



RESEARCH PAPER

Professional Development Needs of Public Sector Women College Teachers: A Conceptual Analysis

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ABSTRACT

The professional development of teachers is undoubtedly an area of great concern related to improving the quality of teaching and assessment in Public Sector Colleges. Women college teachers in Pakistan experience multiple and continuous challenges with regard to CPD such as their burden of work, home responsibilities, poor mobility, insufficient institutional support and lack of gender-sensitive trainings. The conceptual review is based on the empirical doctorate study of 300 women college teachers of Punjab to explore needs of professional development in six areas of pedagogical skills, curriculum and instructional design, assessment practices, digital literacy, leadership planning and emotional well-being. Guskey's Five-Level Model of Professional Development was used as the theoretical lens to analyse how CPD affects teachers and, ultimately, student outcomes. The results show that pedagogical and digital training needs are most salient and that emotional and leadership development are less addressed needs. The barriers are the most pronounced when it comes to time issues and household duties. The highest correlation with CPD participation was found with institutional support ($r = .61, p < .001$). In this review, a conceptual framework for contextually appropriate, flexible and institutionally embedded gender-responsive CPD is proposed.

KEYWORDS Professional Development Needs, Women College Teachers, Continuous Professional Development, Institutional Support, Public Sector Colleges, Punjab

Introduction

Not only is the quality of teaching in higher education influenced by teacher knowledge, but by the extent to which teachers develop their knowledge and skills throughout their careers. The Continuous Professional Development (CPD) system is a programme of structured learning for teachers to ensure they keep up to date with changing subjects, methods and expectations within institutions (Mumtaz et al., 2024). In Pakistan's public sector colleges this pathway is often obstructed and especially for women teachers, who hold a Unique and unsung position in the education system. In Pakistan, women teachers in colleges are playing an important role in the field of higher education. They work in almost all public degree and intermediate level colleges for women. Even in this capacity, their professional learning is largely unaddressed in the policy and institutional field. Most Pakistan CPD are designed for school teachers and university teachers here but, no structured learning supports are available for college teachers (Rasheed et al., 2024; Saleheen, 2025; Naz et al., 2026). The gap is greater for women, and there are gender-specific challenges which male teachers don't face.

Challenges such as the burden of everyday tasks, less space to move around in conservative social environments, lacking female-led training environments and institutional cultures that do not focus on teacher development. Where CPD is available, it is generic, takes up a significant amount of time and is poorly targeted. Consequently, women college teachers often face professional stagnation, loss of teaching efficacy and low

satisfaction in their careers. This review takes up those gaps. It is based on empirical findings of a doctoral study which was carried out in women colleges of three divisions of Punjab namely Multan, Dera Ghazi Khan and Bahawalpur. The Five-Level Model of Professional Development (FLMPD) by Guskey was used as the theoretical background of this study and a sequential explanatory mixed-methods design was used. The data of 300 teachers were analysed through descriptive statistics, Pearson correlation and regression analysis and the qualitative data obtained from interviews were used to give depth and contextual meaning to the data. Based on these results, a conceptual review of the CPD needs of women college teachers, barriers relating to CPD, role of institutional support and effect of CPD on teaching and learning outcomes is developed. Keeping the above findings in mind, a conceptual review of the CPD needs of Women College teachers, barriers related to CPD, role of institutional support and impact of CPD on teaching and learning outcomes are developed.

Literature Review

Conceptualizing Professional Development

According to AbdulRab (2023), professional development is a formal and systematic activity by teachers for enhancing their content knowledge, pedagogical competence, and class performance in a meaningful and planned way. It involves various types of activities such as the workshop, seminar, mentoring, peer learning sessions and reflective practice. Teachers' professional development is primarily about developing their capacity to meet shifting demands in education and provide effective instruction at all times.

Within the last few decades the concept has undergone significant change. Some earlier theories of professional development focused on brief, externally provided in services and minimal opportunities for debriefing and support (Smith Gillespie, 2023). Instructional strategies used these ways viewed the teacher as a mere recipient of information, with limited learning proved to be lasting (Bkhit et al., 2026). More modern models encourage active learning, teacher autonomy and extended periods of engagement. They promote collaboration among peers, action research, experimentation in the classroom, and mentoring. Professional learning is seen as a long-term endeavor and not a one-time event (Ansari et al., 2025; Arshad et al., 2025).

Women college teacher in Pakistan has more structural disadvantages to face in the field of education so the development of their professional life is of utmost importance. A lot are placed in teaching positions and then not provided with further training upon induction. Teachers are not systematically informed about the changes in the curriculum expectations, nor updated about new content or methods. Without organized CPD, the teaching profession may stagnate and over time teachers will lose their confidence and effectiveness (Avidov-Ungar, 2023). Many of the women in public sector colleges lack a formal process of improvement and recognition through professional development.

Theoretical Framework: Guskey's Five-Level Model

The Five-Level Model of Professional Development (Five-Level Model) is the main theoretical lens for this review (Strang, 2022). The model suggests that there are five overlapping dimensions to consider when trying to understand the effectiveness of professional development: Participants' reactions, Participants' learning, Organizational support and change, Use of new knowledge and skills, and Student learning outcomes.

The first level looks at teachers' perceptions of the relevance, usefulness and engagement of training. The second looks at what teachers actually learn from participation in terms of knowledge and skills. This is the third level and is the focal point of this study. Assesses if the school affords opportunities for teachers to use the knowledge and skills they

have acquired, such as time, resources, leadership support, and structural flexibility. The fourth level considers whether teachers take them with them to the classroom. The fifth level questions whether student learning is enhanced because of teachers' professional development.

The model is especially relevant for analysing the CPD effectiveness of women college teachers in the context of Pakistan as the institutional support plays a primary role as a facilitator in this process. Acknowledges that training, if well-designed, cannot bring about change if institutions do not provide enabling conditions. Among women teachers who have to deal with several external conditions the matter of institutions is not of secondary importance. Participation is a key prerequisite for meaningful engagement (Hamid et al., 2025).

International and National views on CPD

A number of countries have matured CPD system and have common characteristics: well-structured, continuous CPD program; focusing on teachers' professional needs; institutionalization of the CPD system and acceptance of CPD participation for promotion. Teacher learning in the UK, Finland and Singapore shows how national frameworks can foster school-level teacher support to sustain effective and ongoing teacher teaching (Iswadi et al., 2025). In Singapore, for instance, teachers are required to do 100 hours of CPD every year, and their progress is monitored against the national goals for teachers.

Challenges to CPD include low financial capacity, substandard training facilities and training support, and lack of post-training support in developing countries (Zindi, et al., 2023; Munawar et al., 2024). Fundamental changes have resulted from this. There have been innovative models that have sprung up as a response. Kenya has adopted teacher performance assessment systems that are connected to professional development. The government of India initiated the DIKSHA electronic platform for delivering training resources to everyone. To support teacher development in rural areas, Rwanda adopted peer learning groups as a mechanism in schools.

CPD in Pakistan has traditionally been donor funded, aimed at teachers operating at the school level. To date, little attention has been paid to the development of teachers at the college level. Women teachers in Colleges are quite less served by others. The National Education Policy (2009) and the faculty development programs of the Higher Education Commission recognize the merit of CPD, which mostly target the university level faculty while public degree colleges hardly receive this. There are also some provincial programs, such as the College Teaching Interns (CTI) programme in Punjab, which have contributed, but not consistently, with limited resources and no post training follow up (Afzaal).

Domains of Professional Development Need.

Women college teachers' professional development can be held on six major areas which are pedagogical development, curriculum and instructional design, assessment and evaluation, digital literacy and technology integration, leadership and career planning, and emotional and psychological well-being.

For pedagogical development, the teaching strategies and classroom management are focused. A number of female college teachers in Pakistan were well-trained in their academic disciplines, while they were relatively less trained in subject pedagogy and its implementation. While many public institutions continue to follow the traditional lecture model, it doesn't provide opportunities for students to be involved in critical thinking and active learning (Klein et al., 2023; Shafqat et al., 2024). Professional development in student-centered instructional practices, in addressing this foundational gap, includes differentiated instruction and reflective teaching practices. Curriculum and instructional design involves

teachers' ability to convert course content that has been centrally designed to effective, well-sequenced lessons. Women teachers often find it hard to make curricula adaptable to the academic needs of their students (Shaheen et al., 2025). Teachers without training in instructional design, lesson planning and content scaffolding may have problems in closing learning gaps or engage diverse students with various academic backgrounds (Yousaf et al., 2021; de Oliveira et al., 2024; Rashid et al., 2026).

Assessment and evaluation practices are an important skill that is not developed in many cases. Summative assessments continue to be assessed in many public colleges and focus on recall rather than comprehension. There is a need for women teachers to be trained in formative assessment techniques, higher order question designing, rubric designing and feedback techniques. If this training is not provided, the purpose of assessment and guiding student learning and improving outcomes is not met. The ability to use ICT and be a digital literate has become a critical aspect of professional skills (Saleem et al., 2024; Ahmad et al., 2025). In Pakistan, women college teachers are less confident in using digital tools in teaching than those with better equipped colleges. This gap was evident during the COVID-19 pandemic when schools forced to shift to online learning. This gap was seen during the COVID-19 pandemic with the shift to online learning in schools (Golden et al., 2023; Shehbaz et al., 2025). Learning Management System (LMS) training, presentation software, online assessment software and platforms such as Google Classroom and Microsoft Teams has become a necessary part of the profession.

Often women's professional development programming does not focus on leadership and career planning skills. Leadership seems to be out of the scope of many women teachers, especially in leadership spheres that are under-represented in women. When CPD can enhance communication, team coordination, academic planning and strategic thinking, women can more actively participate and share their involvement to institutional decision-making (Kalumba et al., 2023; Mumtaz et al., 2024; Bilal et al., 2025; Bhatti et al., 2026; Riaz et al., 2026). The area that is most not being focused on is emotional and psychological well-being. Women college teachers have two heavy workloads, professional and domestic. The research of the women teachers in South Asia is reported as having high incidence of stress, burnout, and professional isolation. Teachers can benefit from PD with stress management, resilience, self-care, and peer support components that can help raise their mental health, keep them more engaged in the profession, and reduce teacher turnover.

The factors that hinder participation in CPD

Women college teachers face several barriers in accessing the opportunity of CPD. These barriers are interrelated and can be encountered at the individual, institutional, and cultural/societal level.

Some of the most common reported barriers are the time constraint and workload. College teachers for girls are employed and are given full load of teaching and with administrative and student assistant duties. Professional development time is restricted and CPD courses are often held during working hours and/or weekends, putting extra pressure on teachers who have family obligations (Pasique & Maguate, 2023).

Another dimension that is rarely considered in designing a CPD plan is domestic and family responsibilities. Women are generally supposed to focus on housekeeping in conservative Pakistan society. A number of people are not able to attend off-site or overnight training sessions. Long distance journeys or long working hours are especially challenging for working women with children or family responsibilities.

Access is also restricted by mobility challenges. Cultural taboos stand in the way for women to reach training facilities in other cities in parts of Punjab. Many women have no

access to training which takes place at or near their colleges, nor do they have safe meeting places for accessing transport facilities by themselves if that is necessary.

There are also attitudinal/behavioural issues. In cultures within institutions where professional development is not acknowledged as a valued part of their leadership, teachers may see professional development as an extra task and not see it as an investment in themselves. This is especially true if training is not specific, classroom or job oriented, or linked to career progression.

Lack of institutionalized support (time allocation, financial allowance, substitute teachers and follow-up) leaves even the most motivated teachers without the means of being able to engage effectively in their classroom. We cannot have professional development neglected without any repercussions since there are no centralized monitoring and accountability.

Material and Methods

This review was based on an empirical study that followed the pragmatic research paradigm and the sequential explanatory mixed-method design. This enabled the systematic gathering of a quantitative data set to be followed by gathering the qualitative data that explains and contextualizes the quantitative data (Barroga et al., 2023).

The target population was the women college teachers and principals of the public sector degree colleges in Divisions of Multan, Dera Ghazi Khan and Bahawalpur in Punjab of the Punjab province of Pakistan. Stratified random sampling method was used to ensure proportional representation both between divisions and college sizes. The total number of questionnaires distributed were 360 of which 300 were completely filled in after screening and cleaning the data.

A structured questionnaire was developed, based on Guskey's Five-Level Model of Professional Development and used to gather quantitative information. The five broad factors assessed in the questionnaire were: professional development requirements, barriers and challenges, institutional support, involvement in CPD activities and impact on teaching and outcomes. A 5 point Likert scale was used to measure all items. The content validity was obtained by five educational research experts. Adopted materials were also tested with 30 teachers under pilot testing with Cronbach's alpha internal consistency indicated .84 for the institutional support and .81 for CPD participation, respectively.

Data analysis of quantitative data was done by means of the Statistical Package for Social Sciences (SPSS). All subscales were computed to obtain descriptive statistics. Pearson product-moment correlations were used to analyze the relationships among key study variables. A linear regression analysis was conducted to establish the significance of institutional support for predicting the CPD participation. Semi-structured interviews were conducted to collect qualitative data, which were taken and analyzed thematically in NVivo software to find patterns in the answers and meanings.

Results and Discussion

Descriptive statistics for each of the six domains of professional development needs are shown in Table 1. Teachers' mean score of pedagogical skills development was $M = 4.12$ and $SD = 0.61$ for which they strongly recognized the need for training in teaching methods and classroom practice. The mean score ($M = 4.01$, $SD = 0.69$) for digital literacy and technology integration was also high, indicating increasing recognition of the value of technology in the modern classroom. Highly ($M = 3.98$, $SD = 0.67$) the needs of curriculum and instructional design. Assessment/ evaluation needs came next ($M = 3.85$, $SD = 0.72$). Mean scores were generally lower for leadership and career planning ($M = 3.74$, $SD = 0.78$)

and emotional well-being ($M = 3.67$, $SD = 0.81$) indicating that these are understood and seen but not so high a priority. The overall mean for professional development need was 3.89 ($SD = 0.63$) suggesting a high level of overall need for PD within the sample.

Table 1
Descriptive Statistics for Professional Development Needs Domains (N = 300)

Dimension	M	SD	Min	Max
Pedagogical Skills Development	4.12	0.61	1.00	5.00
Curriculum and Instructional Design	3.98	0.67	1.00	5.00
Assessment and Evaluation Practices	3.85	0.72	1.00	5.00
Digital Literacy and Technological Skills	4.01	0.69	1.00	5.00
Leadership and Career Planning	3.74	0.78	1.00	5.00
Emotional and Psychological Well-being	3.67	0.81	1.00	5.00
Overall Professional Development Needs	3.89	0.63	1.00	5.00

Note. M = Mean; SD = Standard Deviation. Scores based on a five-point Likert scale (1 = Strongly Disagree, 5 = Strongly Agree).

Barriers and Challenges

The mean scores for each of the six barriers studied are shown in Table 2. The results were most severe in the category of workload/timelines ($M = 4.21$, $SD = 0.58$) which has been observed in many studies to be the most frequent barrier to CPD in the South Asian context. Family and domestic responsibilities came in second ($M = 4.09$, $SD = 0.64$) indicating that family and domestic responsibilities are indeed a major impediment for female teachers. Limited mobility and travel restrictions ($M = 3.93$, $SD = 0.71$) and lack of financial support ($M = 3.87$, $SD = 0.73$) were also considered as critical barriers. Low ratings were given to lack of institutional encouragement and the lack of appropriate gender consideration in the design of CPD, suggesting that structural and design-level barriers are also important factors in low participation.

Table 2
Mean Scores for Barriers to CPD Participation (N = 300)

Barrier Category	M	SD	Severity Level
Workload and Time Constraints	4.21	0.58	High
Family and Domestic Responsibilities	4.09	0.64	High
Limited Mobility and Travel Restrictions	3.93	0.71	High
Lack of Financial Support	3.87	0.73	Moderate
Inadequate Institutional Encouragement	3.74	0.78	Moderate
Lack of Gender-Sensitive CPD Design	3.68	0.80	Moderate

Note. M = Mean; SD = Standard Deviation. Severity Level: High = $M > 4.00$; Moderate = $M 3.50$ to 3.99 .

Correlation Analysis

Pearson correlation analysis was used to investigate the correlations between the professional development needs, institutional support, barriers and CPD participation. A correlation matrix is shown in Table 3. The overall professional development need had also a strong positive correlation with CPD participation ($r = .58$, $p < .001$). Pedagogical skills development ($r = .54$) and digital literacy ($r = .51$) were most strongly related to participation at the individual domain level. CPD participation was positively correlated most significantly with institutional support ($r = .61$, $p < .001$). There was a negative correlation between participation and the barriers and challenges ($r = -.43$, $p < .001$), which indicates that the higher the factor of barriers and challenges, the less participation there is in CPD. All correlation was statistically significant at the $p < .001$ level.

Table 3
Pearson Correlation Matrix: Key Study Variables and CPD Participation (N = 300)

Variable	CPD Participation (r)	p-value
Professional Development Needs (Overall)	.58	< .001
Pedagogical Skills Development	.54	< .001
Digital Literacy and Technological Skills	.51	< .001
Institutional Support	.61	< .001
Barriers and Challenges	-.43	< .001

Note. All correlations are significant at the $p < .001$ level (two-tailed). N = 300.

Regression Analysis

Simple linear regression was performed between institutional support and CPD participation. The model was statistically significant, $F(1, 298) = 86.4$, $p < .001$. The support of the institution accounted for 37% of the variance in CPD participation ($R^2 = .37$). The unstandardized regression coefficient was $B = 0.64$ ($SE = 0.07$); the standardized regression coefficient was $\beta = .61$. For every one-point increase in perceived institutional support, participation in CPD had increased by 0.64 on the five-point scale. Both study hypotheses were supported. The results for H1 that suggested a strong positive correlation between institutional support and CPD participation was supported by $r = .61$ ($p < .001$). The regression results confirmed H2 which stated that institutional support was one of the factors that determined the participation in CPD.

Discussion

The result of this study gives a representative view of professional development scenario of female college teachers of public sector colleges of Punjab. The findings replicate and expands upon current understanding on CPD needs in three key areas: nature and distribution of CPD needs, the connection between institutional support and uptake, and the effect of professional development on teaching and learning impacts.

Professional Development Needs

Women teachers have been very aware of the gaps in the two core competencies: pedagogical skills and digital literacy as evidenced by the high mean scores. This aligns with the other findings from South Asia and other low and middle-income settings which continuously draw attention to the need of updating teachers' knowledge of pedagogy and technology (Ahmed et al., 2025). While it received the lowest mean score, it does not imply that this domain is of less value. Instead, it probably is the result of not understanding the link between emotional health and job performance. Evidence from related settings indicates that such stresses as burnout, isolation, and professional dissatisfaction directly impact teaching quality and retention (Ledet-McNair, 2025). It represents an important and evolving concern and is one that is neglected by CPD programs that do not include this domain.

Leadership and career planning needs also scored below the overall mean. The results align with the overall trends of low representation of women in leadership positions in public colleges in Pakistan. Leadership might not have yet become part of the identity of many women teachers, and this could also be attributed to the conditioning and institutional cultures that do not promote women's advancement. Over time, this can change with the implementation of CPD programmes that develop leadership competencies and establish clear leadership and management career pathways for women.

Barriers to Participation

The severity of workload and time barriers supports the idea that structural barriers and not individual motivation are the main barriers to CPD participation. Women educators

in this sample were not unengaged from professional learning. The overall mean of the recognized professional development needs is high, which shows that there is a strong motivation. They have external and institutional barriers. Those that expect graduates to be away at the weekends or during school hours systematically exclude women who are unable to leave home, or who have not received support from their institutions to be away from the classroom simultaneously (Sloan et al., 2025).

Moderate severities for the gender-insensitive CPD design and poor institutional CPD encouragement suggest that, although not as severe as those of time and mobility constraints, these are ongoing structural issues. CPD designed without taking into account the particular context of women, and where institutions do not actively encourage participation, can still result in women teachers encountering unnecessary friction in accessing opportunities for learning.

This will be followed by an examination of Institutional Support as a Predictor of Participation.

The regression analysis also showed that institutional support is the strongest of the individual factors as a single predictor of CPD participation, accounting for 37% of the variation of participation rates. The discovery has implications for the administration of colleges. It clearly signals that it's institutional action or interaction that is not an outside issue in CPD's success. It is the key variable that does or does not do the rest. Participation rates are significantly higher when the college makes administrative encouragement, flexibility in scheduling, resources, and rewarding CPD participation available. If they don't, then women teachers are stuck without time, resource, and support to carry out their own professional development.

The positive correlation between administration encouragement and participation in CPD ($r = .58$) takes special significance in the Pakistani context of public colleges, where the leadership culture is a key determining factor in faculty priorities. Principals who model professional learning, care about teachers' needs, and provide for their CPD do respond. Teachers respond when principals practice professional learning, pay attention to teachers' professional development needs and provide them with time and space for their learning to continuously improve. Also, the converse is true. A sign of administrative apathy is a lack of interest in professional development, which reduces participation even among teachers who are personally interested (Ehule et al., 2024).

Effect on teaching and student learning outcomes

The results of the study are consistent with the international evidence that quality CPD leads to quality teaching which in turn results in improved learning outcomes for the students. The teachers in this study who participated in CPD activities reported that their confidence in implementing student-centered classroom methods had increased, together with classroom management and use of a more diverse range of methods in the assessment. These adjustments are important at the classroom level despite being hard to directly assess with respect to student achievement.

The links between CPD and student outcomes as outlined in Guskey's model are over time and therefore need a sustained institutional support. A one-off training programme or training in the short term can temporarily increase teacher knowledge but without a follow-up process within the institution and peer support, knowledge and behaviour will pass away. A regular pattern from Asian studies is that regular delivery of CPD (with coaching embedded and reflection) results in more lasting improvements in teaching and student achievement, over multiple semesters (Boodt et al., 2025).

Conclusion

This conceptual review delivers three main results. The women teachers of colleges in Punjab are aware of their strong professional development requirements of pedagogical, digital, curricular, assessment, leadership and emotional areas in public sector colleges. There are no existing CPD programs to meet these needs. Second, structural barriers such as workload, domestic responsibilities, mobility restrictions and a lack of gender sensitivity in the design of the programme have a significant impact on participation in CPD. Third; the strongest determinant for participation in CPD is institutional support. Results demonstrate that the more a college facilitates teacher engagement in professional learning through its administrative support, flexible scheduling, and resource access, the more likely that rates of teacher engagement will be significantly higher.

Recommendations

The most influential thing that can be done for principals in college is to make CPD a visible priority for the college. This involves planning time off for professional development activities into the school calendar, celebrating teachers' engagement in CPD, and ensuring that it is not CPD in a teacher's "personal time. Programs should be designed in portable, flexible formats, such as on-site shop, peer learning, and digital modules which offer women the opportunity to participate at their own time and place, rather than the one size fits all approach.

This study recommends for the Punjab Higher Education Department, formalized and institutionalized CPD framework for Degree colleges. It should set minimum standards for training frequency, include design principles for budget allocation for teachers' training, and build in gender sensitivity as an integral part of the design.

It is also envisaged that the regional CPD hubs to be established in the divisional level will give opportunities to the teachers in the rural and semi-urban areas to participate in CPD which will reduce the burden of mobility. The Higher Education Commission's faculty development needs to be clearly expanded in scope to include degree level college teachers. CPD certification pathways that lead to career progression would provide desirable links to continued involvement. Digital infrastructure investments on public women colleges would also enhance online and blended CPD options, especially for teachers who cannot move, can support this as well.

The key takeaway for CPD program designers is to engage in systematic needs assessment prior to program design. Professional development that addresses teachers' identified areas of greatest need; and that is delivered in easily accessible formats, with opportunities for reflection and follow-up action, will be more relevant and impactful. It is important for female trainers/mentors to be engaged in program delivery in order to shape safe and relatable learning spaces.

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