

## **Teachers' Perceptions Regarding the Effect of Instructional Leadership Practices of Primary School Head-teachers on Teacher Effectiveness**

*Nazir Ahmad<sup>1</sup> Martin Thomas<sup>2</sup> Shamas Hamid<sup>3</sup>*

*<sup>1</sup>PhD Scholar Iqra University Karachi*

*<sup>2</sup>HoD Education and Social Science Iqra University Karachi*

*<sup>3</sup>Dean Faculty of Arts Design and Social Science Iqra University Karachi*

*Corresponding Author's Email: [nahmed094@gmail.com](mailto:nahmed094@gmail.com)*

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Considering that the students' academic performance and achievement are contingent on the teacher effectiveness, lack of instructional leadership in primary schools of Pakistan, including both urban and city areas, has been a serious issue as it remained a root cause of ineffective teaching in the schools. This issue needs to be addressed on a priority basis. This quantitative research analysed teachers' perceptions regarding the effect of instructional leadership practices of primary school head-teachers on teacher effectiveness. By using the Principal, Instructional Management Rating Scale (PIMRS) and the Self-Assessment Instrument for Teacher's Evaluation (SITE) data from 560 primary school teachers of the Korangi District, Karachi, were gathered through a stratified sampling technique. The dataset of 512 valid cases was used for the analysis. The data screening and demographic features of respondents were examined using SPSS 22 and measurement and structural model were analysed through the Smart PLS. The analysis revealed that the instructional leadership practices of the primary school head-teachers concerning school inputs, school processes and school outcomes have a significant impact on teacher effectiveness whereas both teacher gender and experience have an insignificant moderating roles between instructional leadership practices and teacher effectiveness. It is recommended that the head-teachers of primary schools, adopt instructional leadership style to improve teacher effectiveness and ultimately students' academic performance and achievements.

**Keywords:** *Instructional leadership practices, input, process, outcomes, teacher effectiveness*

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### **Introduction**

Primary education is the bedrock of the entire education pyramid and the most important cardinal sub-sector of the foundation of educational organizations of any country in the world. In Pakistan however, the primary schools are experiencing ineffective school administration, management and leadership practices (Bashir & Khalil, 2017; Gulistan, 2015; Khan, 2012) which ultimately become the root cause of ineffective teaching by the primary school teachers and poor student outcomes in these schools (NEP, 2017; NEPF, 2018).

Many research studies (such as Moonsammy-Koopasammy, & Schmidt, 2013; Salo, Nylund, & Stjernström, 2015; & Ali, 2017) have highlighted the position of instructional leader in school effectiveness and improvement. It is expected that school head-teachers focus on

promoting successful teaching and learning strategies so that students attain academic achievement. Therefore, while focusing on learning for students, the educational reforms around the world put emphasis on overall school leadership, particularly instructional leadership (Pashiardis & Johansson, 2016).

Head teacher's position as an instructional leader is central to addressing many existing issues in primary schools. These include, capacity building, enhancing the teachers' professional skills and creating a more effective general workplace environment and conducive atmosphere for teaching (Niqab, Sharma, Wei, & Maulod, 2014). Considering the impact of instructional leadership on teachers' professional skills and practices as well as on students' learning (Day, Gu, & Sammons, 2016; Salo et al., 2015), various scholars suggest that potential researchers

should research on the practices of instructional leadership as well as on the context-specific circumstances in which the instructional leadership is implemented in a variety of school settings (Hallinger, Wang, Chen, & Liare, 2015; Pan, Nyeu, & Cheng, 2017). Instructional leadership of school heads enhances the teachers skills, knowledge and competencies (Shengnan & Hallinger, 2020). So this research has concentrated on understanding the effect of instructional leadership practices on the teacher effectiveness at the primary school level.

### **Literature review**

#### **Instructional Leadership as a theoretical framework**

The idea of instructional leadership rose out of instructional effective elementary schools (Kraft, Papay, Charner-Laird, Johnson, Ng, & Reinhorn, 2012) that depicted the role completed by the school head and having a powerful instructional leadership in schools (Hallinger, 2005).

#### ***Hallinger and Murphy's Model***

Hallinger and Murphy (1985) established the conceptual framework that is most widely used to explain the role of instructional leadership. This concept proposes three dimensions in this position: (1) defining school mission; (2) managing instructional program; and (3) promoting a positive learning climate for schools. These three dimensions can be considered the practices of instructional leaders which support professional learning for teachers. Eventually, instructional leaders aim to build the school learning environment that motivates, and encourages teachers, and sustains school's professional learning (Zheng, Yin, & Li, 2019). Hallinger and Murphy's conceptual framework is summarized through the Principal Instructional Management Rating Scale (PIMRS) which has been used in various school contexts across the world to analyze the practices of instructional leadership of school principals (Hallinger & Chen, 2015).

Hallinger and Murphy (1985) have divided instructional leadership in a number of dimensions which include: framing the school goals, communicating school goals, professional development, supervising and evaluating instruction, protecting instructional time, monitoring student progress, coordinating curriculum development, maintaining high visibility, providing incentives for teachers and providing incentives for learners (Hallinger & Murphy, 1985). In current research, the dimensions of instructional leadership were merged into three categories considered as factors affecting teacher effectiveness, these include: (1) practices of instructional leaders concerning school inputs; (2) practices of instructional leaders concerning school processes; and (3) practices of instructional leaders concerning school outcomes. Teacher effectiveness is the competency-based prerequisite for teaching that involves knowledge, skills, and values that support teachers to achieve their professional goals (Suleman, Aslam, Sarwar, Shakir, & Hussain, 2011) and assist them to monitor and evaluate student's progress and outcomes (Akram & Zepeda, 2015). According to Akram and Zepeda (2015), effective teachers are explicit about their goals and are informed about curriculum content and teaching strategies. They are informed about receiving guidance for their students' needs and predicting misconceptions in their prior knowledge.

#### ***Practices of Instructional Leaders concerning School Input [PILSI] and teacher effectiveness***

The responsibilities of a school principal concerning staff, include, ensuring : (1) a specific plan is developed that highlight measurable goals; (2) an emphasis on academic achievement pervades; (3) resources are integrated with the objectives; and (4) ensuring that goals are frequently visited. While setting goals starts as a first-order change, it becomes a second-order change when leaders express their ideas and beliefs and coordinate their actions

accordingly. To change in second order takes a shape as resources are positioned strategically to support teachers and students learning (Hallinger, 2005).

With respect to setting and communicating goals, Robinson, Lloyd and Rowe (2008) argue that these goals are specific and embedded in the activities and procedures of the school's classroom through a purposeful vision of common values, imbuing a sense of identity that motivates others. The significance of framing and communicating school goals with consistency is seen as an important factor concerning a principal leadership which is seen through providing a vision, clear learning goals and the highest standards for all students that directly affect students' academic achievements.

Liu and Hallinger (2018) examined the impact of principals' instructional leadership on teacher professional learning in China at middle schools through Hallinger and Murphy's (2005) PIMRS. They found that framing school goals, communicating school goals and providing professional development by principals (input practices) have a moderate level direct and indirect effect on teacher professional learning or effectiveness. However, Ismail, Don, Husin and Khalid (2018a) assessed the relationship of instructional leadership and teachers' functional competency across the 21st Century in Malaysia. Ismail, et al. (2018a) found that practices of instructional leaders concerning school input (framing the goals, communicating the school goals and providing professional development opportunities) have a significant and positive relationship with teacher competencies or teacher effectiveness at primary and secondary level schools. Outcomes of the research revealed that instructional leadership provided by the school principals have a significant effect on teachers' effectiveness or competencies at primary and secondary level. Similarly, Ismail, Mansor, Iksan and Nor (2018b) used Hallinger and Murphy's (2005) model

and examined the influence of principals' instructional leadership on science teaching competency in Malaysia at secondary level. Ismail et al. (2018b) found that practices of instructional leaders concerning school input (framing the school goals, communicating the school goals and professional development opportunities) have a significant effect on science teaching competencies/teacher effectiveness. The review of literature thus supported framing  $H_1$ .

*H<sub>1</sub>: The practices of instructional leadership concerning the school input [PILSI] have a significant positive effect on teacher effectiveness.*

### ***Practices of instructional leaders concerning school process [PILSP] and teacher effectiveness***

Improving teaching and learning remained the greatest obstacle faced by leaders of schools as overseeing the instructional program is not the singular responsibility of the principal. The principal, however is responsible for coordinating, controlling and evaluating the curriculum and instructional program (Hallinger, Wang, & Chen, 2013). Measuring student progress is synonymous with measuring student learning progress through diagnostic, formative, structured and criterion-based assessments for curriculum, assessment purposes, school instructional changes, and developing intervention measures, to ensure that the school is making progress towards identifying student achievement objectives. Cotton (2003) asserted the value of continuously improving transparency through progress analysis and the use of student progress data to educate programs. The role of principal in tracking student progress is not only supporting the timely collection of student data, but also evaluating the data to guide the next phase (Leithwood, Harris, & Hopkins, 2020). The school principal as an instructional leader protects instructional time which means that the principal ensures that procedures of the school provide uninterrupted slots of instructional time in the classrooms. Such

leader maintains high visibility across campus and in classrooms to ensure his/her constant contact with students and teachers. The school principal as an instructional leader also regularizes professional support and development for teachers (Ali, 2017). Relationship of instructional leadership and teachers' functional competency across the 21st Century in Malaysia was measured at primary and secondary level. Hallinger and Murphy (1985) instructional leadership model was used. Instructional leadership practices of school principal that include measuring student progress, coordinating curriculum, protect instructional time, maintaining high visibility and supervision and evaluating instructions (process practices) found to have a significant and positive effect on teacher competencies or effectiveness at primary as well as at secondary school levels (Ismail et al., 2018a). Similar results were found from another research in Malaysia (Ismail et al., 2018b) and China (Liu & Hallinger, 2018) when Hallinger and Murphy's (1985) model was used to assess the influence of principals' instructional leadership on science teachers' teaching competencies. Both the research studies found that principal's role in measuring students' progress, coordinating curriculum, protecting instructional time, maintaining high visibility and evaluating instructions effect significantly on students' competencies. The results of these studies revealed a significant positive effect of instructional leadership practices of a principal concerning school processes on teacher effectiveness. The literature thus encouraged formulating H<sub>2</sub> for the current study.

*H<sub>2</sub>: The practices of instructional leadership concerning the school processes [PILSP] have a significant positive effect on teacher effectiveness.*

***Practices of instructional leaders concerning school outcomes [PILSO] and teacher effectiveness***

Practices of instructional leaders concerning outcomes can be assessed

through the provision of incentives by the leader for teachers and the students. Providing incentives for teachers is a general concept that aims to match goals, expectations and rewards through a more structured human resource management framework. The single pay structure and tenure scheme limit the principal in terms of inspiring teachers by using monetary incentives. Money can only be marginally more effective in schools, than praise and appreciation as an motivation. This proposes that the principal should make the best enough use of formal and informal techniques to inspire teachers and build a trust, shared esteem and success-based school culture (Hallinger, Wang, Chen, & Liare, 2015).

The role of the Principal protected under the result activity heading is the feature that offers learning opportunities. School learning environment can be built, in which students attain great academic achievement. Positive school environment can be shaped which means offering students several, tangible opportunities to be praised and appreciated for their academic achievement and progress. The benefits do not have to be stylish or costly, but students should have possibilities to be acknowledged both within the classroom and in front of the school as a whole because of their success. This aspect of instructional leadership covers the functions of commitments for leading learning for the principal and the leadership team at the school. Nonetheless, putting those roles in the wider sense of how leadership exerts its impact in schools is also useful (Hallinger, Wang, Chen, & Liare, 2015).

One of the aspects of leading learning is supporting instructional planning and strategy that involve various responsibilities accepted by the teachers that involves the connection between the curriculum and the student. Studies on aspects of teaching that contribute to improved student learning can be explored in the following areas: instructional

differentiation, learning emphasis, instructional clarification, instructional ambiguity, student learning perceptions, the use of technology and questioning (Habib, 2017). Furthermore, according to Hill, Rowan and Ball (2005), the subject matter knowledge of teachers has been attracted by the policy maker in recent years in order to provide effective teaching for students. It requires that teachers demonstrate subject-matter competency as teaching has a direct effect on students learning in the classroom. Relationship of teachers' functional competency and instructional leadership across the 21st Century in Malaysia was described by Ismail et al. (2018a). Instructional leaders' practices concerning school outcomes (provide incentives for teachers and provide incentive for learning) have a significant and positive effect on teacher competencies or teacher effectiveness at primary and secondary level schools. Similar results were found by Ismail et al. (2018b) in Malaysia and Liu and Hallinger (2018). These studies encouraged to formulate H<sub>3</sub> for the current study.

*H<sub>3</sub>: The practices of instructional leadership concerning the school outcomes [PILSO] have a significant positive effect on teacher effectiveness.*

#### **Moderating Role of Teacher's Gender**

According to psycho-sociological perspective (Aikhenvald 2016), gender shapes the perception of an individual about his/her environment as well as other individuals. Hallinger and Murphy (1987) acknowledged the potentials of addressing gender-related variables as a component in recognizing instructional leadership in the earlier conception of instructional leadership. In over 30 years of longitudinal studies in instructional leadership (input, process and outcome practices), gender remains one of the most studied variables (Hallinger 2011; Hallinger, Dongyu & Wang, 2016). While most of the studies relate to gender as an antecedent variable that defines the nature of instructional leadership (input, process and outcome

practices), looking at gender as a factor shaping the leadership perspectives of teachers provides a different angle for understanding instructional leadership functions including practices concerning inputs, processes and outcomes (Day, Gu, & Sammons, 2016). Lee, Smith and Cioci (1993) stated in a study conducted in the United States that male and female teachers view leadership styles differently from those of their principal. Similarly, Jantzi and Leithwood (1996) consider the gender of teachers as a factor that shape school leadership ideals and expectations. Thus, they characterize the perspectives of female teachers as being more inclined towards interpersonal relationship and capacity building (Ghavifekr, Radwan & Velarde, 2019). The literature supports in formulating the following hypotheses for the current study.

*H<sub>4a</sub>: Teacher's gender moderates the effect of instructional leaders' practices concerning the school inputs [PILSI] on teacher effectiveness.*

*H<sub>4b</sub>: Teacher's gender moderates the effect of instructional leaders' practices concerning the school processes [PILSP] on teacher effectiveness.*

*H<sub>4c</sub>: Teacher's gender moderates the effect of instructional leaders' practices concerning the school outcomes [PILSO] on teacher effectiveness.*

#### **Moderating Role of Teacher's Teaching Experience**

According to Hammond (2000) notes that teachers with greater knowledge of teaching and learning are more highly rated by the students are more successful in the teaching career. Teachers with varying experience levels may need different types of support from their principals. There are major variations in student ratings between teacher classes based on experience in teaching, and years of working with the current principal. Hammond (2000) observed that more weighted is given to those teachers whose service length is higher than those teachers who taught in parallel classes. Teachers having teaching

experience, view the practices of instructional leadership differently than those who have less teaching experience (Zorlu & Arseven, 2016, and Bredeson, 2000). The literature review supported formulating the following hypotheses.

*H<sub>5a</sub>: Teacher's teaching experience moderates the effect of instructional leaders' practices concerning the school inputs [PILSI] on teacher effectiveness.*

*H<sub>5b</sub>: Teacher's teaching experience moderates the effect of instructional leaders' practices concerning the school processes [PILSP] on teacher effectiveness.*

*H<sub>5c</sub>: Teacher's teaching experience moderates the effect of instructional leaders' practices concerning the school outcomes [PILSO] on teacher effectiveness.*

**Conceptual Framework**

The pictorial representation (Refer to Figure 1) of the conceptual framework is presented below. This conceptual framework depicts that the practices of instructional leaders concerning school inputs, school processes and school outcomes have direct effect on teacher effectiveness. The figure also indicates that both teacher gender and experience moderate the effect practice of instructional leaders concerning school inputs, processes and outcomes on teacher effectiveness.

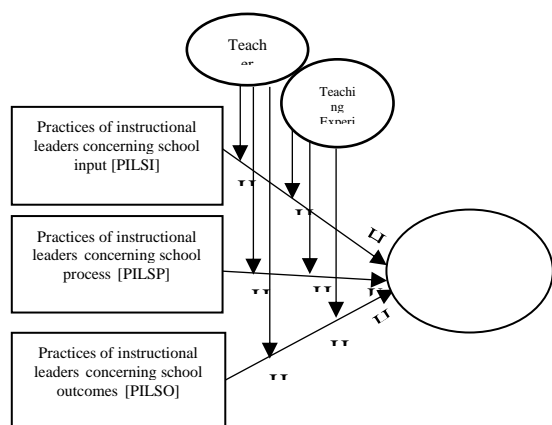


Figure.1: Conceptual Framework

**Table 1:**

Reliability of the Instruments

Adapted from: (Hallinger & Murphy, 1985) and (Akram & Zepeda, 2015).

**Methodology**

This research used a quantitative approach to evaluate the effect of primary school head-teachers' instructional leadership practices on teacher effectiveness.

**Sample and Data Collection**

The targeted population for the current research was public primary school teachers located in District Korangi, Karachi. The reason for selecting Korangi district was multicultural population present in the district, representation of both urban and rural areas in the same district which could support understanding instructional leadership in a variety of contexts. By using the stratified random sampling technique, 560 survey questionnaires were distributed among the teachers working in 86 primary schools in District Korangi, Karachi. Response rate was 96 percent as 538 questionnaires were returned. Out of which six (6) were rejected as they were incomplete and 20 were rejected in data screening for multivariate outliers by using Mahalanobis distance and multiple checks (Ghorbani, 2019). The final dataset contained 512 questionnaires which was used for further analysis.

**Instruments**

Two instruments that were adapted after seeking permission from the authors included Principal Instructional Management Rating Scale (PIMRS) developed by (Hallinger & Murphy, 1985) and Self-assessment instrument for Teacher Evaluation scale (SITE) by (Akram & Zepeda, 2015). Both instruments were pilot tested before collecting the main data. The overall reliability of the instruments as well as the reliability of the sub-sections were between the acceptable ranges (Refer to Table 1)

Factors	Cronbach's Alpha	Number of Items
PILSI	0.863	07
PILSP	0.754	05
PILSO	0.688	05
Instructional Leadership Overall	0.898	17
Teacher Effectiveness	0.914	11

**Table 1 Principal Instructional Management Rating Scale (PIMRS)**

Principal Instructional Management Rating Scale (PIMRS) teacher short form (Hallinger & Murphy, 1985) meets the technical reliability and validity requirements as a research instrument and has been used in more than 200 leading studies in the USA, Canada, Australia, Europe, and Asia (Hallinger, 2011). In the current study the items of the teacher short form PIMRS were arranged in three categories including practices of instructional leaders concerning school inputs (PILSI), practices of instructional leaders concerning school processes (PILSP) and practices of instructional leaders concerning school outcomes (PILSO). The instrument has 17 items (PILSI = 7 items; PILSP = 5 items; PILSO = 5 items). (Appendix A).

#### **Self-Assessment Instrument for Teacher Evaluation scale (SITE)**

The self-assessment instrument for the Teacher Evaluation scale (SITE) (Akram &

Zepeda, 2015) was used to assess teacher effectiveness through measuring teacher instructional planning and strategy, teacher subject matter knowledge, teacher assessment and teacher effective communication of primary school teachers. This instrument consisted of 11 items to measure teacher effectiveness. All these 11 items were measured at a five points Likert scale ranging from almost never to almost always (Akram & Zepeda, 2015). (Appendix B).

#### **Demographics of the study**

Table 2 provides demographic details of the participants. The table indicates that 62 percent of females and 38 percent male teachers participated in this study and almost half of the teachers (49%) were having graduation as a qualification. A reasonable percentage of teachers (29%) were holding 11-20 years teaching experience where majority of them (56%) were between 41 and above age group. Amongst the total valid sample cases (n = 512), 62.3 percent were females and the remaining 37.7 percent were males.

**Table: 2**

*The Research Demographic details*

Demographic with sample size n= 512 Primary School teachers	Frequency (f)	Percentage (%)
Male	193	37.7
Female	319	62.3
Total	512	100

	B.A	250	48.8
Qualification	M.A	243	47.5
	M.Phil.	19	3.7
	Total	512	100
	1-10years	137	26.8
Teaching	11-20years	149	29.1
Experience	21-25years	123	24.0
	26years and Above	103	20.1
	Total	512	100
	25-30 years	25	4.9
	31-35 years	69	13.5
Age	36-40 years	131	25.6
	41 years and above	287	56.0
	Total	512	100
	Less than 01 years	42	8.2
	2-4 years	287	56.0
Working Duration with School Head	5-9 years	138	27.0
	10-15 years	32	6.3
	16 years and above	13	2.5
	Total	512	100
	Male	203	39.6
Head Gender	Female	309	60.4
	Total	512	100

Table 2 **Data Analysis**

By using the Smart PLS version 3.2.8 data were analyzed. Smart PLS was used to



validate the external model's validity and reliability, and to test the research hypothesis (Ringle, Wende, & Becker, 2015). It is one of the sophisticated statistical tools widely used for Structural Equation Modelling of the Partial Least Square (PLS-SEM).

**The Measurement Model (Outer Model)**

To ensure adequate validity and reliability of the measurement or outer model, content validity, convergent validity, and discriminant validity were measured . The content validity of the model was achieved as factor loading (Refer to Table 3) were above 0.7 (Hair, Ringle, & Sarstedt, 2011). Cronbach's alpha is the lower boundary, whereas the composite reliability (CR) is the upper boundary for the internal

consistency reliability of the research model (Hair, Risher, Sarstedt & Ringle, 2019). Table 4 reflects that the values of Cronbach's alpha as well as CR for all the factors are above the threshold value (minimum = 0.7). This describes that the construct reliability and validity of the current research was established (Hair, Risher, Sarstedt, & Ringle, 2019). As all factor loadings were above 0.7 (Table 3) and the values of average variance extracted (AVE) were greater than 0.5 (Table 4), the convergent validity is maintained (Hair et al., 2019) which indicate that group of items for each factor measure the respective factor.

**Table: 3**

Table 3

Factor Loadings	IP	OC	PR	TE
IP1	0.809			
IP2	0.781			
IP3	0.749			
IP4	0.829			
IP5	0.811			
IP6	0.728			
IP7	0.738			
OC1		0.777		
OC2		0.702		
OC3		0.763		
OC4		0.751		
OC5		0.752		
PR1			0.741	
PR3			0.832	
PR4			0.790	
PR6			0.779	
PR7			0.743	
TE1				0.802

TE10	0.803
TE11	0.851
TE12	0.868
TE2	0.796
TE3	0.825
TE4	0.823
TE6	0.838
TE7	0.838
TE8	0.822
TE9	0.786

IP= Practices concerning school inputs;  
 PR=Practices concerning school process;  
 OC= Practices concerning school outcome;

TE= Teacher effectiveness.

**Table: 4**

Construct Reliability and Validity

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)
IP	0.891	0.915	0.606
OC	0.809	0.865	0.561
PR	0.836	0.884	0.605
TE	0.952	0.958	0.678

Table 4 To confirm that a set of items can discriminate a factor from other factors, three results were analyzed. (1) All items strongly loaded against their perspective domain (Refer to Table 5) when compared with cross-loadings of the items in factors in rows and columns (Fornell & Larcker, 1981); and (2) All values of Heterotrait-

Monotrait (HTMT) ratios (Refer to Table 6) are < 1. Thus the discriminant validity test (HTMT<sub>inference</sub>) rejects the null hypothesis (H<sub>0</sub>: HTMT ≥ 1) against the alternative hypothesis (H<sub>1</sub>: HTMT < 1) (Henseler, Ringle & Sarstedt, 2015).

**Table: 5**

Cross Loading and Loadings

	IP	OC	PR	TE
IP1	<b>0.809</b>	0.562	0.665	0.528
IP2	<b>0.781</b>	0.538	0.617	0.471
IP3	<b>0.749</b>	0.538	0.606	0.435
IP4	<b>0.829</b>	0.601	0.638	0.535
IP5	<b>0.811</b>	0.577	0.671	0.578

IP6	<b>0.728</b>	0.468	0.578	0.448
IP7	<b>0.738</b>	0.550	0.632	0.496
OC1	0.587	<b>0.777</b>	0.595	0.480
OC2	0.451	<b>0.702</b>	0.420	0.273
OC3	0.508	<b>0.763</b>	0.463	0.382
OC4	0.499	<b>0.751</b>	0.472	0.355
OC5	0.560	<b>0.752</b>	0.557	0.521
PR1	0.597	0.481	<b>0.741</b>	0.435
PR3	0.691	0.537	<b>0.832</b>	0.491
PR4	0.589	0.510	<b>0.790</b>	0.417
PR6	0.597	0.505	<b>0.779</b>	0.505
PR7	0.669	0.622	<b>0.743</b>	0.466
TE1	0.564	0.461	0.561	<b>0.802</b>
TE10	0.492	0.392	0.443	<b>0.803</b>
TE11	0.526	0.478	0.509	<b>0.851</b>
TE12	0.556	0.472	0.533	<b>0.868</b>
TE2	0.523	0.454	0.498	<b>0.796</b>
TE3	0.525	0.448	0.456	<b>0.825</b>
TE4	0.527	0.451	0.495	<b>0.823</b>
TE6	0.553	0.511	0.509	<b>0.838</b>
TE7	0.532	0.443	0.488	<b>0.838</b>
TE8	0.496	0.417	0.438	<b>0.822</b>
TE9	0.533	0.531	0.469	<b>0.786</b>

**Table: 6**  
Heterotrait-Monotrait Ratio (HTMT)

	IP	OC	PR	TE
IP				
OC	0.814			
PR	0.936	0.809		
TE	0.695	0.607	0.666	

**Table 6 The Structural Model (Inner Model) and Hypotheses Testing**

Upon evaluating and determining the validity and reliability of the research model, the Partial Least Squares-Structural Equation Modelling (PLS-SEM) in Smart PLS 3.2.8 was adopted (Ringle et

al., 2015) to test the study's proposed hypotheses. The PLS-SEM methodology offers better estimates than other methods focused on covariance (Hair et al., 2013) thus was adopted for the current study. As shown in Table 7, all factors of instructional leadership practices of school head-teachers including: practices concerning school inputs (IP) (t = 4.869, p = 0.000),

practices concerning school processes (PR) (t = 2.823, p =0.005), and practices concerning school outcomes (OC) (t = 2.234, p =0.026), have a positive and significant effect on teacher effectiveness. It thus concluded that three hypotheses (H<sub>1</sub>, H<sub>2</sub> and H<sub>3</sub>) for the current research were supported.

**Table: 7**

Hypothesis testing results

No	Variables	Original	Sample	Standard	T	P	f <sup>2</sup>	Decision
		Sample	Mean	Deviation(SD)	Statistics	Values		
		(O)	(M)					
H1	Input -> TE	0.383	0.376	0.079	4.869	<b>0.000</b>	0.079	<b>Supported</b>
H2	Process -> TE	0.170	0.167	0.060	2.823	<b>0.005</b>	0.025	<b>Supported</b>
H3	Outcomes -> TE	0.169	0.165	0.076	2.234	<b>0.026</b>	0.016	<b>Supported</b>

p < 0.05

Table 7 indicates that the teacher gender does not moderate the effect of IP on TE (t =0.198, p = 0.843), PR on TE (t =0.624, p = 0.533), and OC on TE (t = 0.346, p = 0.730). Similarly, teacher experience does not moderate the effect of IP on TE (t =0.190, p = 0.849), PR on TE (t = 0..230, p = 0.818) and OC on TE (t =0.377, p = 0.706). Thus while practices of instructional leadership concerning school

inputs, school processes and school outcomes have a significant positive effect on teacher effectiveness, teacher's gender and experience have no moderating role between the instructional leadership practices and teacher effectiveness at primary level. It thus concluded that all six proposed hypotheses and (H4a, H4b, H4c, H5a, H5b, and H5c) were not supported.

**Table: 8**

Moderating Effect

No	Constructs	Original	Sample	Standard	T-	P	Decision
		Sample	Mean	d	Statistics	Valu	
		e (O)	(M)	Deviation	( O/STDEV)	es	
				(STDEV)			
H4a	IP*Gender -> TE	0.018	-0.051	0.089	0.198	0.843	<b>Not Supported</b>

H4b	PR*Gender -> TE	0.042	0.064	0.067	0.624	0.533	Not Supported
H4c	OC*Gender -> TE	-0.019	0.015	0.055	0.346	0.730	Not Supported
H5a	IP*Exp -> TE	0.017	-0.007	0.091	0.190	0.849	Not Supported
H5b	PR*Exp -> TE	-0.015	0.013	0.065	0.230	0.818	Not Supported
H5c	OC*Exp -> TE	0.026	0.021	0.068	0.377	0.706	Not Supported

**Table 8 Predictive Relevance of the Model**

The predictive relevance of the structural model construct was analyzed through R-square and Stone-Geisser's Cross-Validated Redundancy (Q square). The value of R-squared is an important criterion for evaluating the PLS-SEM structural model and is known as the coefficient of determination (Hair et al., 2013). The threshold values for R-squared is 0.10 (Falk & Miller, 1992). Table 9 reveals that all factors of instructional leadership explain 45.5 percent (R-square = 0.455) of teacher effectiveness which indicates that the current research has achieved the required

value of R-square. In addition, the importance of Cross-Validation Redundancy (Q square) was checked to ensure the research model consistency (Stone, 1974). The Q square value > 0 (Q Square = 0.302) reveals the research model's predictive relevance was established (Refer to Table 9). According to Hall and Cohen (1988) the effect size ( $f^2$ ) 0.02, 0.15 and 0.35 respectively represent low, moderate and strong effects. Table 7 presents effect size ( $f^2$ ) of all the factors of instructional leadership, which describes that the three practices of instructional leaders used in this study have a weak effect on teacher effectiveness.

**Table: 9 Predictive relevance of the construct**

	R Square	Adjusted R-Square	Q-Square
Teacher Effectiveness (TE)	0.455	0.443	0.302

**Discussion**

This research was conducted to analyse whether or not three factors, namely, the practices of instructional leaders concerning school inputs (PILSI), the practices of instructional leaders concerning school processes (PILSP) and the practices of instructional leaders concerning school outcomes (PILSO) have a significant positive effect on teacher effectiveness. Whether or not teacher gender and teaching experience have a significant moderating effect on teacher effectiveness. By using the SmartPLS, nine hypotheses (H<sub>1</sub>, H<sub>2</sub>, H<sub>3</sub>, H<sub>4a</sub>, H<sub>4b</sub>, H<sub>4c</sub>,

H<sub>5a</sub>, H<sub>5b</sub> and H<sub>5c</sub>) were tested. The result revealed that each of the three factors, that is, PILSI, PILSP as well as PILSO have a significant positive effect on teacher effectiveness while teacher's gender and experience have no moderating effect between instructional leaders' practices and teacher effectiveness.

The result of the current study is consistent with the previous literature which observed a significant effect of leadership practices concerning school inputs, processes and outcomes on teacher effectiveness (Ali, 2017; Hallinger & Chen, 2015; Hallinger & Hosseingholizadeh, 2019; Ismail et al.

2018b) and practices of instructional leaders on the teachers' professional learning (Shengnan & Hallinger 2020 & Ismail et al. 2018a).

However, among the three predictors investigated the current study, PLISI have the highest significant positive effect ( $f^2 = 0.079$ ), PLISO have a medium effect ( $f^2 = 0.025$ ) and PLISP ( $f^2 = 0.016$ ) have a very weak effect. The result guided to infer that the primary school teachers in District Korangi rely heavily on the leadership practices concerning school inputs such as improving student enrolment, provision of teachers, infrastructure, curriculum, reading material, teaching aids and other classroom facilities, rewards and benefits and so on and consider leadership practices concerning school process such as classroom teaching and learning, creating learning environment conducive for students' teachers' comparative less important for teacher effectiveness. This finding is consistent with Ghazi, Ali, Khan, Hussain and Fatima (2010) who found that the quality education in Pakistan was contingent on the school inputs including, low student enrolment, high drop out, low budget allocation, low quality curricula and books. Input practices of school heads enhance the classroom practices of primary school teachers but practices such as involving teachers while deciding objectives of the school and clarifying objectives to each and every staff member of the schools are equally important. Similarly, professional development opportunities for teachers play a vital role in enhancing teachers' daily classroom practices which ultimately increase student result.

The primary school teachers throughout Sindh are experiencing a number of issues, many of which are concerning school inputs, that impact negatively on the teacher effectiveness. Where general phenomenon of poor quality inputs exists in public schools of Sindh there Mujahid and Noman (2015) investigated 48,865 schools in Sindh and found that inequalities in

terms of infrastructure, net enrolment, gender-wise and district-wise availability of schools, number of student enrolment, availability of teachers, number of classrooms and student teacher ratios. Mujahid and Noman (2015) found that when contrasted with public schools in rural areas, the public schools in urban areas of Sindh such as Karachi and Hyderabad were comparatively better in terms of school inputs. Therefore the quality of education in urban areas of public schools is better than the quality of public schools in rural areas of Sindh. The findings of the current research is in the portal of general perception of teachers working in public schools and struggling with issues concerning with school inputs. The current research however, also found that the school processes and outcomes also have a significant impact on teacher effectiveness whereas gender and experience of teachers have no moderating effect among instructional leadership and teacher effectiveness. These findings are similar to those results of the researchers who found that perceptions of male and female teachers are same (Sisman, 2016, & Hallinger, 1992).

### **Recommendations**

On the basis of the findings of the current research, the following recommendations were made:

- The current research found that the practices of the instructional leader concerning the school inputs have a significant positive effect on the teacher effectiveness. It is therefore recommended that the heads of primary public schools in Karachi specifically and the heads of primary public schools in Sindh generally, improve their practices regarding the framing of shared goals for their schools that focus on student learning, - communicating the school goals to the teachers and staff, ensuring that classroom teaching and learning are aligned with the school goals, improving student enrolment, utilizing the school infrastructure and

other resources for student learning and providing professional development opportunities for teachers' effectiveness.

- The current study revealed that the practices of the instructional leader concerning the school processes have a significant positive effective on the teacher effectiveness. It is therefore recommended that the head teachers of the primary schools in Sindh monitor and evaluate the students' and the teachers' progress on regular bases, review students' work, participate in cocurricular activities and have meetings with the teachers to discuss students' and teachers' progress and encourage teachers to use innovative techniques to improve student learning and teacher effectiveness.

The current study provided reasonable evidence to support that the instructional leaders' practices concerning the school outcomes have a significant positive effect on the teacher effectiveness. Thus the study recommends that the head teachers of primary public schools in Sindh appreciate students' work by sharing their exemplary work at different forums such as paratent teacher meetings, school noticeboard, local magazines and so on. It is also recommended that the head teachers appreciate teachers' progress by giving certificates, sharing the contribution of the teachers in the faculty meetings, displaying their progress on the staff bulleton board and by providing professional development opportunities to further enhance their teaching skills. It is recommened that the concerned governtment official appreciate public primary school students', teachers' and head teachers' performance in improving practices for school input, school process and school outcomes so that other schools, tecahers and students in the primary schools in the Korangi district as well as throughout Sindh are motivated to work for their schools.

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