Measure the Relationship between Instructional Leadership and Professional Development of Teachers

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Abstract

Instructional leadership is a key component in fostering teachers' professional development and enhancing student learning outcomes. Good leadership fosters a supportive learning environment in schools that promotes ongoing professional growth of teachers and creative teaching practices. The purpose of the study was to measure the relationship between instructional leadership and professional development of teachers. A correlational research design was used to measure the relationship. A multistage sampling process was used to select the sample. The sample of the study was 1214 public secondary school teachers. Data were collected through two valid and reliable instruments. Instructional Leadership Questionnaire (ILQ) developed by Akram et al. (2017) with the overall reliability values ranged from 0.78 to 0.87. The Self-Professional Development Questionnaire (SPDQ) developed by the researcher with a five-point Likert scale. The reliability values ranged from 0.90 to 0.85 with 37 items. The collected data were analyzed by descriptive statistics, correlation, and regression analysis. Findings disclosed that instructional leadership showed strong positive correlation with professional development (**r** = .755, **p** < .01). The R-value of 0.767 indicates a moderate to strong correlation between the variables, and the R^2 value of 0.573 suggests that approximately 58.8% of the variance in PD can be explained by IL. Overall, these results indicate a significant positive relationship between IL and PD, with IL explaining a substantial portion of the variation in PD. These findings will contribute to the previous literature. This study indicates practical implications for school and

district administration; they can improve teachers' professional growth by prioritizing the best performance of instructional leaders.

Keywords: *Instructional leadership, professional development, relationship*

Introduction

Instructional leadership is an important factor for developing teachers' competency that offers the essential support to enhance the teaching-learning process and professional development of teachers (Gading, 2024). Effective instructional leadership promotes professional growth of teachers, collaboration among teachers, and collective efficacy that positively effects students learning outcomes and overall school effectiveness (Gatama et al., 2023; Hallinger et al., 2020; Kilag & Sasan, 2023). Instructional leadership involves in different characteristics that defined by various researchers. Defining the school mission is an essential component of instructional leadership which involves defining and sharing the school mission. Instructional leader as school principal is responsible for developing school goals that can be revise and put into school activities according to the requirement (Hallinger et al., 2020; Rodrigues & Avila de Lima, 2024).

Maintaining instructional program is another significant component that refers to the supervising and instructional evaluation, coordinating curriculum and students' evaluation. It requires that the principal of the school have sufficient knowledge about teaching-learning process to improve the instructional program and a deeper comprehension related to the instructional practices in order to bring about positive change (Akram et al., 2017). Positive learning climate is also crucial factor that involves promoting professional development of teachers, maximizing time for teaching, awarding inducements for teachers and students learning, and confirming observable presence in the school activities (Hallinger et al., 2019; Hallinger & Murphy, 1985; Senol & Lesinger, 2018).

Another component of instructional leadership is the instructional resources provider. By assigning necessary teaching materials to satisfy the educational objectives, it guarantees the supply of important instructional services. Although, when school principals are aware of what is happening in the classroom, they are able to comprehend teachers' requirements and deliver the required resources to support teachers to enhance their teaching methods (Quines & Monteza, 2023; Hallinger, 2003). Additionally, instructional resources also embrace the provision of some

forums for teachers to exchange ideas during workshops, professional development activities, and discussions to assess their own strengths and shortcomings (Andrews & Soder, 1987).

Maintain visible presence is another factor of instructional leadership that embrace supervision and evaluation of instructional activities, that promotes positive relationship among school principal, teachers, and students (Hallinger, 1985). A noticeable presence is always preferred by effective instructional leaders who concentrate on learning objectives, indicating learning activities, and organizing different instructional programs. It is especially regarded as task-oriented leadership that concentrates on establishing school objectives, overseeing instructional methods, forming positive relationships with teachers, motivating, and verifying their well-being (Shaked, 2024). Maximizing instructional time involved in increasing amount of time for teachers to adequately connect with students and give directions regarding academic tasks and exams. Monitoring students' progress is a factor in which school principal evaluate students learning for taking decisions about instructional programs, and providing feedback on students' learning outcomes (Akram et al., 2017).

Feedback on teaching and learning is an important component in which an instructional leader provides feedback on teaching-learning process, professional development practices, and students' classroom behavior. Similarly, evaluation of students' progress, supervision and feedback can help teachers to acquire new skills (Bellibas, 2023; Bellibas et al., 2025). Curriculum implementation is also a significant component of instructional leadership in which an instructional leader develops such type of environment that encourages effective planning, management, implementation of curriculum, and evaluating classrooms. In order to providing resources, notable presence in school practices, evaluating students' progress, increasing instructional time, providing feedback, effective curriculum implementation, and fostering teachers' professional development instructional leaders perform their best practice (Akram et al., 2017). Though, teachers' professional development improves students learning outcomes that enhanced by improving classroom behavior of students (Alanoglu, 2022).

Professional development is the second variable that used to measure the relationship in this study. Professional development refers to a process that involves in various activities to promote professional behavior of teachers, knowledge, and skills that ultimately enhance the

learning outcomes of the students (Guskey, 2000). Professional development of teachers involves various activities that foster their overall professional growth. One important component is building a culture that supports professional development activities, and encouraging collaboration among teachers (Putra et al., 2024). Participation in professional development is second factors that contains various formal and in formal activities. These activities are designed to improve teachers' teaching skills and instructional methods with the help of trainings, workshops, including informal methods mentoring, self-directed learning, coaching, and learning communities (Rani et al., 2023: Thurlings & den Brok, 2017; Wijaya et al., 2024).

Self-directed learning is significant factor in which individuals initiate learning process. Self-directed learning is a simple and natural learning approach that enables educators to enhance their instruction in accordance with their professional requirements (Porter & Freeman, 2020; Said & Abdallah, 2024). Virtual technology is an important factor of professional development in the current era. It is a method that provide guidelines how teachers can use technologies to improve their professional growth and skills (Hennessy et al., 2022; Klemse, 2024). Learning communities is critical factor that defined as "Professional learning community is a group of professionals working collaboratively towards a shared purpose of improvement in instruction and student learning through dialogue" (Dogan & Adams, 2018, pp. 636). Mentoring is also significant component in which a senior teacher is willing to impart his or her professional expertise, and information to a junior and less experienced educator in order to optimize his/her performance. Mentoring is a reciprocal connection that support teachers to continuing their own learning while also helping them deal with specific obstacles. This professional development approach at the same time affects both the mentor and the mentee (Pandey & Sharma, 2022).

Previously conducted studies in international context shows relationship between instructional leadership and professional development (Kilag & Sasan, 2023; Dorukbaşi & Cansoy, 2024; Nguyen et al. 2023; He et al. 2024; Mabele et al. 2023; Kim & Lee, 2020). In the local context researcher found few studies that were conducted by (Ahmed et al. 2021; Nawab & Quraishi, 2024; Tahir & Fatima, 2023). However, not many studies have been conducted that investigated the relationship between instructional leadership and professional development,

especially in local contexts. Instructional leader as school principal significantly affects teachers' professional growth by supporting all formal and in-formal professional development activities.

However, to fill the certain research gap this study address the three objectives as; 1) examine the perceptions of secondary school teachers about instructional leadership of principal and professional development of teachers; 2) investigate the relationship between instructional leadership and teachers' professional development as perceived by secondary school teachers; and 3) measure the effect of instructional leadership of school principal on teachers' professional development. Thus, by demonstrating the connection between instructional leadership an teachers' professional development, the current study will add to the existing body of knowledge.

Literature Review

Instructional leadership is now being emphasized as a crucial element in school development research. It has received a lot of attention recently, especially from developing countries. Prior research has demonstrated a link between teacher professional development and instructional leadership. The current study is supported by numerous investigations into the relationship among the assumed variables.

Dorukbaşi and Cansoy (2024) investigated the mediating effect of teachers professional learning with the connection of instructional leadership and their practices. A survey method was used and 385 school teachers were participated in the study. Results revealed that moderate positive relation between instructional leadership and professional learning of teachers, a weak link was measured between instructional leadership and instructional practices. But, moderate positive relationship between professional learning and instructional practices was measured. Nguyen et al. (2023) conducted a qualitative study to measure the instructional leadership and professional learning in Vietnamese schools. In this study 12 schools from four provinces were participated. Data were collected through interviews with 24 school teachers and 12 principals. Findings revealed that teachers were satisfied towards their head's instructional leadership, showed positive association between instructional leadership and professional learning.

Through a mixed-method study, Nzambimana et al. (2024) assessed the connection between the role of instructional leadership in students' state exam performance and teachers'

professional development. School teachers (79) were interviewed to gather qualitative data, and principals (795) took part in the study to gather quantitative data. The findings showed a positive correlation between students' performance and instructional leaders' involvement in teachers' professional development. He et al. (2024) examined the Nigerian principals' instructional practices as significant factor to promote teachers' professional development. School principals and teachers were participated in this study. Results revealed significant relationship between professional development of teachers and their instructional leaders.

Quines and Monteza (2023) investigated the mediation of teachers' collegiality in the association of professional development of teachers and their heads instructional leadership practices. A correlational technique was used; 300 public school teachers were participated through stratified sampling. Results found that positive significant relationship among collegiality, professional development, and instructional practices. Further, results described strong mediation effect of teachers' collegiality.

Kilag and Sasan (2023) conducted a qualitative study to investigate the role of teachers' professional growth and school heads leadership. Thematic analysis of data extracted three basic themes. First, found that instructional practices play significant role in promoted professional learning; second, quality of relations between school teachers and administration was crucial in fostering teachers' growth, mutual trust, good communication and respect; and the third theme's results described that teacher's professional development is a continuous process that needs proper support from their instructional leaders. Li et al. (2023) Findings demonstrated that the mediating effect of school support and instructional leadership practices is mediated by teachers' professional development. It was revealed that school support is the best predictor of skills or expertise of teachers as compared to instructional leadership of principal. Moreover, students and peer support were the best predictors of the expertise of teachers than the instructional coaching. The study reported that the expertise of teachers is based on developing their professional agency. And they have enough sense of agency to endure their teaching profession while instructional leaders provide a positive learning climate that promotes relationships with students and colleagues.

Amzat et al. (2022) studied the influence of both distributed and instructional leadership practices performed by school principal on professional development of teachers. Findings

demonstrated that instructional leadership has direct effect on distributed leadership. It recommended in-school practical support for applying distributed and instructional leadership practices that are a major provision of professional development of teachers. Kim and Lee (2020) examined the relationship between instructional leadership and school teachers' participation in various forms of professional development in South Korea, Japan and Singapore. Results found that due to the distinct nature of the activities and the unique needs of each of the three nations, the results showed that the principal leadership had varying effects on teachers' involvement in professional learning. According to the findings, a school principal's instructional leadership can influence teachers' involvement through coaching, peer review, and mentoring more than any other type of professional development.

All the above-mentioned studies were conducted in an international context, investigating the link between professional development and instructional leadership. There are a few studies in the local (Pakistani) context, providing a valid research gap for the current study as well.

Tahir and Fatima (2023) examined the association of instructional leadership practices with professional learning of school teachers, culture building and professional development in the Pakistani context. Data were gathered from both the government and private school teachers in Lahore. Results reported a significant association between instructional practices and professional learning of teachers. It highlights the influence of instructional leaders' behavior, like setting clear objectives, promoting collegial environment to enhance learning, and providing feedback for further improvements. Further, in order to comprehend instructional practices and their impact on teachers' professional development, Ahmed et al. (2021) conducted a study involving 374 secondary school teachers. The results demonstrated a strong relationship between teachers' professional development and the instructional leadership of principals.

In order to observe the role of principal leadership in teachers' development, Nawab and Quraishi (2024) conducted a study using Pakistan as a case study. 46 respondents, including principals, teachers, and other educational staff, were interviewed in groups to gather their opinions. The results were consistent with earlier research showing that school principals had little influence over teachers' professional development. The conclusions were predicated on a number

of significant elements, including the principal's limited ability, ignorance of professional development, and a feeble monitoring system.

Research Objectives

The objectives of the study were to:

1. Examine the perceptions of secondary school teachers about instructional leadership of principal and professional development of teachers
2. Investigate the relationship between instructional leadership and teachers' professional development as perceived by secondary school teachers
3. Measure the effect of instructional leadership of school principal on teachers' professional development

Research Questions

1. What are the perceptions of teachers about their heads' instructional leadership?
2. What are the perceptions of teachers about their professional development?
3. What is the relationship between instructional leadership of principal and professional development of teachers?
4. What is the effect of instructional leadership of school principal on professional development perceived by secondary school teachers?

Methodology

The researcher used a positivism paradigm to conduct the current study. A correlational research design was used to investigate the relationship between instructional leadership and professional development of teachers. The population of the study was secondary school teachers (SSTs) from four districts (Lahore, Multan, Kasur, and Okara) of Punjab. Secondary school teachers were selected through a multistage sampling process. The sample of the study was 1215 secondary school teachers (SSTs) from public sector schools. For the collection of data, the researcher used two valid and reliable instruments. The Instructional Leadership Questionnaire (ILQ) was developed by Akram et al. (2017) and consists of six factors with 33 items. The overall reliability values ranged from 0.78 to 0.87. The Self-Professional Development Questionnaire (SPDQ) was developed and validated by the researcher and contains six factors. The reliability values ranged from 0.90 to 0.85 with 37 items. Data were collected after getting the consent from

teachers on a hard-form questionnaire. The researcher guides all teachers on how to respond to the questionnaire. The researcher ensured that provided data were used only for the purpose of the research. After receiving the questionnaires, the researcher organized and prepared the data for further analysis.

Data Analysis

After the preparation of quantitative data, the researcher applied descriptive statistics to measure the perceptions of secondary school teachers about instructional leadership of their heads and professional development. Inferential statistics was used to measure the relationship and the effect of independent variable on the dependent variable.

Research Question 1.

What are the perceptions of teachers about their heads' instructional leadership?

Table 1: *Teachers' Perceptions about Instructional Leadership*

Sr. No	Factors	Min	Max	M	SD
1.	IRP	1.00	5.00	3.19	1.034
2.	MVP	1.00	5.00	3.24	1.020
3.	MIT	1.00	5.00	3.25	1.021
4.	MSL	1.00	5.00	3.27	1.075
5.	FTL	1.00	5.00	3.19	1.051
6.	CI	1.00	5.00	3.29	1.063

IRP = Instructional Resource Provider, MVP = Maintaining Visible Presence, MIT = Maximize Instructional Time, MSL = Monitoring Student Learning, FTL = Feedback on Teaching and Learning, CI = Curriculum Implementation

The table 1 shows the perceptions of teachers about instructional leadership. The five-point type Likert scale was used to collect responses of teachers that ranged from (1), Rarely (2), Occasionally (3), Sometimes (4), Often (5), Usually. Teachers perceived that heads instructional leadership often promising, as revealed by the six factors, which range from (M= 3.19 to 3.29).

The standard deviation (SD) of all the components between (SD=1.020 and 1.075), indicating some variability in teachers' perceptions. Curriculum Implementation recorded the

highest mean (M = 3.29, SD = 1.063), suggesting it is the most practiced aspect of instructional leadership. This is followed by Monitoring Student Learning (M = 3.27, SD = 1.075) and Maximizing Instructional Time (M = 3.25, SD = 1.021), and maintain visible presence (M= 3.24, SD= 1.020) which also received relatively high scores. In contrast, Instructional Resource Provider (M = 3.19, SD = 1.034) and Feedback on Teaching and Learning (M = 3.19, SD = 1.051) had the lowest means, indicating comparatively less emphasis. It is concluded that overall mean scores revealed often instructional leaders focus on their practices.

Research Question 2.

What are the perceptions of teachers about their professional development?

Table 2: *Perceptions of Teachers about their Professional Development*

Sr. No	Factors	Min	Max	M	SD
1.	Build Culture Support for Professional Development	1.00	5.00	3.35	1.017
2.	Participation in Professional Development Activities	1.00	5.00	3.37	1.038
3.	Self-Directed Learning	1.00	5.00	3.37	1.053
4.	Virtual Technology Skill Development	1.00	5.00	3.36	1.029
5.	Learning Communities	1.00	5.00	3.38	1.953
6.	Mentoring	1.00	5.00	3.37	1.024

The Table 2 shows mean and standard deviation of that secondary school teachers' perceptions about their professional development that constructed by five-point Likert type scale (Rarely=1, Occasionally=2, Sometimes=3, Often=4, and Usually= 5). The mean scores showed that teachers often focus on their professional development. The highest mean was recorded for Learning Communities (M = 3.38, SD= 1.953), suggesting that collaborative learning environments are a prominent aspect of professional development. This was closely followed by Participation in Professional Development Activities, Self-Directed Learning, and Mentoring (M = 3.37, SD= 1.038, 1.053, 1.024), reflecting strong engagement in both structured and autonomous learning opportunities. Virtual Technology Skill Development (M = 3.36, SD= 1.029) and Build Culture Support for Professional Development (M = 3.35, SD= 1.017) also scored moderately

high. It is concluded that mean scores range from (M= 3.38 to M=3.35) that indicates teachers often work on their professional development.

Research Question 3.

What is the relationship between instructional leadership of principal and professional development of teachers?

To address the research questions, the researcher measured the correlation between instructional leadership and professional development.

Table 3: *Correlation between Instructional Leadership and Professional Development*

	BCSPD	PPDA	SDL	VTSD	LC	Ment	PD
IRP	.514**	.497**	.423**	.430**	.495**	.608**	.598**
MVP	.546**	.522**	.461**	.466**	.519**	.501**	.608**
MIT	.573**	.553**	.509**	.505**	.573**	.536**	.654**
MSL	.557**	.529**	.425**	.470**	.514**	.520**	.607**
FTL	.580**	.565**	.494**	.489**	.534**	.528**	.643**
CI	.608**	.580**	.529**	.526**	.566**	.538**	.675**
IL	.676**	.649**	.568**	.577**	.640**	.646**	.757**

**. Correlation is significant at the 0.01 level (2-tailed).

IRP = Instructional Resource Provider, MVP = Maintaining Visible Presence, MIT = Maximize Instructional Time, MSL = Monitoring Student Learning, FTL = Feedback on Teaching and Learning, CI = Curriculum Implementation, IL (overall) = Instructional Leadership, BCSPD = Build Culture to Support Professional Development, PPDA = Participation in Professional Development Activities, SDL = Self-directed Learning, VTSD = Virtual Technology Skill Development, LC = Learning Communities, Ment = Mentoring, PD (overall) = Professional Development.

The Table 3 presents the correlation coefficients of Instructional Leadership and Professional Development. Overall instructional leadership (IL) exhibited strong positive correlation with professional development (overall) (**r** = .757, **p** < .01). The factors of IL

Curriculum Implementation (**r** = .675, **p** < .01), and Maximizing Instructional Time (**r** = .654, **p** < .01)" showed strong positive correlation with Professional Development and Mentoring (**r** = .646, **p** < .01), whereas Learning Communities (LC) (**r** = .640, **p** < .01), Monitoring Student Learning (r = .607, p < .01), and Instructional Resource Provider (r = .598, p < .01) showed moderate positive correlation with professional development, suggesting that collaborative teaching practices enhance professional development and highlight the critical role of leadership in teacher' professional growth.

The factors wise highest correlation coefficients of instructional leadership with professional development showed that IRP and MIT both had the highest correlation coefficient with Mentoring (r = .608 and .573, p < .01), whereas other factors MVP (r = .546, p < .01), MSL (r = .557, p < .01), FTL (r = .580, p < .01), and CI (r = .608, p < .01) all had highest vales of moderate positive correlation with Build Cultural Support for Professional Development (BCSPD).

Research Question 4.

What is the effect of instructional leadership of school principal on professional development perceived by secondary school teachers?

The researchers used simple linear regression analysis to examine the effect of instructional leadership on professional development of teachers.

Table 4: *Effect of various factors of instructional leadership on professional development*

No	Model	*B*	SE	*B*	*t*	*p*
1	Professional Development (constant)	.975	.060		16.159	.000
2	IRP	.140	.021	.171	6.708	.000
3	MVP	.052	.024	.063	2.177	.030
4	MIT	.164	.024	.199	6.739	.000
5	MSL	.031	.024	.039	1.310	.190
6	FTL	.125	.024	.156	5.225	.000
7	CI	.227	.022	.286	10.502	.000

Note: R = .767[a], R^2 = .588, $p < .05$

The Table 4 presents the results of regression analysis examining the relationship between various factors and an outcome variable. The model includes seven predictors: Professional Development (constant), Instructional Resource Provider, Maintaining Visible Presence, Maximize Instructional Time, Monitoring Student Learning, Feedback Teaching and Learning, and Curriculum Implementation. The standardized regression coefficients (B) are provided along with their standard errors (SE), t-values, and p-values.

Results indicated that all predictors except "Monitoring Student Learning" significantly contribute to the model, as evidenced by p-values less than 0.05. Specifically, the strongest positive predictors are "Curriculum Implementation" (B = 0.286, p < 0.001) and "Maximize Instructional Time" (B = 0.199, p < 0.001), suggesting that these factors have a substantial impact on the outcome. "Feedback Teaching and Learning" (B = 0.156, p < 0.001) and "Instructional Resource Provider" (B = 0.171, p < 0.001) also show significant positive relationships, though to a lesser extent. "Maintaining Visible Presence" (B = 0.063, p = 0.030) also significantly contributes but with a smaller effect. "Monitoring Student Learning" (B = 0.039, p = 0.190) does not significantly predict the outcome. The overall model has a strong fit (R = 0.767), explaining 58.8% of the variance in the outcome (R^2 = 0.588). The significant p-values (p < 0.05) for the model suggest that the predictors collectively account for a significant proportion of the variance in the dependent variable.

Table 5: *Effect of Instructional Leadership (IL) on Professional Development (PD)*

Sr. no	Model	*B*	SE	*β*	*t*	*P*
1	PD (constant)	.994	061		16.326	.000
2	IL	.733	018	757	40.508	. 000

Note: R = .755[a], R^2 = .573, $p < .05$

The Table 5 presented regression analysis, the relationship between the independent variable (IL) and the dependent variable (PD) was assessed. The constant (intercept) for the model is B = 0.994, with a standard error (SE) of 0.61, and the t-value is 16.326, which is statistically significant (p < .001). This suggests that when the independent variable (IL) is zero, the dependent

variable (PD) is expected to be 0.994. For the independent variable IL, the regression coefficient is B = 0.733, with a standard error of 0.18, and a standardized coefficient (β) of 0.755. The t-value for IL is 40.508, and the p-value is less than .001, indicating a strong and statistically significant relationship between IL and PD. The R-value of 0.767 indicates a moderate to strong correlation between the variables, and the R^2 value of 0.573 suggests that approximately 58.8% of the variance in PD can be explained by IL. Overall, these results indicate a significant positive relationship between IL and PD, with IL explaining a substantial portion of the variation in PD.

Findings

Findings revealed that instructional leaders as school principal sometimes favorable for secondary school teachers. Mean score (M= 3.29) showed that instructional leaders highly concerned for curriculum implementation in all the factors of instructional leadership. Followed by monitoring student learning (M = 3.27), and maximizing instructional time (M = 3.25), maintaining a visible presence (3.24). Instructional resource provision and feedback on teaching and learning were rated slightly lower by teachers (M= 3.19, M=3.19).

Perceptions of secondary school teachers about their professional development measured by five-point Likert type scale. Findings showed that the secondary school teachers (SSTs) sometimes focus on their professional development. Mean score revealed that teachers highly focused on learning communities (M=3.38) and followed by participation in professional development activities (M=3.37), mentoring (M = 3.37), self-directed learning (M = 3.37) for their professional development. But virtual technology skill development (M = 3.36), and build culture support (M= 3.35) less used by teachers for their professional development.

Findings disclosed that instructional leadership (IL) showed strong positive correlation with professional development (overall) (**r** = .755, **p** < .01). Further, the regression analysis showed that a strong and statistically significant relationship between IL and PD. The R-value of 0.767 indicates a moderate to strong correlation between the variables, and the R^2 value of 0.588 suggests that approximately 58.8% of the variance in PD can be explained by IL. Overall, these results indicated a significant positive relationship between IL and PD, with IL explaining a substantial portion of the variation in PD.

Discussion

The study was investigated the relationship between instructional leadership of school principal and teacher's professional development. Results of the study indicated that sometimes instructional leaders focused on provision of resources, show notable presence, enhance instructional time, give feedback, and curriculum implementation as perceived by secondary school teachers. These results in line with previously conducted study, as Ghavifekr et al. (2019) stated perceptions of teachers related to the functions of instructional leaders. However, Quines and Monteza (2023) stated high perceptions of teachers about all the functions of instructional leaders. These findings described that instructional leaders are highly focused on their instructional practices. Further, results showed that secondary school teachers (SSTs) sometimes work on their professional development practices by focusing on learning communities, self-directed leaning, using technology, create environment that support professional development, taking part in different activities, and mentoring. Overall perceptions described that teachers sometimes work on their professional growth.

Results showed that significant positive correlation between principal's instructional leadership and professional development. Findings are in line with the findings of Quines and Monteza (2023), and Kim and Lee (2020). They revealed that if instructional leaders effectively perform their functions that lead the participation of teachers in various professional development activities like mentoring, peer observation, and collaboration with each other. These results also supported by other studies as (Hallinger et al., 2017; He et al. 2024; Nguyen et al. 2017), they considered instructional leaders play significant role in teachers' professional growth. Ozdemir et al. (2020), stated that when instructional leaders provide conducive environment where teachers can collaborate with their colleagues, communicate with school principal, it ultimately fosters teachers' professional growth and teaching skills. Moreover, Tahir & Fatima (2023) also reported that significant effect of instructional leadership on professional development of teachers. They found that instructional leaders' behavior significantly affects collaborative environment in teachers, and their participation in professional development activities.

Conclusion

Results of the study concluded that instructional leaders played an important role in the professional growth of school teachers. Effective instructional leaders focus on resource provision, visible presence in day-to-day school activities, providing feedback on teachers and students progress, effective curriculum implementation, and promoting professional development of teachers. While instructional leaders display their best performance, it has a significant effect on teachers' professional growth. Further, when teachers create a culture that boosts their professional activities, take part in learning communities, focus on self-directed learning, and mentoring practices, it ultimately cultivates teachers' professional development. These findings will contribute to the previous literature. This study indicates practical implications for school and district administration; they can improve teachers' professional growth by prioritizing the best performance of instructional leaders.

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