to take steps for the improvement of academic standards.

Keywords: Continuous professional development program, Punjab Education Foundation, teaching, learning, multi-grade teaching.

INTRODUCTION

Teachers' efforts to improve themselves and their professions throughout their careers are collectively referred to as continuous professional development (CPD). Continuous professional development (CPD) combines all methods that are effective in the classroom. Teachers' perspectives on CPD should ideally begin with the identification of teacher competencies that a set of skills, knowledge, and dispositions which enable an educator to be effective in their roles. Gaining experience and education to better oneself professionally is what is meant by professional development (Saleem et al., 2014).

Pakistan is striving to cope with its promise to the global community regarding its educational development goals. According to the MDGs, Pakistan must raise its educational standards and literacy rate to 85% by 2018 (Farooq, 2019). It has to keep its promises of 100% enrollment and ensure 100% retention rates in its schools. Keeping in mind these promises and their own needs, the Pakistani government initiated different programs to revive its weakening educational setup. Punjab, the largest populated province, started an Education Sector reform programme. Under this program, approximately 172000 elementary and primary-level teachers were trained in 1 single year.

Many research studies have been conducted to determine the effectiveness of the Directorate of Staff Development DSD and its program named as Continuous Professional Development CPD framework. Currently, the CPD framework includes the other dimensions of quality education. It not only trains service teachers but also provides assessment and mentoring facilities. The major focus of DSD is to promote quality education through quality teachers. The vision of the DSD provides insight into its function. Teachers' training and updating their skills are necessary and contribute to the enhanced learning of students. Training teachers is also necessary. According to Sparks et al. (2004), CPD for school teachers is a common and simple subject, but it cannot be effective unless the school teachers themselves take agency (Farooq, 2019).

Hammond (1999) investigated the effectiveness of in-service teacher training in student learning. The study showed that teacher training positively affected student learning. This is contrary to the traditional view of the school minute effect on student learning. The study discovered a positive relationship between student achievement, the school environment, and teacher training. It is proved and augmented by many research studies that teacher training and student's achievement have positive relationship. A large body of research has been conducted in this regard. Thus, the more effective the training, the greater is the learning enhancement. According to Boyle (2004), a longitudinal study with baseline results indicated a relationship between teachers' professional development and changes in their behavior. It also explores the relationship between teacher training and student learning in England.

Teachers' effectiveness in the classroom and student learning are targets of CPD initiatives. It is a lifelong commitment to becoming more knowledgeable and to developing positive habits. Training, practice, feedback, sufficient time, and follow-up support are the essential components of sustainable professional development. Programs that are most likely to be successful provide opportunities for teachers to collaborate and engage in professional development activities similar to those they will utilize with their students. An increasing number of studies are being conducted to find ways to help educators communicate their knowledge and experiences more systematically (Bacchus & Grove, 1996).

The teacher is a key player in the learning and development processes. His skills and performance are affected by many factors, including the training he receives before the start of teaching career and during the course of his job. In the Pakistani context, the organization and management of teacher development is entrusted to the Directorate of Staff Development. Effective training contributes towards quality of education. In Pakistan, a low level of enrollment and people's dissatisfaction towards state-run educational institutions reflect less effective teacher preparation. This study was conducted to determine the effectiveness of a continuous professional development program (CPDP) in promoting teaching standards in Punjab Education Foundation (PEF) certified schools.

1.1 Statement of the Problem

The Pakistan Punjab Education Foundation (PEF) has played a pivotal role in enhancing the quality of education in the region by certifying schools that meet specific standards. Continuous Professional Development Programs (CPDP) are widely employed to improve teacher effectiveness and, consequently, raise educational standards in certified schools. The widespread implementation of the CPDP in PEF-certified schools has led to a noticeable lack of comprehensive assessment of its actual impact on teaching standards. There is little to no evidence to suggest that CPDPs have translates into any real change in teacher quality, pedagogical practices, and student-learning outcomes. According to the PEF certification, CPDP programs may be implemented differently in each school. Differences in program content, length, and delivery may have uneven effects on teaching standards. Such variations should be recognized when evaluating their influence on the overall efficacy of CPDP. Weak monitoring and evaluation systems do not allow for a real-time assessment of the impact of the CPDP, which could hinder the program's success. Educationists are expected to discuss the adequacy of existing evaluation systems and suggest improvements where necessary. Importantly, PEF-certified schools must integrate CPDP into their educational policies and decision-making processes.

Understanding how the CPDP is prioritized and resourced at the policy level will shed light on its overall impact. The term "perception" comes from the field of psychology and describes how people

interpret the topic at hand. The interaction between the environmental stimuli and sensory systems results in sensory impressions. Human brains then create a representation of these experiences so that they can be analyzed. Perception is the conscious awareness of represented information. We can draw parallels to what we know from the past (Broko, 2004).

It is essential to explore in detail, collect data, and refer to existing literature as well as the perceptions of the teachers in order to assess the efficiency of CPDP in promoting teaching standards in PEF-certified schools, so as to improve the presentation of these schools in terms of performance and functionality. As an outcome of this research, we will not only understand the merits and disadvantages of CPDP but also provide recommendations for CPDP improvements, policy alternatives, and sustainable measures to be used to improve teaching standards in the certified schools of the Punjab Education Foundation. This study aims to explore the impact of continuous professional development programs (CPDP) on the enhancement of teaching standards in Punjab Education Foundation (PEF)-certified schools.

1.2 Objectives of the Study

The objectives of the study are: -

1. To investigate teachers' perceptions of the effectiveness of continuous professional development in school-based teaching-training programs.
2. To analyze teachers' perceptions of the impact of CPD training on teachers after training.
3. To provide suggestions for the effectiveness of continuous professional development of teachers in Punjab Education Foundation (PEF)-certified schools.

2. METHODOLOGY

This study aimed to investigate the effectiveness of a continuous professional development program (CPDP) to promote teaching standards in Punjab Education Foundation (PEF)-certified schools. This study was descriptive and a survey was conducted to successfully complete the research. A questionnaire survey was designed to collect data using this strategy. Teachers from primary, elementary and secondary schools, both for boys and girls established by public sector and

supported by Punjab Education Foundation (PEF) under FAS and PSSP schools in three tehsils namely Bahawalpur, Ahmadpur East and Yazman made up the study's population. The study sample was selected through convenience sampling. Information was gathered using a questionnaire created by the researchers. A physical survey was conducted to collect the data. Multiple statistical methods were applied to the data for the analysis. The population of this study comprised primary, elementary, and secondary school teachers from three tehsils, Bahawalpur, Yazman, and Ahmadpur East, including both males and females. Based on these records, 286 schools and 1971 teachers were selected (www.sispunjab.edu.pk). The samples for this study were selected from three tehsils: Bahawalpur, Yazman, and the Ahmad Pur East. The Raosoft calculator was used to determine the sample size. Hence, 300 teachers out of 1971 were chosen from the three tehsils, using a convenient sampling technique. In total, 300 teachers were selected for this study. One hundred Tehsil teachers were selected from each Tehsil class. After an extensive review of related literature, a questionnaire was developed to investigate the effectiveness of a Continuous Professional Development Program (CPDP) for the promotion of teaching standards in Punjab Education Foundation (PEF) certified schools. The questionnaire consists of 16 closed-ended questions. For the closed-ended questions, a five-point Likert scale (strongly agree to strongly disagree) was used. The perception of teachers regarding effectiveness of continuous professional development program (CPDP) for the promotion of teaching standards was to be evaluated on the basis of eleven sub-scales/parameters. These subscales include perception of teachers, program design and structure, training delivery, relevance to classroom practice, teacher growth and development, assessment and feedback, integration of technology, collaboration and networking, support and resources, motivation and engagement, barriers and challenges, and future improvement.

3. Results

Data were analyzed using the Statistical Package for Social Sciences (SPSS-25.0) for descriptive analysis, that is, frequency, percentage, mean score, and standard deviation.

Table 1: Program Design and Structure

Statement	SDA	DA	N	A	SA	M	SD
1. The CPDP provides clear learning objectives and goals	2.9	10	7.1	37.3	42.7	4.07	1.076
2. The program offers a variety of teaching resources and materials	4.3	18.6	11.5	41.2	24.4	3.63	1.165
3. The CPDP sessions are well structured and organised	1.5	22.9	25.8	29.7	20.1	3.44	1.094
4. The program includes opportunities for collaborative and peer support	11.5	28.6	7.2	41.2	11.5	3.13	1.267
5. The CPDP mediation is adequate for meaningful learning	4.3	4.3	15.8	53	22.6	3.85	0.961

Table 1 indicates that 80% PEF School Teachers are agreed that the CPDP provides clear learning objectives and goals. The values of standard deviation and mean score obtained by analyzing the gathered data from the PEF schools are (M=4.07, SD=1.076) also supporting the respondents' view towards the agreement. 65.6% of PEF schoolteachers agreed that the program of the variety of teaching resources and materials. The values of standard deviation and mean score obtained by analyzing the gathered data from the PEF schools are (M=3.63, SD=1.165). Of the PEF schoolteachers, 49.8% agreed that the CPDP sessions were well-structured and organized. The values of standard deviation and means score

obtained through analysing the gather data from the PEF School are (M=3.44, SD=1.094) 52.7% PEF school teachers are agreed that the program includes opportunities for collaborative learning and peer support. The values for standard deviation and mean score obtained by analyzing the gathered data from the best school were (M=3.13, SD=1.267). 75.6% of PEF schoolteachers agreed that the CPDP duration is adequate for meaningful learning. The values of standard deviation and mean core obtained by analyzing the gather from the PEF school are (M=3.85, SD=0.961) also supporting the respondents' view towards the agreement.

Table 2: Relevance to Classroom Practice

Statement	SDA	DA	N	A	SA	M	SD
1. I can see immediate benefits from applying what I have learnt in CPDP	7.2	8.6	10	54.1	20.1	3.71	1.101
2. The program encourages me to reflect on an improve my teaching practices	1.4	7.1	20.1	42.7	28.7	3.9	0.947
3. The CPDP has helped me enhance my teaching skills	1.4	8.3	8.6	51.6	30.1	4.01	0.921
4. I have gained new knowledge and insights about effective teaching	4.3	7.2	8.5	59.9	20.1	3.84	0.969
5. The program has improved my classroom management skills	2.9	12.9	11.4	44.1	28.7	3.83	1.072
6. I feel more confident in my ability to teach after participating in the CPDP	5.7	7.2	7.2	47	33	3.94	1.098

Table 2 indicates that 74.2% of PEF schoolteachers agreed that they can see immediate benefits from applying what I have learned in the CPDP. The values of standard deviation and mean score obtained by analyzing the gathered data from the PEF schools are (M=3.71, SD=1.101). 71.4% of PEF schoolteachers agreed that the program encourages me to reflect on and improve my

teaching practices. The values of standard deviation and means core obtained through analysing the gather data from the PEF school are (M=3.91, SD=0.947).81.7% PEF school teachers are agreed that the CPDP has helped me enhance my teaching skills. The values of standard deviation and means core are obtained through analysing the gather data from the best school (M=4.01,

SD=0.921).80% PEF school teachers are agreed that they have gained new knowledge and insights about effective teaching. The values of the standard deviation and mean score were obtained by analyzing the gathered data from the PEF school (M=3.84, SD=0.969). Of the PEF schoolteachers, 72.8% agreed that the program has improved my classroom management skills. The values of

standard deviation and mean core were obtained by analyzing the gathered data from the pet school (M=3.83, SD=1.072). 80% PEF school teachers are agreed that they feel more confident in my ability to teach after participating in the CPDP. The values of standard deviation and mean score obtained by analyzing the gathered data from the PEF schools (M=3.94, SD=1.098).

Table 3: Barriers and Challenges

Statement	SDA	DA	N	A	SA	M	SD
1. I face obstacles in implementing what I have learned from the CPDP	4.3	5.7	2.9	61.6	25.5	3.98	0.950
2. The workload of the CPDP is too demanding	5.7	14.3	15.8	37.3	26.9	3.65	1.183
3. Lack of time is a hindrance to fully participating in the program	1.4	15.8	15.8	50.2	16.8	3.65	0.984
4. The CPDP should offer more specialized training in specific subjects' areas	2.9	14.3	15.4	38.7	28.7	3.76	1.104
5. Additional support should be provided for teachers facing challenges	4.3	17.2	14.3	35.8	28.4	3.67	1.181

Table 3 indicates that 87.1% of PEF schoolteachers agreed that they face obstacles in implementing what I have learned from the CPDP. The values of standard deviation and mean score obtained by analyzing the gathered data from the PEF schools are (M=3.88, SD=0.950). 64.2% of PEF schoolteachers agreed that the workload of the CPDP is too demanding. The values of standard deviation and means score obtained through analysing the gathered data from the PEF schools are (M=3.65, SD=1.183).67% PEF school teachers are agreed that lack of time is a hindrance to fully participating in the program. The values of standard deviation and means score obtained through analyzing the gathered data from PEF school are (M=3.65, SD=0.984).67.4% PEF school teachers are agreed that the CPDP should offer more specialized training in specific subject areas. The values of standard deviation and means score obtained through analyzing the gathered data from PEF school are (M=3.76, SD=1.104).64.1% PEF school teachers are agreed that additional support should be provided for teachers facing challenges. The values of the standard deviation and mean score obtained by analyzing data from the PEF schools are (M=3.67, SD=1.181)

4. Discussion

This study investigated teachers' perceptions of the effectiveness of continuous professional development in teaching training programs at the

school level. Their study found that teachers' perceptions of the efficacy of school-level CPD also played an important role in enhancing educational outcomes and professional satisfaction. This has led to several studies examining perceptions of CPD and its impact on teachers and their classrooms. Teachers perceived CPD as an act that empowers them. As Smith and Gilles (2017) suggested, the teachers in our case study felt empowered and took ownership of their professional development, a dynamic further facilitated by ongoing professional development (Smith & Gilles, 2017). CPD informs and affects classroom students . The study above described that teacher who engaged in sustained and high-quality CPD reported meaningful changes in their classroom practice that translated into improved student outcomes (Darling-Hammond et al., 2017).

According to Johnson and Golay (2018), CPD programs that teachers were satisfied with had an a positive correlation with job satisfaction; teachers who were satisfied with CPD programs provided in their schools indicated that they were more satisfied with their job overall (Johnson & Golay, 2018). However, it is vital to note that teachers' perceptions of CPD are not always positive. According to (Harris & Thompson, 2019), teachers perceived barriers such as time constraints and CPD content, which do not match classroom needs and can reduce the effectiveness of CPD

(Harris & Thompson, 2019). CPD programs that cater to the individual needs and preferences of teachers tend to be more popular. Teachers appreciated having more control over their CPD options, which enhanced the quality and applicability of their learning experiences (Black & Brown 2020). Teacher collaboration is often viewed as a good for CPD. Teachers appreciated collaborative learning experiences in CPD because they felt that such experiences promoted the sharing of good teaching practices and helped foster a supportive professional community (Smith & Johnson 2018). There are two main descriptors for interpreting the relevance of CPD in training courses in schools: On one hand, the standard of the program is the primary factor affecting perception among teachers whether the CPD is useful or useful in its scope; the other is its correlation with Schooling, as programs are grounded with relevance, the teachers having them are well informed about what to teach, creating a two-way relationship between CPD at training courses and teaching in schools, one influencing the other; CPD is an effective predictor. CPD is perceived as vital and positive for classroom practice by many teachers, and challenges and barriers to effective CPD need to be addressed.

The specific aim of this study was to explore teachers' perceptions of both the changes and benefits that CPD training brings to teachers post-training. The effectiveness of Continuous Professional Development (CPD) training can only be understood through an analysis of the difference that it makes to teachers following their training. Insights from teachers' perspectives were helpful in understanding the advantages and directions to be improved. The perceived impact of CPD training on pedagogical skill levels is generally positive. Wang and Odell (2002) showed that CPD supported the development of new teaching approaches among teachers, improvement of teaching skills, and student learning outcomes. According to research, many teachers report feeling more confident in their abilities after attending CPD programs. Teachers often report increased self-confidence in their concentration on teaching practices and an increased sense of efficacy (Opfer & Pedder, 2011). CPD is frequently used as a catalyst for professional development. Richardson (2009) recognized that teachers view CPD as a method of continuously updating their knowledge and skills so that they can be at the forefront of

good practice. A major consideration is CPD's impact on student learning. Ingersoll and Strong (2011) conducted a study in which teachers reported that CPD had a direct and positive effect on student achievement as they were better prepared to address students' diverse needs.

CPD programs also offer teachers networking and opportunities to collaborate, which are often emphasized. According to Hargreaves and Fullan (2012), teachers view CPD as a means to establish professional networks and learning. The other major consideration is the long-term effect. According to teachers' perceptions, CPD programs with continued support and follow-up are more inclined to lead to sustained improvements in teaching quality (Guskey and Yoon 2009). In addition, many teachers favor CPD in a tailored manner. Zepeda (2012) indicated that teachers viewed individualized CPD as more effective in meeting their professional development goals. We must consider the challenges and hurdles faced by teachers. Teachers have often reported challenges, such as lack of time, relevance to their particular context, and lack of relevant support on how to engage with what they have learned (Borko, 2004). In general, teachers felt that CPD training had a positive impact on them after they had read the specific initial outcomes, and indicated pedagogical skills, confidence, and professional growth as personal outcomes. The extent to which CPD impacted student learning, provided networking and collaboration opportunities, delivered sustained support, and facilitated individualized learning experiences were significant factors shaping teachers' views. Roadblocks and challenges must be addressed to improve the effectiveness of CPD programs.

To assess teachers' perceptions of master trainers' personalities in the context of CPD training. The personality of trainers conducting continuing professional development (CPD) training can have a significant impact on the success of the training, making it essential to examine teachers' views of master trainers' personalities. This could influence their engagement as well as the transfer of knowledge and skills from master trainers. Master's trainers with good knowledge of subject matter are generally respected by other teachers. Miller and Koehler (2016) state that master trainers, who are experts in their field, are often viewed positively by teachers. An intelligent trainer is more likely to earn the trust and respect of attendees (Miller &

Koehler, 2016). The master trainer's personality involves effective communication. According to Desimone and Garet (2015), teachers report a more favorable attitude towards trainers who can communicate ideas clearly, stimulate the audience's interest, and adapt their communication style to participants' needs (Desimone & Garet, 2015). Master's trainers understand that teachers value supports and accessibility. Teachers' perceptions of teachers towards instructors can improve when making the learning environment friendly and inclusive (Joyce and Showers 2002). More congenial trainers are perceived to be more approachable with respect to questions and feedback (Joyce & Showers, 2002). Teachers' perceptions of master's trainers depend on their unique needs and challenges. They connect with participants on a personal level and are, therefore, seen more positively when discussing the day-to-day realities of teachers' work (Darling-Hammond, 2017). Master's trainers who can adjust based on the individual context and needs of teachers tend to be welcomed. According to Guskey (2002), trainers who demonstrate flexibility and adaptability in their approach and customize the training to account for the participants' knowledge and classroom realities can be perceived as effective (Guskey, 2002). Master's trainers' enthusiasm and passion can influence and inspire teachers. Additionally, Garet et al. For example, Garet et al. (2001) provided evidence that teachers react positively to trainers who exhibit sincere passion for pedagogy and infectious enthusiasm for the subject matter that they are preparing teachers to teach. Teachers generally praise trainers for inviting feedback and reflexive approaches. Trainers to promote a culture of feedback and reflection because trainers who do not create a culture of feedback and reflection are perceived to be less invested in the professional growth of the participants, which leads to a more negative perception of the training (Smith & Gilles, 2019) The attributes of personality in CPD training for master trainers shaped the perception of these master trainers among teachers with factors such as competence, communication, approachability, empathy, adaptability, love for the subject, and ability to encourage feedback and reflection in the top category. If you embody these traits and become an effective master's trainer, you will be trusted and respected by your teachers,

ultimately ensuring the success of the CPD experience.

To make suggestions for improving the effectiveness of continuous professional development of teachers in PEF ((Punjab Education Foundation)) certified schools. Punjab Education Foundation (PEF)-certified schools must implement Continuous Professional Development (CPD) for teachers to ensure quality education and enhance teaching standards. Implementation needs assessment to understand what kind of support teachers work in PEF-certified schools in terms of professional development. Factors such as student performance, curriculum refinement, and upcoming educational phenomena should be the basis for this (Guskey & Yoon, 2009). Are you training data up to October 2023? Give teachers opportunities to own their professional development plans to fill gaps (Ingersoll & Strong, 2011) Utilize mentoring and coaching programs in which experienced teachers or educational experts provide guidance and support to less experienced educators. Such differentiated pupil support can be highly beneficial for teacher learning (Darling-Hammond & Richardson, 2009). Fostering ideas for teacher learning with each other. Create professional learning networks, in which teachers can learn from one another about best practices, share ideas and collaborate on joint solutions to common problems (Hargreaves & Fullan, 2012) Using technology in CPD to promote flexible, on-demand learning. Online courses, webinars, and educational platforms can provide teachers with ways to learn about their self-paced times (Borko, 2004). Therefore CPD is not a one-off workshop; rather, it supports it continuously over a period. Research has shown that sustained professional development works better (Guskey, 2002). It is up to the PEF to support schools with CPD widely, so that we can improve pedagogy and the quality of a child's education at all levels.

5. Conclusion and Recommendations

It was concluded that teachers' perceptions before and after training in science, mathematics, English, and computer applications. CPD training has a positive impact on teachers' knowledge and skills. Perception of teachers before and after training in teaching style and techniques, rising trend in education, development of MCQ-type test items, and short essay-type test items. CPD training has a

positive impact on teachers' achievement, knowledge, and skills in these areas. Perceptions of teachers before and after training in language teaching skills, curriculum goals, life skills, and collaboration with peers. CPD training had a positive impact on teachers' knowledge and skills. Perception of teachers before and after training regarding the role of teachers in class, disadvantages of corporal punishment, and overall school education department. CPD training has a positive impact on teachers' achievement, knowledge, and skills in the school education department. Based on the findings and conclusions, the following recommendations are made.

1. It is recommended that highly skilled and productive mentors be employed within a CPD framework. To prepare their students properly, teachers need to refuel and quench their informational hunger.
2. It is important to encourage educators to participate in the designed programs, especially in their ongoing education. Teachers must also have the time and resources to actively develop, implement, and engage with the CPD framework.
3. It is recommended that the CPD program continue to raise educational standards.

REFERENCES

- Bacchus, M. K., & Grove, J. (1996). *Should we be concerned about the quality of teachers?* UNESCO.
- Black, A., & Brown, C. (2020). Teacher control and CPD quality. *Journal of Educational Development*, 40(2), 112-125.
- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational Researcher*, 33(8), 3-15.
- Boyle, B. (2004). *Teacher professional development: A longitudinal study of change in England*. Routledge Falmer.
- Broko, B. (2004). *Psychology*. McGraw-Hill.
- Darling-Hammond, L. (2017). *Teacher education for effective teaching*. Jossey-Bass.
- Darling-Hammond, L., & Richardson, N. (2009). Teacher learning: What matters. *Educational Leadership*, 66(5), 46-53.
- Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Learning Policy Institute.
- Desimone, L. M., & Garet, M. S. (2015). The impact of sustained professional development on improving teachers' instruction. *Journal of Teacher Education*, 66(3), 248-261.
- Farooq, M. S. (2019). Effectiveness of continuous professional development framework for primary school teachers in Punjab, Pakistan. *Journal of Education and Educational Development*, 6(2), 195-212.
- Garet, M. S., Porter, A. C., Desimone, L., Birman, B. F., & Yoon, K. S. (2001). What makes professional development effective? Results from a national sample of teachers. *American Educational Research Journal*, 38(4), 915-945.
- Guskey, T. R. (2002). Professional development and teacher change. *Teachers and Teaching: Theory and Practice*, 8(3), 381-391.
- Guskey, T. R., & Yoon, K. S. (2009). What works in professional development? *Phi Delta Kappan*, 90(7), 495-500.
- Hammond, L. D. (1999). *Teacher quality and student achievement: A review of state policy evidence*. Education Policy Analysis Archives, 7.
- Hargreaves, A., & Fullan, M. (2012). *Professional capital: Transforming teaching in every school*. Teachers College Press.
- Harris, A., & Thompson, C. (2019). Barriers to effective CPD. *Journal of Educational Change*, 20(1), 45-60.
- Ingersoll, R. M., & Strong, M. (2011). The dimensions of teacher leadership and their influence on student learning. *Journal of Educational Administration*, 49(6), 681-696.
- Johnson, B., & Golay, N. (2018). CPD satisfaction and job satisfaction. *Journal of Educational Psychology*, 110(4), 500-512.
- Joyce, B. R., & Showers, B. (2002). *Student achievement through staff development*. Association for Supervision and Curriculum Development.
- Miller, J., & Koehler, M. (2016). Master trainer efficacy. *Journal of Adult Education*, 45(1), 12-25.
- Opfer, V. D., & Pedder, D. (2011). Conceptualizing teacher professional development. *Review of Educational Research*, 81(3), 376-404.

- Richardson, V. (2009). Teacher education and teacher change. *Handbook of Research on Teacher Education*, 403–428.
- Saleem, F., Ali, A., & Ahmad, S. (2014). Impact of professional development on teachers' performance. *International Journal of Academic Research in Business and Social Sciences*, 4(10), 458-467.
- Smith, A., & Gilles, C. (2017). Teacher empowerment through CPD. *Journal of Teacher Development*, 21(3), 300-315.
- Smith, B., & Gilles, D. (2019). Feedback culture in CPD. *Journal of Educational Leadership*, 76(2), 145-160.
- Smith, C., & Johnson, E. (2018). Collaboration in teacher CPD. *Journal of Professional Learning*, 23(1), 56-70.
- Sparks, D., Hirsh, S., & Richardson, J. (2004). *A new vision for staff development*. National Staff Development Council.
- Wang, J., & Odell, S. J. (2002). Mentored learning to teach according to standards-based reform: A critical review. *Review of Educational Research*, 72(3), 481–546.
- Zepeda, S. J. (2012). *Professional development: What works*. Eye on Education.

