The Role of Principals Instructional Leadership Practices towards Teachers' Performance: An Empirical Study from Secondary School Level, Lahore, Pakistan

Iram Tahir[1]
Division of Education
University of Education
Lahore, Punjab, Pakistan

Noor Fatima[2]
Division of Education
University of Education
Lahore, Punjab, Pakistan

Abstract:- The aim of this research work is to find the impact of the principals' instructional leadership practices on the performance of the teachers at the secondary school level in the selected areas of Lahore. The schools for the research work are selected areas of Lahore that consist of Allama Iqbal town, Samnabad, Icchra, Shah Jamal, Faisla Town, and the Shadman area of Lahore. The criteria of School selection for the data collection are that the schools must have at least 15 trained instructors, a minimum of 500 students, enough classrooms, and professional principals, enough computer and science labs, a playground, and they must have enough sports and science equipment. The primary data was collected from 250 secondary school teachers, which included 130 private school teachers and 120 public school teachers. Convenience sampling is used for the selection of the participants of the study. The data is collected by visiting the selected school with the help of a Likert scale paper instrument. The data of observed items collected and further seven factors of instructional leadership and one factor of teacher performance have been constructed. The findings of the study are indicated that instructional leadership practices have a significant and positive impact on the performance of teachers. The econometrics techniques in the form of descriptive statistics, correlation analysis, regression analysis, reliability analysis and the Kaiser-Mayer Olkin and Barlett's test Sphericity used in this work. The results of the study suggest that instructional leadership practices have a significant and positive impact on the performance of the teachers in the secondary schools of Lahore. The limitation of this research work is that this study is only limited to the selected areas of Lahore, and it is not generalised to all the secondary schools of Lahore. Future research must be focused on a mixed research approach because it will be more useful to get a complete understanding of the impact of instructional leadership on teachers' performance. Future research studies should be focused on the contextual factors, which include the school culture, motivation of the teachers, and community engagement relationship with the instructional leadership.

I. INTRODUCTION

The advancement of society and individual growth are significantly reliant on education, which is subject to the guidance and decision-making of school principals [80, 2, 112]. The dynamic nature of educational environments, in response to societal, technological, and political shifts, has led to a more intricate and challenging set of responsibilities and obligations for school principals [1, 109, 79]. The contemporary educational landscape has witnessed a shift from the outdated perception of the principal's responsibilities as being limited to organisational and managerial obligations [111, 4, 25]. In modern educational environments, principals undertake multiple roles, encompassing visionary leadership, change management, facilitation, and, notably, instructional leadership [108, 54, 89, 98].

The responsibility of a principal encompasses a crucial component of instructional leadership [55, 43, 78]. The primary objective is to establish a conducive learning atmosphere and pedagogical approaches that facilitate the academic success of students [37, 6, 100, 81]. Instructional leadership is grounded on the evidence that the academic performance of a school can be improved by empowering principals to actively participate in the development of instructional strategies and curriculum content for their institution [11, 21, 41, 76]. The integration of curriculum development, staff development, and teaching supervision is aimed at enhancing student performance [73, 90, 84, 97].

The notion of instructional leadership is not a novel concept and has been subject to debate and disagreement [26, 67, 77, 90]. The concept of instructional leadership emerged during the late 1970s and early 1980s in response to the perceived inadequacy of management-oriented models of school leadership [9, 18, 39, 73]. The transition from managerial duties to instructional procedures marked a

substantial change in the understanding of the liabilities of a school principal [9, 33, 49, 68].

The concept of instructional leadership encompasses a wide range of practices [10, 29, 54, 63]. Instructional leadership practices encompass a wide array of activities, both direct and indirect. These include observing and providing feedback on classroom instruction, as well as developing strategic plans, setting educational objectives, and cultivating a school culture that values academic success [93, 103, 82, 62]. Instructional leadership also involves promoting opportunities for the professional growth of educators and establishing cooperative work settings that stimulate the exchange of optimal methodologies [23, 13].

The performance of teachers is a pivotal factor in determining student achievement and school success [75, 23, 11]. The learning outcomes of students are significantly impacted by effective teaching, which is distinguished by pedagogical expertise, profound subject knowledge, and the capacity to cultivate favourable associations with students [13, 29, 31]. Moreover, the efficacy of teachers cannot be considered in isolation as it is closely linked to and impacted by the wider educational context, encompassing the guidance provided by school principals [6, 23].

The influence that a principal can exert on educators is significant [100]. The student body possesses the ability to establish the prevailing attitude of the educational institution, impact the level of motivation among educators, mold the overall code of the school, and either enhance or diminish the efficacy of pedagogical practices [92, 97]. There is an accord among scholars regarding the potential impact of instructional leadership on the quality of teaching [99]. However, the precise nature, scope, and mechanisms of this impact remain unresolved, thereby presenting an opportunity for further investigation [101, 85, 32].

The idea of instructional leadership is centered on the notion that educational administrators should be highly engaged in matters pertaining to curriculum and instruction that have a direct influence on the academic performance of pupils [105, 28]. As the instructional leader, the principal assumes the duty of overseeing and evaluating the instructional program, thereby influencing the performance of teachers and students' academic achievements [45]. It is noteworthy that instructional leaders in the form of principals are frequently compared to conductors of orchestras [59, 69]. Similar to the role of a conductor in guiding musicians towards a harmonious performance, an instructional leader assumes the responsibility of guiding teachers towards achieving instructional cohesiveness and effectiveness [89, 94, 107]. This analogy effectively represents the complex nature of instructional leadership [17, 37, 43]. A proficient instructional leader, similar to a competent conductor, must possess a profound comprehension of their field, the capability to elicit optimal performance from their team, and the foresight to establish a harmonious and prosperous outcome [58, 68, 73].

Instructional leadership necessitates a balanced integration of various components, such as establishing unambiguous objectives, administering the curriculum, overseeing lesson plans, and providing an evaluative feedback mechanism [71, 92]. In addition, it necessitates the establishment of a environment that places a quality on the enhancement of professional skills and promotes a collective aspiration for achieving educational achievement [13, 19]. By means of these methodologies, instructional leadership has the potential to exert a considerable influence on the performance of teachers [97, 87, 61]

The concept of teacher performance is multifaceted and comprises diverse elements such as instructional strategies, classroom management, student assessments, and professional responsibilities [20, 16, 38]. The capacity of educators to effectively manage classroom dynamics, create and implement impactful instructional strategies, and utilise assessment data to guide their pedagogical approaches has a notable influence on student academic performance. Hence, it is crucial to comprehend the elements that augment the efficacy of educators [26, 35, 51].

Empirical studies have proved that the leadership of educational institutions has a substantial impact on the motivation, commitment, and working conditions of teachers, all of which are positively associated with their performance [92, 74, 26]. The implementation of effective instructional leadership has the capacity to enhance teacher performance through the provision of unambiguous guidance, ongoing opportunities for professional growth, and assistance in addressing instructional obstacles [7, 58, 65]. Establishing and maintaining high expectations for teaching and learning is a crucial aspect of instructional leadership [83, 105]. Elevated standards are a prevalent characteristic among educational institutions that demonstrate exceptional academic performance [95, 83]. Educational leaders who establish elevated benchmarks for pedagogy and scholarship frequently motivate instructors to attain these aspirations, thus amplifying their efficacy [64, 56].

Indorsing a positive school learning climate is deemed a crucial aspect of instructional leadership [22, 40]. The aforementioned objective is attained through the formation of a conducive atmosphere that fosters a sense of worth and authority among teachers, provides a supportive environment for learners, and encourages parental involvement in their offspring's educational pursuits [29, 38]. Research has established that a favourable school climate has the potential to enhance teacher morale and motivation, consequently exerting an indirect impact on their performance [53, 74].

Moreover, instructional leaders hold significant importance in promoting professional learning communities within their educational institutions [53, 25, 15]. These communities offer a forum for teachers to engage in collaborative efforts, exchange successful pedagogical approaches, and acquire knowledge from one another [19]. Collaborative environments have the potential to enhance

teacher performance, which in turn can positively impact student outcomes [21, 47]. The implementation of proficient instructional leadership practices is crucial for the success of schools that aim to achieve high levels of performance [57, 64]. The significance of a principal's instructional leadership strategies in enhancing and impacting teacher performance is of utmost importance [98, 75].

The provision of direct and constructive feedback to teachers is considered to be a crucial component of instructional leadership [36, 87]. The practice involves the act of closely monitoring classroom instruction and providing teachers with productive feedback intended at enhancing their pedagogical techniques and elevating the academic achievements of their students [95, 77]. Empirical studies indicate that feedback on substance from school principals may hold greater significance in enhancing teaching efficacy than structured professional development [42, 56]. The provision of feedback enables educators to engage in introspection regarding their pedagogical approaches, pinpoint domains that require enhancement, and implement requisite modifications, thereby augmenting their efficacy [87, 14].

Some researchs has indicated a positive association between teacher collaboration and increased levels of teacher efficacy, job satisfaction, and academic performance among students [16, 29]. Professional learning communities are frequently utilised to foster a collaborative culture among educators, providing a platform for the exchange of ideas, discussion of challenges, and sharing of best practices [30, 96]. Through the promotion of a collaborative culture, school principals have the ability to facilitate the acquisition of knowledge among teachers, leading to a perpetual enhancement of their pedagogical techniques [53, 79].

Several academic studies have demonstrated a direct association between instructional leadership practices and teacher performance. These studies suggest that effective leadership can facilitate a favourable learning atmosphere, elevate teacher job contentment, and ultimately augment teaching effectiveness [86, 89]. Contrary to the aforementioned perspective, some studies suggest that the correlation between instructional leadership practices and academic outcomes is not necessarily direct or significant [17, 31]. This viewpoint proposes that variables such as teacher autonomy, unique teacher attributes, and external contextual factors may weaken the influence of instructional leadership practices [61, 93, 86].

The complexity of instructional leadership and teacher performance presents a significant obstacle in comprehending their interconnection [16, 21]. Instructional leadership comprises a diverse array of practices, including but not limited to shaping the school's vision, fostering a favourable school climate, monitoring classroom instruction, offering constructive feedback, and facilitating prospects for professional development [39, 50, 22]. Teacher performance is impacted by a multitude of factors, such as instructive knowledge, classroom management skills, content

knowledge, and motivation levels, among other variables [51, 56, 95].

The efficacy of instructional leadership practices and their effect on teacher performance can be influenced by various factors, including the location of the school (urban or rural), student demographics, available school resources, and cultural norms [49, 37]. It is significant that instructional leadership practices that prove efficacious in urban schools characterised by a diverse student population may not yield the same outcomes in rural schools that feature a more homogeneous student body [29, 38]. Despite the abundance of research on instructional leadership practices, there remains a lack of literature that comprehensively accounts for contextual factors [96, 18]. This knowledge gap impedes our ability to discern how instructional leadership practices ought to be customised to suit diverse educational contexts [28, 34].

Additionally, there exists a gap in research regarding the potential impacts of principals' instructional leadership practices on the performance of teachers at secondary school level [16, 23]. Effective instructional leadership has the potential to improve the school climate and increase teacher morale, ultimately resulting in improved teacher performance [44, 56]. Examining these indirect impacts may offer a more intricate comprehension of the association between instructional leadership and teacher effectiveness [68, 84].

The analysis of the principal's role in instructional leadership and its impact on teacher performance is a subject of considerable significance that merits further examination [96, 89]. Notwithstanding the significance and ubiquity of this subject matter, there is a lack of information within the extant research that constrains the comprehension of the correlation between instructional leadership and teacher performance [86, 53].

The objective of this research endeavour is to establish a connection between the gaps and present an all-inclusive examination of this association [42, 24]. The primary objective is to examine the impact of instructional leadership practices implemented by principals on the performance of teachers [17, 87]. The aim of this study is to identify particular teaching practices that significantly affect the effectiveness of teachers and to investigate whether certain practices hold greater influence than others [84, 97].

The present study aims to explore the potential indirect impacts of the instructional leadership practices of principals on the performance of teachers [112]. The hypothesis posits that proficient instructional leadership has the capacity to result in a school climate that is more favourable and an elevated level of morale among teachers, which could subsequently augment their performance [1, 103]. The objective of this investigation into indirect effects is to provide a thorough depiction of the various manners in which instructional leadership can influence the performance of teachers [66, 47].

II. LITERATURE REVIEW

A. Understanding Instructional Leadership

Instructional leadership has developed as a crucial area of inquiry in educational scholarship in recent decades [94, 82]. Although there is no uniform definition, there is a shared recognition that instructional leadership practices exert a significant influence on school environments, pedagogical efficacy, and academic achievement [73, 92]. The initial research in this area introduced a three-part framework for instructional leadership that includes the establishment of the school's goal, the administration of the instructional program, and the advancement of a supportive learning environment within the school [91, 76]. The aforementioned model has established a fundamental structure for the principal's function in directing pedagogy and enhancing academic achievements, thereby facilitating further extensive investigation in this domain [62, 97]. Instructional leadership refers to the actions and behaviours of principals that directly impact teaching and learning outcomes [42, 39].

The studies conducted have highlighted the significance of the principal's role in not only overseeing the educational program but also in establishing a distinct vision for the school's educational mission [16, 28]. The establishment of quantifiable objectives pertaining to the performance of students has surfaced as a pivotal facet of the principal's instructional leadership responsibilities [45]. Principals who adopt instructional leadership practices create a school culture focused on incessant improvement and student success [48, 83]. Instructional leadership involves setting high outlooks for teaching and learning and supporting teachers in meeting those expectations [12, 27]. Instructional leadership practices by principals promote a culture of reflection, inquiry, and continuous improvement among teachers [9, 76]. Principals who prioritise instructional leadership are key drivers of school improvement efforts and student academic success [79, 72].

Proficient instructional leadership encompasses promoting collective decision-making and empowering educators to assume leadership positions within the school setting [23, 91]. Effective instructional leadership by principals positively influences teacher practice and student achievement [20, 78]. Principals who prioritise instructional leadership are more likely to foster a collective and qualified learning community among teachers [29, 4].

Sebastian et al. have emphasised the crucial function of principals in offering productive feedback to teachers as a component of their instructional leadership strategies [92, 87]. Research has indicated that the provision of prompt and practical feedback by school principals has the potential to positively impact teaching methodologies, resulting in improved academic outcomes for students [80, 13]. Recent research has identified the establishment of a common visualisation and a culture of teamwork among staff as crucial components of instructional leadership [19, 74]. Educational institutions in which principals effectively fostered a collaborative and collegial atmosphere were frequently linked to enhancements in teacher morale, motivation, and overall performance [38, 57].

Principals who exhibit strong instructional leadership skills are more successful in implementing and sustaining school improvement initiatives [86, 53]. Instructional leadership underscores the use of data and evidence-based practices to inform instructional decision-making [58] and prioritise instructional leadership foster a constructive and compassionate learning environment for both teachers and pupils [84, 17].

B. Principal's Role in Teacher Performance

Numerous empirical studies have yielded significant evidence indicating the pivotal purpose of instructional leadership in shaping the performance of teachers [86, 99] Instructional leadership encompasses supervisory practices such as the assessment of teaching practices, the provision of constructive feedback, and the guidance of teachers towards enhancing their performance [84, 100]. Numerous studies have consistently demonstrated that the implementation of these practices by principals has a positive impact on the performance of teachers [71, 87]. The provision of feedback and guidance by these principals facilitates the refinement of instructional strategies by teachers, enables them to overcome challenges encountered in the classroom, and fosters their professional growth in a continuous manner [104, 84]. Principals who engage in instructional leadership practices have a positive and significant influence on teacher performance and school achievement [107, 77].

Furthermore, scholarly research has emphasised the secondary impacts of instructional leadership strategies on educator efficacy by fostering a constructive and cooperative educational environment [9, 33]. The establishment of a conducive environment by instructional leaders can lead to the improvement of teachers' job satisfaction, morale, and collaborative practices and this, in turn, has an optimistic impact on their overall performance [74, 86]. Principals who promote a culture of continuous improvement and innovation contribute to increased teacher performance [90, 87]. Strong instructional leadership practices by principals are associated with reduced teacher turnover and increased retention [97, 64]. In addition, principals who facilitate opportunities for teacher collaboration and peer feedback witness improved teacher performance [105].

The aforesaid results suggest a favorable association between instructional leadership and teacher performance [109, 57]. The efficacy of instructional leadership practices is contingent upon various factors, including but not limited to the size of the educational institution, the composition of the student body, the prevailing school ethos, and the wider socio-cultural milieu [28, 38]. The previous studies indicated that clear communication of instructional expectations by principals enhances teacher performance [91, 75]. Principals who provide effective feedback and support to teachers foster professional growth and improve performance [43].

The presence of effective instructional leaders in schools positively influences teacher performance [108]. Principals who prioritise instructional coaching and mentoring programs observe enhanced teacher performance [2, 49]. Principals, as Instructional leaders, when establishing a culture of trust and respect among teachers, witness higher levels of teacher performance [93, 19]. The evidence from the previous studies indicated that principals as instructional leaders foster a positive and inclusive school climate experience and increased teacher performance [110, 34]. In addition, clear and consistent evaluation systems implemented by principals as instructional leaders enhance teacher performance [89]. Principals who prioritise instructional support and professional learning opportunities contribute to enhanced teacher performance [88, 74].

C. Principal's Support and Teacher Performance

The previous studies underscore the significant impact of principals who provide support in augmenting the effectiveness of teachers, their job satisfaction, and their overall dedication to the field of education [87, 72]. A key area of emphasis pertains to the significance of emotional and psychological support provided by principals in enhancing teacher performance [9, 68]. The results suggest that school principals who provide comprehension, compassion, and ethical backing, especially in difficult situations, play a significant role in enhancing teachers' job contentment and ability to recover from adversity [93, 90]. The presence of supportive relationships has been observed to have a positive correlation with the motivation of teachers, which in turn can have a direct influence on their classroom performance [91, 83].

Likewise, scholarly investigations on the subject of principal feedback and recognition strategies indicate their favourable influence on the instructional efficacy of educators [47, 16]. Educators who receive regular and constructive evaluations from their school administrators report an enhanced perception of proficiency and self-assurance in their pedagogical practices [94, 83]. Moreover, the acknowledgement and admiration of teachers' endeavours and accomplishments by principals have the potential to enhance their drive and contentment in their profession, ultimately resulting in enhanced productivity [84, 65]. Principals which offer effective feedback and constructive criticism foster professional growth and enhance teacher performance [30, 20].

The provision of professional development opportunities by principals is a crucial factor in developing the performance of teachers [37, 77]. Research indicates that school principals who encourage teachers to participate in professional development and growth opportunities, and allocate adequate resources and time for these pursuits, are more likely to foster a climate of ongoing enhancement [71, 88]. This cultural context not only enhances the proficiency and expertise of educators but also inspires them to achieve higher levels of performance. Supportive and significant relationships between principals and teachers contribute to increased teacher performance [96, 16].

The promotion of a cooperative culture by principals, through the encouragement of team teaching, shared decision-making, and collective problem-solving, has the potential to augment the professional development, job contentment, and performance of teachers [57, 63]. A conducive setting frequently fosters the interchange of concepts, stimulates originality, and advances shared accountability, culminating in elevated teacher efficacy. Principals who prioritise the well-being and work-life balance of teachers contribute to increased teacher performance [94, 42].

The notion of pedagogical assistance provided by school principals has been investigated, revealing its favourable influence on the instructional efficacy of educators [36, 1]. The provision of guidance by principals on instructional strategies, curriculum implementation, and classroom management has the capacity to greatly augment the instructional effectiveness of teachers [8, 34]. In addition, research has indicated that the assistance provided by principals in decreasing the non-instructional workload of teachers, such as administrative duties and documentation, can result in the liberation of teachers' time and effort for their primary responsibility of teaching, thereby leading to enhanced performance [96].

The provision of different types of support from school principals, including emotional, professional, collaborative, instructional, and workload reduction support, has been found to have a substantial positive influence on teacher performance [81, 76]. The requisite nature and degree of assistance required may differ depending on the specific requirements of teachers and contextual factors, thereby mandating a flexible and customised approach to the support provided by principals [94, 99]. Principals who provide strong support and guidance to teachers witness improved teacher performance [94, 86].

III. METHODS

The purpose of this research work was to find the association between instructional leadership practices and teacher performance as far as the secondary school level in Lahore, Pakistan, is concerned. The questionnaire has been developed to measure and construct the latent factors. The reliability analysis was used to measure internal reliability and the accuracy of the questionnaire used to collect the data. Furthermore, factor analysis was used to construct the latent variables of instructional leadership and teacher performance.

A. Design

The descriptive research design has been used in this research work with the quantitative research approach. Convenience sampling was used for the collection of the data, and a field survey was conducted for the purpose. The researcher visited secondary-level schools for the collection of the data that have at least 15 professional principals and trained instructors and they have more than 500 students. The researcher also prefers the schools for the collection of the data that have enough classrooms, science, and computer

labs, as well as science and sports equipment. The sample collected for this research is from the different areas of Lahore city, which includes Allama Iqbal Town, Samnabad, Shah Jamal, Icchra, and Faisal Town, along with the Shadman area of Lahore. A sample of 120 public and 130 private schools have been used for the collection of the data from the 250 teachers. The coding and data cleaning was used to prepare the data for the analysis or transformation of the data from the qualitative form to the quantitative form. The Cronbach alpha test was used to test the reliability of the data collected with the help of a questionnaire. The multivariate analysis was used to reduce the volume and the dimensions of the data because it helps to extract the latent variables from the observed variables. The t-test for independent samples was used to test how female and male teachers perceived the instructional leadership factors. The KMO and Bartlett's test was used for the verification of the suitability of the data for the factor analysis. The linear regression analysis was used to analyse the latent factors extracted by using multivariate analysis [104, 17].

B. Population and Sample

The population of this research work was all the teachers working for the private and public schools in Selected areas of Lahore that contain at least 15 trained instructors, professional principals, enough computer and science labs, enough classrooms, playgrounds for students, as well as enough science and sports equipment. Those secondary schools of Lahore also lie in the targeted population of this research that have all these facilities for the studies that are used as the determinant of student enrollment. The researcher specifies some research areas in Lahore because of the convenience of accessing the participants, which includes the Allama Iqbal, Shah Jamal, Samnabad, Shahdman, and Faisal Town areas of Lahore. The determinant of student enrollment was used as the inclusion criteria in this research. The sample size of this research work consists of 250 secondary school teachers, that further includes 130 private school teachers and 120 public school teachers. To collect samples for this research, the researcher visits 17 private secondary schools for the collection of data from 130 school teachers and 14 public secondary schools for the collection of the data from 120 school teachers in the Lahore region. The convenient sampling method was employed for this purpose because it is the most suitable sampling technique for this research. The research faces challenges in accessing the school teachers for the collection of the data, that the major reason they decided to use convenient sampling for the collection of the data. When it comes to the percentage of male and female participants, the share of male participants is higher in comparison to the female participants. The male participants were 147, and the female participants were 103, which indicates that 58.8% of male and 41.2% of female teachers participated in this research work. The data indicates that 52% of participants belonged to private secondary schools, while 48% of participants belonged to Government secondary schools.

C. Instruments Development and Measures

The idea of this instrument development was taken from the research work of [77], development and validation of the instructional leadership questionnaire as far as the measurement of the latent factor of instructional leadership is concerned. The teacher's performance is measured with the help of 16 items that are observed directly with the help of a questionnaire. In this work, the researcher grouped the 25 items into the seven factors or dimensions that are used to measure instructional leadership. Moreover, instructional resource provider was measured with the help of 4 items, maintaining visibility presence was measured with the help of 4 items, maximising instructional time was measured with the help of 3 items, teacher professional development was measured through 4 items, the monitor's student progress was measured with the help of 3 items, feedback on teaching and learning was measured with the help of 3 items, and curriculum implementer was measured with the help of 4 items. The 25 observed items were used to measure 7 latent dimensions of Instructional leadership. The demographic question of Gender is also included at the start of the questionnaire, which helps to know the percentage of male and female participants in the questionnaire. The Likert scale with five points was used to measure all these dimensions. The five points Likert scale was Never contained at scale 1, Rarely at scale 2, Sometimes at scale 3, Often at scale 4, Always at scale 5. In this instrument, the response in the form of never contains that the principal in the cross-ponding school never practiced instructional leadership, while the response in the form of always means that the principal always practices instructional leadership. On the other hand, the identical Scale was applied to measure the job performance that consisted of the 16 observed items. The data was collected in February 2023, and the researcher visited 250 schools for this purpose in the selected area of Lahore, which is mentioned above. No ethical issue was associated with this research work because the information of the participants of the study was quite confidential, and it was not shared with any higher authority. The name of the schools from where participants belong was not included, and it encouraged the participants to complete the questionnaire without any fear in their minds.

IV. RESULTS

The data analysis of this research work was conducted through IBM Statistical Packages for the Social Science (SPSS-27) and Microsoft Office 365. In the first stage of the data analysis, the process of data cleaning and data mining was conducted the removal of the messy data and the outliers to enhance the accuracy of the results. The multivariate analysis was used to reduce the dimension and the volume of the data. The reliability analysis was conducted to find the internal reliability and accuracy of the data of observed factors (Amirrudin et al., 2021). On the other hand, the KMO and Bartlett's tests were used to determine the appropriateness of the data for the factor analysis [26]. Eight latent factors were extracted by using the multivariate analysis technique to find the association between instructional leadership and teacher performance as far as the teacher's job performance is concerned.

Table 1 Summary of Principal's Instructional Leadership Practices and Teachers' Performance Factors

Factors	N	Mean	Std. Deviation
Instructional Resource Providers	250	3.80	0.69
Maintain Visible Presence	250	3.62	0.74
Professional Development	250	3.64	0.72
Maximise Instructional Time	250	3.57	0.81
Monitoring Student Progress	250	3.89	0.64
Feedback on Teaching Learning	250	3.61	0.82
Curriculum Implementation	250	3.39	0.81
Teacher Performance	250	3.71	0.54

The table-1 presents the results of the summary statistics of Principal's Instructional Leadership Practices and Teachers' Performance Factors based on a survey of 250 respondents. The instructional resource providers category received the highest mean score of 3.80, indicating a relatively strong perception of the principal's effectiveness in providing instructional resources. Following closely is monitoring student progress with a mean score of 3.89, suggesting a high level of satisfaction regarding the principal's involvement in tracking student development. Meanwhile, curriculum implementation scored the lowest mean at 3.39, indicating a comparatively lower perception of the principal's involvement in this aspect. maximize instructional time also scored relatively lower with a mean of 3.57. In terms of teacher performance, it received a mean score of 3.71, showcasing a moderately positive perception of teachers' overall performance.

Table 2 Reliability Analysis of Instructional Leadership Scale (N=250)

Latent Factors	Items	Included Items	Reliability Score
Instructional Resource Providers	4	1,2,3,4	0.704
Maintain Visible Presence	4	5,6,7,8	0.782
Professional Development	4	9,10,11,12	0.784
Maximise Instructional Time	3	13,14,15	0.725
Monitoring Student Progress	3	16,17,18	0.740
Feedback on Teaching Learning	3	19,20,21	0.887
Curriculum Implementation	4	22,23,24,25	0.882
Overall	25	25	859

The above-mentioned table-2 indicates the higher level of internal consistency among the set of items as a group. The results indicate that the Likert Scale questions used for the collection of the data are highly reliable. The value of the coefficient alpha is greater than the minimum accepted level of 0.7. The higher value of Alpha indicates that the observed items are directly associated with each other. The Alpha score in the case of all latent factors is greater than 0.7, which shows the reliability of the Scale. It also shows that the observed factors move in the same direction to construct one latent factor. The reliability score was 0.70 for Instructional Resource Providers (4 items), 0.78 for Maintain Visible Presence (4 items), 0.78 for professional development (4 items), 0.72 for Maximize Instructional Time (3 items), 0.74 for Monitoring Student Progress (3 items), 0.88 for Feedback on Teaching Learning (3 items), 0.88 for Curriculum Implementation (4 items). The internal reliability is interpreted as not acceptable (0.01-0.60), acceptable (0.61-0.70), good and acceptable (0.71-0.80), Good (0.81-0.90), Excellent (0.91-1.00) (Setya et al., 2020).

Table 3 Reliability Analysis of Teacher Performance Scale (N=250)

Latent Factors	Items	Included Items	Reliability Score
Teacher Performance	16	26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41	0.811

The above-mentioned table-2 shows that the teacher performance was extracted with the help of 16 observed variables that were measured directly through a questionnaire. The reliability score of 0.81 stated that all 16 variables highly correlated with each other, which means items move in the same direction. The value of Alpha indicates the higher internal consistency of the observed items and the reliability of the Scale. It also indicates that the observed variables are suitable for extracting the latent variable of teacher performance.

Table 4 Results of Kaiser-Meyer Olkin and Bartlett's Test Sphericity

Factors	KMO	BTS	Cumulative %
Instructional Resource Providers	0.63	<0.001	46.461
Maintain Visible Presence	0.64	<0.001	52.184
Professional Development	0.69	<0.001	48.166
Maximise Instructional Time	0.60	<0.001	51.891
Monitoring Student Progress	0.712	<0.001	46.967
Feedback on Teaching Learning	0.656	<0.001	72.706
Curriculum Implementation	0.675	<0.001	52.710
Teacher Performance	0.808	<0.001	58.983

KMO* Kaiser-Meyer Olkin; **BTS*** Bartlett's test of Sphericity

The results of KMO and Bartlett's test of Sphericity have indicated that the data is suitable for the factor analysis because the value of KMO indicates that all the observed variables are highly correlated to each other. In the case of all the latent variables, the value of the KMO test is greater than 0.5, which indicates that the sample is adequate. It also indicates that all the items have significant factor loading. The higher value of the KMO test also suggests that the correlation between the observed items is significantly higher. Barlett's test value is less than 0.05 in the case of all the latent variables, which indicates that factor analysis is acceptable. It also shows that the researchers are not violating the assumptions of Sphericity. Bartlett's test results show a higher level of correlation between the variables as far as the observed variables are concerned. So, the overall results of KMO and Bartlett's test indicate that the sample is adequate and factor analysis is suitable and acceptable to the data.

Table 5 Descriptive Statistics Results of Factors of Instructional Leadership Practices and Teacher Performance

	Gender	N	Mean	Std. Deviation	Std. Error Mean
IRP	Male	147	3.7738	.70610	.05824
	Female	103	3.8495	.68361	.06736
MVP	Male	147	3.6820	.75996	.06268
	Female	103	3.5510	.72959	.07189
TDP	Male	147	3.6854	.76194	.06284
	Female	103	3.5801	.67991	.06699
MIT	Male	147	3.6508	.86566	.07140
	Female	103	3.4660	.70222	.06919
MSP	Male	147	3.9048	.62422	.05148
	Female	103	3.8738	.67336	.06635
FTL	Male	147	3.7041	.83943	.06923
	Female	103	3.4903	.77327	.07619
CI	Male	147	3.4626	.84113	.06937
	Female	103	3.2913	.77261	.07613
IL	Male	147	3.6948	.56598	.04668
	Female	103	3.5860	.46054	.04538
TJP	Male	147	3.7309	.57588	.04750
	Female	103	3.6936	.49232	.04851

IRP*Instructional Resource Providers; MVP* Maintain Visible Presence; PD* Professional Development; MIT* Maximize Instructional Time; MSP* Monitoring Student Progress; FTL* Feedback on Teaching Learning; CI* Curriculum Implementation; TP* Teacher Performance

The mean value of the survey results lies between 3 to 4 as far as all the latent variables are concerned. It shows that most participants' answers were often and sometimes. The value of mean shows that the principals practice instructional leadership to deal with the situations. The standard deviation lies between 0 and 1 case of all the latent variables, which suggests that the individual response is not too diverse from the average responses and most data lie very close to the mean of the data. The value of standard deviation indicates that the dispersion of the data is too small from the mean value of the data. It also indicates that most data lie under the bell-shaped curve and do not disperse from the mean value. The above table- 4 also indicates that the standard error of the mean is not too much deviates from the actual mean of the population. The lower mean value of the standard error also suggests the accuracy of the sample, and it also indicates that the sample fully represents the study population.

Table 6 Correlation Between Latent Factors of Instructional Leadership and Teachers' Performance

Factors	IRP	MVP	PD	MIT	MSP	FTL	CI	TP
IRP	1							
MVP	0.57**	1						
PD	0.56**	0.60**	1					
MIT	0.47**	0.57**	0.58**	1				
MSP	0.40**	0.39**	0.38**	0.41**	1			
FTL	0.49**	0.40**	0.39**	0.38**	0.40**	1		
CI	0.40**	0.45**	0.38**	0.41**	0.48**	0.42**	1	
TP	0.80**	0.67**	0.83**	0.74**	0.50**	0.47**	0.44**	1

IRP*Instructional Resource Providers; MVP* Maintain Visible Presence; PD* Professional Development; MIT* Maximize Instructional Time; MSP* Monitoring Student Progress; FTL* Feedback on Teaching Learning; CI* Curriculum Implementation; TP* Teacher Performance

The results of the correlation analysis indicate that the instructional resource provider has a significant correlation with maintaining a visible presence. The highest correlation, 0.83, was observed between the teacher's professional development and the teacher's performance. It shows that the higher level of teacher development enhanced their performance. There was also a higher correlation between the teacher's performance and the instruction resource providers. The positive correlation, irrespective of their degree and magnitude among all the variables, suggests that all the variables are moving in the same direction. The higher level of a positive association between teacher performance and maintaining a visible presence show that the increase in the teacher's performance was directly associated with maintaining a visible presence. On the other hand, a higher level of correlation of 0.74 was observed between the teacher's performance and the maximised instructional time. A moderate positive correlation was observed between the teacher's performance and the monitor student progress, which further indicates that the monitoring of student performance was not only helpful for the students to enhance their educational performance but also important for the rise in the performance of the teachers. On the other hand, curriculum implementation and the teacher's performance were moved in the same direction, which further shows that curriculum implementation was very important in enhancing the performance of the teachers. The correlation of 0.47 between the feedback on teaching and learning and the teacher performance suggests that the feedback from the students and the other colleague teachers was very important to improve the performance, as far as the teacher's performance was concerned. Moreover, the feedback on teaching learning and monitoring student progress were directly related to each other, which further indicates that monitoring student progress played a major role in collecting the feedback on teaching-learning. A positive correlation was also observed between the maximised instructional time and the teacher's professional development, which means that more and more instructional time leads to a higher level of teacher development.

Table 7 Effect of Principal's Instructional Leadership Practices on Teacher Performance

	Adjusted R square	F-Test Statistics	
		F	**Sig.**
Instructional Leadership	.751	753.65	0.000
	Beta (β)	**T-Test Statistics**	
		T	**Sig.**
Instructional Leadership	.457	27.453	0.000

The results mentioned in the table-6 show the association between instructional leadership and the teacher's performance that was extracted through linear regression analysis. The value of adjusted R square indicates that the significant variance in the dependent variable of teacher performance was because of the explanatory variable of instructional leadership. According to the results, around 75% variance was due to instructional leadership, which means instructional leadership has a significant impact on job performance. The value of the F test is 753.65, and the p-value is less than 0.05, which indicates the significance of the results. The association between the principal's instructional leadership and teachers' performance was statistically significant. The value of intercept indicates that the nature of the relationship between the principal's instructional leadership practices and the teacher's performance was positive. The higher value of the t-test and the p-value less than 0.05 indicates the rejection of the null hypothesis that contain there is no significant relationship between the principal's instructional leadership and the teacher's performance. Therefore, the principal's instructional leadership has a positive and significant association with the teacher's performance, and it is statistically significant.

V. DISCUSSION

The results of this research work indicate that the instructional leadership practices of principals have played a major role in achieving the teacher's performance. Instructional leadership not just improves the student's performance but also enhances the performance of the teachers. The instructional leadership approach is one of the well-organised approaches that help to achieve the best teacher's performance. The instructional leadership practices help the principals to build a road map for the

teachers to perform better and give their 100% as far as their performance on the job is concerned. It is also useful to provide more opportunities, promote professional growth, provide more resources, as well as improving the learning process of the teachers [6, 37]. School principals need to perform multiple tasks at the same time, and instructional leadership helps them to perform these tasks. The role of teachers is significant in building a nation, and it is the responsibility of the principals to manage their staff in an effective and efficient way. The efficiency of the teachers largely depends on the leadership style of the principals. Under instructional leadership practices, principals provide support for the teacher in different ways, such as resource management, professional development, as well as teaching practice [93].

The instructional leader provides formal and informal development opportunities to the teachers as far as professional development is concerned. The role of principals is very important to enhance the morale of teachers to achieve a higher level of productivity and performance. The instructional leader also encourages the teachers to improve their performance by taking risks associated with innovation in the ways of teachers that are further helpful for student learning [94, 82]. Most teachers in any school require a number of resources and material to perform their jobs effectively, and in this regard, the role of instructional leaders have been increased in providing mentoring and coaching. Teachers learn a number of things by communicating with each other, and principals in high-performing schools provide a number of opportunities for their staff to engage with each other to produce more effective results, despite the fact that the instructional leadership practice at the school level creates the positive effects on the achievement of the students [63, 73].

Instructional leader helps teachers to build a productive environment in every classroom with the help of providing high-quality learning opportunities and supporting teachers. Significant relationships between many aspects of teacher performance were found in the study. The relationship between teachers' professional development and performance had the largest correlation (0.83), suggesting that higher levels of development were associated with better performance. Additionally, a significant association between teacher effectiveness and the availability of instructional resources was found, suggesting that these variables moved in unison. Maintaining a visible presence was substantially correlated with teacher performance, suggesting a direct relationship between visibility and improved performance [67]. Additionally, there was a modestly significant association (0.74), highlighting the significance of time management between teacher effectiveness and maximising instructional time. Its importance in improving both students' and teachers' performance was shown by the fact that tracking student progress was favourably connected with both. The correlation between curriculum implementation and teacher performance is favourable, highlighting the importance of curriculum in raising teacher performance. A moderate association (0.47) between teacher performance and

feedback on teaching and learning suggests the value of this factor in improving instructional strategies. The maximisation of instructional time was positively correlated with teachers' professional growth, indicating that more time spent on instruction led to greater teacher development [14, 19].

The adjusted R square value of almost 75% indicates that instructional leadership's influential role in job performance and that a sizeable percentage of the variable in teacher performance can be attributed to it. The results of the F test, which had a 753.65 score and a p-value of less than 0.05, further support the findings' statistical significance. This suggests a close connection between teachers' effectiveness and the instructional leadership of the principal. The intercept value's indication of the relationship's positive nature adds credence to the idea that good instructional leadership methods have a beneficial effect on teacher performance [106, 83]. The null hypothesis is rejected by the higher t-test value and p-value of less than 0.05, demonstrating a substantial association between instructional leadership and teacher performance. As a result, it can be said that the instructional leadership provided by the principal has a significant and favourable impact on teachers' performance, and this link is statistically significant [76, 87].

The results of this research work are similar to the results of the [97] study because they also found that the instructional leadership of the headmasters and the teacher's performance level were highly correlated with each other. The performance of the teachers in any school is influenced by the leadership of the principal in a significant way, and instructional leadership is considered one of the most appropriately practised to achieve higher teachers performance. [105, 73]. The problems in the school performance have been arising because of the weakness in the leadership, and instructional leadership helps to resolve this issue. Instructional leadership helps to solve the problems related to alignment with the rapid changes associated with the field of education and increasing workload. Another research work [112, 75], found that instructional leadership practices encourage teachers to show their talent, and it further helps to enhance job performance. [74] express that the school principles leadership activities are directly associated with the improvement in the outcomes of the teachers because the positive activities of the teachers help to enhance the teacher performance.

➢ *Limitations and Future Research*
This research work is only limited to the selected areas of Lahore in which this research work has been conducted, and it is not applicable to the other areas. This study is based on the primary data that have been collected with the help of a questionnaire using the convenience sampling method. This study is only limited to the secondary school level, and the finding of this research is not applicable to other schools. The findings of this research work are limited to the sample size of the teachers in the schools in the selected areas of Lahore. This study's

results are not generalisable to all secondary schools in Lahore. This research is based on the cross-sectional research approach that is not useful in establishing the causal relationship between teachers' performance and instructional leadership practices. This study does not include all the contextual factors that can influence the teacher's performance and instructional leadership. The longitudinal research approach will be used to examine the impact of instructional leadership on the performance of the teachers. The mixed research approach will be more useful to gain more understanding in a comprehensive way through which instructional leadership affects the teacher's performance. Future research must focus on particular instructional leadership practices such as the feedback mechanism and professional development support. Future research works should be focused on finding the association between student learning outcomes and instructional leadership practices. Future research should be focused on deep insight into the contextual factors, which include the school culture, community engagement, and motivation of teachers to interact with the instructional leadership.

VI. CONCLUSION

The role of leadership is very important in enhancing the productivity of the teachers because it helps to enhance the professional growth of the instructors. Both private and government schools have a significant share in the schooling system of Pakistan. Instructional leadership is very important for teachers, principals, and students. This study is focused on determining the techniques associated with the principal's instructional leadership and its association with the performance of the teachers. This research work found a significant and positive association between instructional leadership practices and teachers' performance. The seven dimensions were used to measure the instructional leadership practices by using the data of 250 participants in the study. The seven dimensions of instructional leadership include the prospectus implementer, instructional resource providers, upholding the visible attendance, exploiting the instructional time, observing student development, advice on teaching-learning, and teachers' professional development. All the selected factors have contributed significantly to the extraction of the latent variable of instructional leadership practices. On the basis of the results, the researcher accepts the alternative hypothesis and rejects the null hypothesis, which means that instructional leadership practices have a significant and positive impact on the teacher's performance.

➤ *Declarations*

• *Conflicts of Interest/Competing Interests*
No conflict of Interest associated with this research work.

• *Informed Consent*
The informed consent obtained from all the participants

• *Data Availability Statement*
The data supporting the results of this research will be provided on reasonable request.

• *Declaration of Competing Interest*
There is no conflict of interest associated with this research work.

REFERENCES

[1]. Ahmad, N. (2021). An Analysis of Instructional Leadership Practices of Primary School Head-Teachers on Teacher Effectiveness: A Qualitative Study of Teachers' Perceptions. PAKISTAN LANGUAGES and HUMANITIES REVIEW, 5(II), 193–209. https://doi.org/10.47205/plhr.2021(5-ii)2.16. https://doi. org/.

[2]. Aidoo, S. (2020). Principals' Instructional Leadership in Secondary Schools in Bohlabela District: A Matter of Concern. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.3618943. https://doi.org/.

[3]. Al-Mahdy, Y. E. H., Emam, M. M., & Hallinger, P. (2018). Assessing the contribution of principal instructional leadership and collective teacher efficacy to teacher commitment in Oman. Teaching and Teacher Education, 69, 191–201. https://research.cm.mahidol.ac.th/research/index.php/researcher-list?view=publication&task=show&id=741.

[4]. Al-Safran, E., Brown, D., & Wiseman, A. (2014). The Effect of Principal's Leadership Style on School Environment and Outcome. Research in Higher Education Journal, 22. https://eric.ed.gov/?id=EJ1064107

[5]. Amirrudin, M., Nasution, K., & Supahar, S. (2020). Effect of Variability on Cronbach Alpha Reliability in Research Practice. Jurnal Matematika, Statistika Dan Komputasi, 17(2), 223–230. https://doi.org/10.20956/jmsk.v17i2.11655. https://doi.org/.

[6]. Banu Widiasmara, & Andriani, D. (2021). The Effects of Instructional Leadership and Organizational Culture on Teacher Performance at Public Senior High Schools in Sleman Regency, Indonesia. https://doi.org/10.4108/eai.19-12-2020.2309164. https://doi.org/.

[7]. Bellibaş, M. Ş., Gümüş, S., & Liu, Y. (2020). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. School Effectiveness and School Improvement, 32(3), 1–26. https://doi.org/10.1080/09243453.2020.1858119. https://doi.org/.

[8]. Bendikson, L., Robinson, V., & Hattie, J. (2012). Principal instructional leadership and secondary school performance. Set: Research Information for Teachers, 1. https://doi.org/10.18296/set.0387. https://doi.org/.

[9]. Berkovich, I., & Hassan, T. (2022). Principals' digital instructional leadership during the pandemic: Impact on teachers' intrinsic motivation and students' learning. Educational Management Administration & Leadership, 174114322211134. https://doi.org/10.1177/17411432221113411. https://doi.org/.

[10]. Birhasani, M., Sulaiman, & Metroyadi. (2021). Correlation Between Principal Instructional Leadership, Achievement Motivation and Teacher Performance through Job Satisfaction in State Elementary Schools in Kandangan District, Hulu Sungai Selatan Regency. International Journal of Social Science and Human Research. https://doi.org/10.47191/ijsshr/v5-i6-71. https://doi.org/.

[11]. Bloomfield, J., & Fisher, M. (2019). Quantitative research design. Journal of the Australasian Rehabilitation Nurses' Association, 22(2), 27–30. https://doi.org/10.33235/jarna.22.2.27-30. https://doi.org/.

[12]. Boston, M. D., Henrick, E. C., Gibbons, L. K., Berebitsky, D., & Colby, G. T. (2016). Investigating How to Support Principals as Instructional Leaders in Mathematics. Journal of Research on Leadership Education, 12(3), 183–214. https://doi.org/10.1177/1942775116640254. https://doi.org/.

[13]. Brazer, S. D., & Bauer, S. C. (2013). Preparing Instructional Leaders. Educational Administration Quarterly, 49(4), 645–684. https://doi.org/10.1177/0013161x13478977

[14]. Bush, T. (2013). Instructional leadership and leadership for learning: global and South African perspectives. Education as Change, 17(sup1), S5–S20. https://doi.org/10.1080/16823206.2014.865986. https://doi.org/.

[15]. Carpenter, D. (2015). School culture and leadership of professional learning communities. International Journal of Educational Management, 29(5), 682–694. https://doi.org/10.1108/ijem-04-2014-0046. https://doi.org/.

[16]. Carraway, J. H., & Young, T. (2015). Implementation of a Districtwide Policy to Improve Principals' Instructional Leadership. Educational Policy, 29(1), 230–256. https://doi.org/10.1177/0895904814564216. https://doi.org/.

[17]. Chen, J., & Guo, W. (2018). Emotional intelligence can make a difference. Educational Management Administration & Leadership, 48(1), 174114321878106. https://doi.org/10.1177/1741143218781066. https://doi.org/.

[18]. Daniëls, E., Hondeghem, A., & Dochy, F. (2019). A Review on Leadership and Leadership Development in Educational Settings. Educational Research Review, 27(27), 110–125. https://doi.org/10.1016/j.edurev.2019.02.003. https://doi.org/.

[19]. Day, C., Gu, Q., & Sammons, P. (2016). The Impact of Leadership on Student Outcomes. Educational Administration Quarterly, 52(2), 221–258.

[20]. Desimone, L. M., & Pak, K. (2016). Instructional Coaching as High-Quality Professional Development. Theory into Practice, 56(1), 3–12. https://doi.org/10.1080/00405841.2016.1241947. https://doi.org/.

[21]. DiPaola, M., & Hoy, W. K. (2013). Principals Improving Instruction: Supervision, Evaluation, and Professional Development. In Google Books. IAP. https://books.google.com/books?hl=en&lr=&id=-AcoDwAAQBAJ&oi=fnd&pg=PR7&dq=Understanding+Instructional+Leadership&ots=j3HoZkkOY7&sig=CZvXgGkht7zkCj7GAWyFOWukhVw

[22]. DiPaola, M., & Wagner, C. A. (2018). Improving Instruction Through Supervision, Evaluation, and Professional Development: Second Edition. In Google Books. IAP. https://books.google.com/books?hl=en&lr=&id=0VdMDwAAQBAJ&oi=fnd&pg=PR7&dq=Understanding+Instructional+Leadership&ots=QEOe-8Hx7t&sig=yFMmzylG99VazfZzgwqPqcxgK9E

[23]. Dou, D., Devos, G., & Valcke, M. (2016). The relationships between school autonomy gap, principal leadership, teachers' job satisfaction and organisational commitment. Educational Management Administration & Leadership, 45(6), 959–977. https://doi.org/10.1177/1741143216653975. https://doi.org/.

[24]. du Plessis, P. (2013). The principal as instructional leader: Guiding schools to improve instruction. Education as Change, 17(sup1), S79–S92. https://doi.org/10.1080/16823206.2014.865992. https://doi.org/.

[25]. Dugard, P., Todman, J., & Staines, H. (2022). Approaching Multivariate Analysis, 2nd Edition: A Practical Introduction. In Google Books. Taylor & Francis. https://books.google.com/books?hl=en&lr=&id=5hh1EAAAQBAJ&oi=fnd&pg=PP1&dq=multivariate+analysis&ots=IrUckNLypL&sig=veFVprA4BoK7bjZMk4mZXZsJNvs. https://doi.org/.

[26]. Dursun, İ. E., & Bilgivar, O. O. (2022). The Effect of School Principals' Leadership Styles on Teacher Performance and Organizational Happiness. International Journal of Educational Administration and Leadership: Theory and Practice, 1(1), 12–25. https://doi.org/10.52380/ijedal.2022.1.1.7. https://doi.org/.

[27]. Dutta, V., & Sahney, S. (2016). School leadership and its impact on student achievement. International Journal of Educational Management, 30(6), 941–958. https://doi.org/10.1108/ijem-12-2014-0170. https://doi.org/.

[28]. Fairman, J. C., & Mackenzie, S. V. (2014). How teacher leaders influence others and understand their leadership. International Journal of Leadership in Education, 18(1), 61–87. https://doi.org/10.1080/13603124.2014.904002. https://doi.org/.

[29]. Figueroa-Gutiérrez, V., Silvestre, E., & Chaljub-Hasbun, J. (2020). Distribución del tiempo de los directores y su relación con el rendimiento y clima escolar. PUBLICACIONES, 50(3), 55–92. https://doi.org/10.30827/publicaciones.v50i3.21051. https://doi.org/.

[30]. Firdaus, F., Giatman, M., & Ernawati, E. (2022). Principal's leadership in improving student learning outcomes. Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan, 4(11), 4837–4847. https://doi.org/10.32670/fairvalue.v4i11.1817. https://doi.org/.

[31]. Gao Yan. (2015). Strategies of Enhancing Instructional Leadership Competence of Principals. US-China Education Review B, 5(2). https://doi.org/10.17265/2161-6248/2015.02.005

[32]. Gawlik, M. (2018). Instructional leadership and the charter school principal. School Leadership & Management, 38(5), 539–565. https://doi.org/10.1080/13632434.2018.1439467. https://doi.org/.

[33]. Goddard, R., Goddard, Y., Sook Kim, E., & Miller, R. (2015). A Theoretical and Empirical Analysis of the Roles of Instructional Leadership, Teacher Collaboration, and Collective Efficacy Beliefs in Support of Student Learning. American Journal of Education, 121(4), 501–530. https://doi.org/10.1086/681925. https://doi.org/.

[34]. Grissom, J. A., Loeb, S., & Master, B. (2013). Effective Instructional Time Use for School Leaders. Educational Researcher, 42(8), 433–444. https://doi.org/10.3102/0013189x13510020. https://doi.org/.

[35]. Gurley, D. K., Anast-May, L., & Lee, H. T. (2013). Developing Instructional Leaders Through Assistant Principals' Academy. Education and Urban Society, 47(2), 207–241. https://doi.org/10.1177/0013124513495272. https://doi.org/.

[36]. Hallinger, P., & Lee, M. (2013). Mapping instructional leadership in Thailand. Educational Management Administration & Leadership, 42(1), 6–29. https://doi.org/10.1177/1741143213502196. https://doi.org/.

[37]. Hallinger, P., Dongyu, L., & Wang, W.-C. (2016). Gender Differences in Instructional Leadership. Educational Administration Quarterly, 52(4), 567–601. https://doi.org/10.1177/0013161x16638430. https://doi.org/.

[38]. Hallinger, P., Gümüş, S., & Bellibaş, M. Ş. (2020). "Are principals instructional leaders yet?" A science map of the knowledge base on instructional leadership, 1940–2018. Scientometrics, 122(3). https://doi.org/10.1007/s11192-020-03360-5. https://doi.org/.

[39]. Halverson, R., & Clifford, M. (2013). Distributed Instructional Leadership in High Schools. Journal of School Leadership, 23(2), 389–419. https://doi.org/10.1177/105268461302300207. https://doi.org/.

[40]. Heikka, J., Waniganayake, M., & Hujala, E. (2013). Contextualizing Distributed Leadership Within Early Childhood Education. Educational Management Administration & Leadership, 41(1), 30–44. https://doi.org/10.1177/1741143212462700. https://doi.org/.

[41]. Honig, M., & Rainey, L. (2014). Central Office Leadership in Principal Professional Learning Communities: The Practice Beneath the Policy. Teachers College Record, 116, 48. https://education.uw.edu/sites/default/files/250/2014%20HONIG%20RAINEY%20Central%20office%20leadership%20in%20principal%20professional%20learning%20communities.pdf. https://doi.org/.

[42]. Hou, Y., Cui, Y., & Zhang, D. (2019). Impact of instructional leadership on high school student academic achievement in China. Asia Pacific Education Review. https://doi.org/10.1007/s12564-019-09574-4. https://doi.org/.

[43]. https://doi.org/ 10.1177/0013161X15616863. https://doi.org/.

[44]. Huang, T., Hochbein, C., & Simons, J. (2018). The relationship among school contexts, principal time use, school climate, and student achievement. Educational Management Administration & Leadership, 174114321880259. https://doi.org/10.1177/1741143218802595. https://doi.org/.

[45]. Hussin, S., & Al Abri, S. (2015). Professional Development Needs of School Principals in the Context of Educational Reform. International Journal of Educational Administration and Policy Studies, 7(4). https://eric.ed.gov/?id=EJ1075872.

[46]. Ismail, S. N., Don, Y., Husin, F., & Khalid, R. (2018). Instructional Leadership and Teachers' Functional Competency across the 21st Century Learning. International Journal of Instruction, 11(3), 135–152. https://eric.ed.gov/?id=EJ1183348

[47]. Jalapang, I., & Raman, A. (2020). Effect of Instructional Leadership, Principal Efficacy, Teacher Efficacy and School Climate on Students' Academic Achievements. Academic Journal of Interdisciplinary Studies, 9(3), 82. https://doi.org/10.36941/ajis-2020-0043. https://doi.org/.

[48]. Jay, J., & Aureada, U. (2021). The Instructional Leadership Practices of School Heads. International Journal of Educational Management and Development Studies, 2(2), 75–89. https://iiari.org/wp-content/uploads/2021/06/ijemds.v2.2.142.pdf

[49]. Jelena Veletić, Price, H. E., & Rolf Vegar Olsen. (2023). Teachers' and principals' perceptions of school climate: the role of principals' leadership style in organisational quality. https://doi.org/10.1007/s11092-023-09413-6. https://doi.org/.

[50]. Khan, I., Hanif Khan, M., & Saeed, N. (2021). Instructional Leadership at Government Secondary Schools: An Analytical Study. https://qurtuba.edu.pk/jms/default_files/JMS/14_1/14_1_8.pdf

[51]. Kim, T., & Lee, Y. (2019). Principal instructional leadership for teacher participation in professional development: evidence from Japan, Singapore, and South Korea. Asia Pacific Education Review. https://doi.org/10.1007/s12564-019-09616-x. https://doi.org/.

[52]. Kraft, M. A., Marinell, W. H., & Shen-Wei Yee, D. (2016). School Organizational Contexts, Teacher Turnover, and Student Achievement. American Educational Research Journal, 53(5), 1411–1449. https://doi.org/10.3102/0002831216667478. https://doi.org/.

[53]. Kusin, S., & Rashid, U. (2020). The Relationship Between Instructional Leadership Style and School Performance Excellence Among Primary Schools in Johor. https://ieomsociety.org/proceedings/2022nigeria/390.pdf

[54]. Kutsyuruba, B., Klinger, D. A., & Hussain, A. (2015). Relationships among school climate, school safety, and student achievement and well-being: a review of the literature. Review of Education, 3(2), 103–135. https://doi.org/10.1002/rev3.3043. https://doi.org/.

[55]. Kwan, P. (2019). Is Transformational Leadership Theory Passé? Revisiting the Integrative Effect of Instructional Leadership and Transformational Leadership on Student Outcomes. Educational Administration Quarterly, 56(2), 0013161X1986113. https://doi.org/10.1177/0013161x19861137. https://doi.org/.

[56]. Le Fevre, D. M., & Robinson, V. M. J. (2014). The Interpersonal Challenges of Instructional Leadership. Educational Administration Quarterly, 51(1), 58–95. https://doi.org/10.1177/0013161x13518218/. https://doi.org/.

[57]. Lee, M., Hallinger, P., & Walker, A. (2012). A Distributed Perspective on Instructional Leadership in International Baccalaureate (IB) Schools. Educational Administration Quarterly, 48(4), 664–698. https://doi.org/10.1177/0013161x11436271

[58]. Leithwood, K., Harris, A., & Hopkins, D. (2020). Seven strong claims about successful school leadership revisited. School Leadership & Management, 40(1), 5–22. https://doi.org/10.1080/13632434.2019.1596077. https://doi.org/.

[59]. Li, Y., Cai, Y., & Tang, R. (2023). Linking Instructional Leadership and School Support to Teacher Expertise: The Mediating Effect of Teachers' Professional Development Agency. Sustainability, 15(4), 3440. https://doi.org/10.3390/su15043440. https://doi.org/.

[60]. Liu, S., & Hallinger, P. (2018). Principal Instructional Leadership, Teacher Self-Efficacy, and Teacher Professional Learning in China: Testing a Mediated-Effects Model. Educational Administration Quarterly, 54(4), 501–528. https://doi.org/10.1177/0013161x18769048. https://doi.org/.

[61]. Liu, Y., Bellibaş, M. Ş., & Gümüş, S. (2020). The Effect of Instructional Leadership and Distributed Leadership on Teacher Self-efficacy and Job Satisfaction: Mediating Roles of Supportive School Culture and Teacher Collaboration. Educational Management Administration & Leadership, 49(3), 174114322091043. https://doi.org/10.1177/1741143220910438. https://doi.org/.

[62]. Lochmiller, C. R. (2015). Examining Administrators' Instructional Feedback to High School Math and Science Teachers. Educational Administration Quarterly, 52(1), 75–109. https://doi.org/10.1177/0013161x15616660. https://doi.org/.

[63]. MacBeath, J. (2019). Leadership for Learning. Instructional Leadership and Leadership for Learning in Schools, 49–73. https://doi.org/10.1007/978-3-030-23736-3_3

[64]. Manaseh, A. M. (2016). INSTRUCTIONAL LEADERSHIP: THE ROLE OF HEADS OF SCHOOLS IN MANAGING THE INSTRUCTIONAL PROGRAMME. International Journal of Educational Leadership and Management, 4(1), 30. https://doi.org/10.17583/ijelm.2016.1691. https://doi.org/.

[65]. Marsh, J. A., & Farrell, C. C. (2014). How leaders can support teachers with data-driven decision making. Educational Management Administration & Leadership, 43(2), 269–289. https://doi.org/10.1177/1741143214537229. https://doi.org/.

[66]. Mcbrayer, J., Akins, C., Gutierrez De Blume, A., Cleveland, R., & Pannell, S. (2020). Leadership, Technology, and Human Development Faculty Publications Leadership, Technology and Human Development, Department of 2020. https://digitalcommons.georgiasouthern.edu/cgi/viewcontent.cgi?article=1184&context=leadership-facpubs

[67]. McCarley, T. A., Peters, M. L., & Decman, J. M. (2014). Transformational leadership related to school climate. Educational Management Administration & Leadership, 44(2), 322–342. https://doi.org/10.1177/1741143214549966. https://doi.org/.

[68]. Mendels, P. (2012). 5 PIVOTAL PRACTICES THAT SHAPE INSTRUCTIONAL LEADERSHIP. 33(1). https://www.asdn.org/wp-content/uploads/LF-FEBRUARY-2012-THE-EFFECTIVE-PRINCIPAL.pdf

[69]. Mestry, R. (2017). Principals' perspectives and experiences of their instructional leadership functions to enhance learner achievement in public schools. Journal of Education (University of KwaZulu-Natal), 69, 257–280. http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2520-98682017000200012

[70]. Mestry, R., Moonsammy-Koopasammy, I., & Schmidt, M. (2013). The instructional leadership role of primary school principals. Education as Change, 17(sup1), S49–S64. https://doi.org/10.1080/16823206.2014.865990. https://doi.org/.

[71]. Mitchell, R. M., Kensler, L. A. W., & Tschannen-Moran, M. (2015). Examining the Effects of Instructional Leadership on School Academic Press and Student Achievement. Journal of School Leadership, 25(2), 223–251. https://doi.org/10.1177/105268461502500202. https://doi.org/.

[72]. Mngo, Z. Y., & Mngo, A. Y. (2018, April 1). Teachers' Perceptions of Inclusion in a Pilot Inclusive Education Program: Implications for Instructional Leadership. Education Research International. https://www.hindawi.com/journals/edri/2018/3524879/

[73]. Naicker, I., Chikoko, V., & Mthiyane, S. E. (2013). Instructional leadership practices in challenging school contexts. Education as Change, 17(sup1), S137–S150. https://doi.org/10.1080/16823206.2014.865999. https://doi.org/.

[74]. Nancy|Grigsby, A. (2015). Does Leadership Matter? Examining the Relationship among Transformational Leadership, School Climate, and Student Achievement. International Journal of Educational Leadership Preparation, 10(2), 1–22. https://eric.ed.gov/?id=EJ1083099

[75]. Neumerski, C. M. (2012). Rethinking Instructional Leadership, a Review. Educational Administration Quarterly, 49(2), 310–347. https://doi.org/10.1177/0013161x12456700. https://doi.org/.

[76]. Neumerski, C. M., Grissom, J. A., Goldring, E., Drake, T. A., Rubin, M., Cannata, M., & Schuermann, P. (2018). Restructuring Instructional Leadership: How Multiple-Measure Teacher Evaluation Systems Are Redefining the Role of the School Principal. The Elementary School Journal, 119(2), 270–297. https://doi.org/10.1086/700597. https://doi.org/.

[77]. Ng, F. S. D., Nguyen, T. D., Wong, K. S. B., & Choy, K. W. W. (2015). Instructional leadership practices in Singapore. School Leadership & Management, 35(4), 388–407. https://doi.org/10.1080/13632434.2015.1010501. https://doi.org/.

[78]. Niqab, M., Sharma, S., Wei, L. M., & Maulod, S. B. A. (2014). Instructional Leadership Potential among School Principals in Pakistan. International Education Studies, 7(6), 74–85. https://eric.ed.gov/?id=EJ1070065

[79]. Noor, T., & Nawab, A. (2022). Are school leaders working as instructional leaders? Exploration of school leadership practices in rural Pakistan. Cogent Education, 9(1). https://doi.org/10.1080/2331186x.2022.2109315. https://doi.org/.

[80]. O'Doherty, A., & Ovando, M. N. (2013). Leading Learning: First-Year Principals' Reflections on Instructional Leadership. Journal of School Leadership, 23(3), 533–561. https://doi.org/10.1177/105268461302300305. https://doi.org/.

[81]. Orphanos, S., & Orr, M. T. (2013). Learning leadership matters. Educational Management Administration & Leadership, 42(5), 680–700. https://doi.org/10.1177/1741143213502187. https://doi.org/.

[82]. Özdemir, G., Sahin, S., & Öztürk, N. (2020). Teachers' Self-Efficacy Perceptions in Terms of School Principal's Instructional Leadership Behaviours. International Journal of Progressive Education, 16(1), 25–40. https://eric.ed.gov/?id=EJ1244970

[83]. Preston, J., & Barnes, K. E. R. (2018). Successful Leadership in Rural Schools: Cultivating Collaboration. The Rural Educator, 38(1). https://doi.org/10.35608/ruraled.v38i1.231.https://doi.org/.

[84]. Rahman, M. R. bin A., & Hamzah, M. I. M. (2022). Principals' Instructional Leadership Practices and Its Relationship with Teacher Work Performance. Proceedings of the 2nd Padang International Conference on Educational Management and Administration 2021 (PICEMA 2021), 61–67. https://doi.org/10.2991/978-2-494069-11-4_8. https://doi.org/.

[85]. Rathana, L. (2020, September 21). Understanding the Significance of Instructional Leadership and School Principals' Roles and Responsibilities. Cambodian Education Forum. https://cefcambodia.com/2020/09/22/understanding-the-significance-of-instructional-leadership-and-school-principals-roles-and-responsibilities/

[86]. Rigby, J. G. (2013). Three Logics of Instructional Leadership. Educational Administration Quarterly, 50(4), 610–644. https://doi.org/10.1177/0013161x13509379. https://doi.org/.

[87]. Riningsih, P., Suliaman, S., & Saleh, M. (2022). The Influence of Instructional Leadership of School Principles and The Development of Learning Media Through Teacher Performance With Student's Learning Achievement In Junior High School, Alalak District, Barito Kuala Regency. Journal of Advances in Education and Philosophy, 6(2), 118–129. https://doi.org/10.36348/jaep.2022.v06i02.011. https://doi.org/.

[88]. Robinson, V. M. J. (2010). From Instructional Leadership to Leadership Capabilities: Empirical Findings and Methodological Challenges. Leadership and Policy in Schools, 9(1), 1–26. https://doi.org/10.1080/15700760903026748. https://doi.org/.

[89]. Ross, D. J., & Cozzens, J. A. (2016). The Principalship: Essential Core Competencies for Instructional Leadership and Its Impact on School Climate. Journal of Education and Training Studies, 4(9), 162–176. https://eric.ed.gov/?id=EJ1106737

[90]. Sarikaya, N., & Erdogan, Ç. (2016). Relationship between the Instructional Leadership Behaviors of High School Principals and Teachers' Organizational Commitment. Journal of Education and Practice, 7(3), 72–82. https://eric.ed.gov/?id=EJ1089789

[91]. Searby, L., Browne-Ferrigno, T., & Wang, C. (2016). Assistant Principals: Their Readiness as Instructional Leaders. Leadership and Policy in Schools, 16(3), 397–430. https://doi.org/10.1080/15700763.2016.1197281. https://doi.org/.

[92]. Sebastian, J., Allensworth, E., & Huang, H. (2016). The Role of Teacher Leadership in How Principals Influence Classroom Instruction and Student Learning. American Journal of Education, 123(1), 69–108. https://doi.org/10.1086/688169. https://doi.org/.

[93]. Sebastian, J., Allensworth, E., Wiedermann, W., Hochbein, C., & Cunningham, M. (2018). Principal Leadership and School Performance: An Examination of Instructional Leadership and Organizational Management. Leadership and Policy in Schools, 18(4), 1–23. https://doi.org/10.1080/15700763.2018.1513151. https://doi.org/.

[94]. Setya, N. W. N., Gunawan, I., Kusumaningrum, D. E., Sumarsono, R. B., Nurabadi, A., Hui, L. K., Pratiwi, F. D., & Santoso, F. B. (2020, December 15). Development of Student Leadership Variables Instruments: Validity and Reliability Analysis. Www.atlantis-Press.com; Atlantis Press. https://doi.org/10.2991/assehr.k.201214.293. https://doi.org/.

[95]. Shatzer, R. H., Caldarella, P., Hallam, P. R., & Brown, B. L. (2013). Comparing the effects of instructional and transformational leadership on student achievement. Educational Management Administration & Leadership, 42(4), 445–459. https://doi.org/10.1177/1741143213502192. https://doi.org/.

[96]. Shengnan, L., & Hallinger, P. (2020). Unpacking the effects of culture on school leadership and teacher learning in China. Educational Management Administration & Leadership, 174114321989604. https://doi.org/10.1177/1741143219896042. https://doi.org/.

[97]. Skaalvik, C. (2020). School principal self-efficacy for instructional leadership: relations with engagement, emotional exhaustion and motivation to quit. Social Psychology of Education, 23. https://doi.org/10.1007/s11218-020-09544-4. https://doi.org/.

[98]. Sun, J., & Leithwood, K. (2012). Transformational School Leadership Effects on Student Achievement. Leadership and Policy in Schools, 11(4), 418–451. https://doi.org/10.1080/15700763.2012.681001. https://doi.org/.

[99]. Tan, C. Y. (2016). Examining school leadership effects on student achievement: the role of contextual challenges and constraints. Cambridge Journal of Education, 48(1), 21–45. https://doi.org/10.1080/0305764x.2016.1221885. https://doi.org/.

[100]. Taylor Backor, K., & Gordon, S. P. (2015). Preparing Principals as Instructional Leaders. NASSP Bulletin, 99(2), 105–126. https://doi.org/10.1177/0192636515587353

[101]. Teasley, M. L. (2016). Organisational Culture and Schools: A Call for Leadership and Collaboration. Children & Schools, 39(1), 3–6. https://doi.org/10.1093/cs/cdw048. https://doi.org/.

[102]. Tedla, B., & Kilango, N. (2022). The Role of School Leadership toward Improving Student's Achievement: A Case Study of Secondary Schools in Changchun, China. Journal of Positive School Psychology, 2022(4), 6744–6755. https://journalppw.com/index.php/jpsp/article/download/4639/3054/5259

[103]. Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A Review of School Climate Research. Review of Educational Research, 83(3), 357–385. https://doi.org/10.3102/0034654313483907. https://doi.org/.

[104]. TuranS., & Bektas, F. (2013). The Relationship between School Culture and Leadership Practices. EURASIAN JOURNAL of EDUCATIONAL RESEARCH, 13. https://avesis.uludag.edu.tr/yayin/7aa3d9bc-50af-4c49-95f5-914fe33691c3/the-relationship-between-school-culture-and-leadership-practices

[105]. Ullah, J. (2020). Stewardship Role Of Principals In Improving Teachers Professional Development in southern Districts Of Khyber Pakhtunkhwa. 19(2), 1671–1683. https://doi.org/10.17051/ilkonline.2020.02.696749. https://doi.org/.

[106]. Urick, A., & Bowers, A. J. (2013). What Are the Different Types of Principals Across the United States? A Latent Class Analysis of Principal Perception of Leadership. Educational Administration Quarterly, 50(1), 96–134. https://doi.org/10.1177/0013161x13489019

[107]. Vogel, L. R. (2018). Learning Outside the Classroom: How Principals Define and Prepare to Be Instructional Leaders. Education Research International, 2018, 1–14. https://doi.org/10.1155/2018/8034270. https://doi.org/.

[108]. Wang, T. (2016). School leadership and professional learning community: case study of two senior high schools in Northeast China. Asia Pacific Journal of Education, 36(2), 202–216. https://doi.org/10.1080/02188791.2016.1148849. https://doi.org/.

[109]. White-Smith, K. A. (2012). Beyond Instructional Leadership: The Lived Experiences of Principals in Successful Urban Schools. Journal of School Leadership, 22(1), 6–25. https://doi.org/10.1177/105268461202200102. https://doi.org/.

[110]. Woulfin, S. L., & Rigby, J. G. (2017). Coaching for Coherence: How Instructional Coaches Lead Change in the Evaluation Era. Educational Researcher, 46(6), 323–328. https://doi.org/10.3102/0013189x17725525. https://doi.org/.

[111]. Zepeda, S. J. (2014). The Principal as Instructional Leader: A Handbook for Supervisors. In Google Books. Routledge. https://books.google.com/books?hl=en&lr=&id=pbTdAAAAQBAJ&oi=fnd&pg=PP1&dq=Understanding+Instructional+Leadership&ots=nntPYBVBct&sig=jjhlS_MVnpVyS8hjJ26e0q-NFi4

[112]. Zheng, X., Yin, H., & Li, Z. (2018). Exploring the relationships among instructional leadership, professional learning communities and teacher self-efficacy in China. Educational Management Administration & Leadership, 47(6), 174114321876417. https://doi.org/10.1177/1741143218764176. https://doi.org/.