P-ISSN: 2709-6254	Journal of Development and Social Sciences	July-Sep 2021, Vol. 2, No. III
O-ISSN:2709-6262	http://doi.org/10.47205/jdss.2021(2-III)31	[362-377]

Journal of Development and Social Sciences
www.jdss.org.pk

RESEARCH PAPER

Secondary School Teachers' Perceptions of their Head Teachers Instructional Leadership and its Effect on Teachers' Professional development in Karachi Pakistan

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PAPER INFO

Received:
June 11, 2021
Accepted:
September 07, 2021
Online:
September 11, 2021

Keywords:
Instructional Leadership,
Professional Development,
Teachers Perceptions

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ABSTRACT

The purpose of this study is to ascertain secondary school teachers perceptions of their head teacher instruction leadership and its effect on their professional development because Lack of instructional leadership in secondary schools in Karachi Pakistan has been an attentive issue as it has remained a root cause of ineffective teaching practices in the schools, ultimately caused students' low academic performance and poor quality of education. A quantitative research design with a survey technique was used to investigate teachers' perceptions of secondary school head teachers' instructional leadership and its effect on teacher professional development. Participants were chosen through a stratified random sampling technique, and data were collected from 374 secondary school teachers using the Instructional leadership (ILQ). Descriptive analysis was done through SPSS 22 and the Smart PLS was used for calculations, reliability, validity and hypothesis testing of the measurement and structural models. The findings of the current study revealed that secondary school teachers' perceptions about their head teachers' instructional leadership behaviours, as a curriculum implementer, monitoring student progress and protecting their instructional time in the classroom have a significant and positive effect on teacher professional development. It is suggested that secondary school principals of Karachi, Pakistan should adopt and incorporate instructional leadership behaviours like; curriculum implementer, monitoring students' progress and protecting their instructional time to improve secondary school teachers' professional development.

Introduction

A country's educational system is not complete without secondary education, which is the backbone of the entire pyramid (NEP, 2017; & NEPF, 2018). School management and leadership are lacking in Sindh Pakistan's secondary schools. This is the

main cause of ineffective secondary school teaching and poor student outcomes (Bashir & Khalil, 2017; Gulistan, 2015; Khan, 2012). The past studies indicate that teachers need to continue their professional growth for strengthening their competence and teaching skills in order to improve their students' learning. However, such professional development programs generally requires a significant time and commitment of the teachers, as well as a substantial financial commitment of the school authority that provide resources to it (Jacob, Hill, & Corey, 2017; Lee, & Kim, 2016). Consequently, it is important to select that area that leads to teachers positive professional development fruitful outcomes. There are so many factors that influence Teachers' professional development, and there is no fixed scale to gauge it (Justi & Van Driel, 2006). Additionally, structural effects are extensively accepted having effects on teachers' teaching and learning. School organizational limitations and cultural practises, also effect on teachers' professional learning (Kershner, Pedder, & Doddington, 2013). It is broadly accepted and observed that school head teachers' as leaders have a significant effect on teachers' professional learning and grooming for the effective teaching in their classrooms, and it is important that school leaders as a head teacher must support, promote, and appreciate teachers who take the initiative to engage in professional learning (Goldsmith, Doerr, & Lewis, 2014; Lachance & Confrey, 2003).

The head-teacher's role as an instructional leader is very crucial in solving many of the problems of the present era related to secondary school teachers' capacity building and professional development (Huggins, Klar, & Andreoli, 2020; Niqab, Sharma, Wei, & Maulod, 2014).

Past studies indorses that instructional leadership has a significant effect on teachers' professional skills and educational activities and students' learning and they recommend that researchers must explore the phenomenon of instructional leadership and its effects on teachers professional development in the various contexts and specific circumstances under which they are engage teaching learning (Day, Gu, & Sammons, 2016; Salo, Nylund, & Stjernstrøm, 2015; Pan, Nyeu, & Cheng, 2017). The aim of this research was to look into the effects of instructional leadership on secondary school teacher professional development.

Literature Review

Teacher professional development

It can be described as activities that help teachers enhance their knowledge, skills, and attitudes about teaching (Postholm, 2012). Many school reform campaigns have regarded teachers' engagement in professional development as critical to improving teachers' attitudes and behaviours, student learning, and the adoption of educational policies (Babinski, Amendum, Knotek, Sánchez, & Malone, 2018; Kim & Lee, 2020).

Instructional leadership

The concept of instructional leadership originated from instructional effective elementary schools (Kraft, Papay, Johnson, Charner-Laird, Ng, & Reinhorn, 2015), which

depicted the role of the school head teachers and the importance of providing good instructional leadership in schools (Hallinger, 2005).

Instructional Leadership Model

The Instructional leadership model used in this study was developed by (Akram, Kiran, & İLĞAN, 2017), which suggests four dimensions: (1) the school leader's position as a curriculum implementer; (2) the monitoring of students' progress; (3) the protection of instructional time; and (4) teacher professional development. These dimensions can be assumed as instructional leadership strategies that help teachers to enhance their professional growth. Ultimately, head teachers as instructional leaders create good learning atmosphere in the school that motivates and inspires to learners and keep the teachers' professional learning programs on going (Zheng, Yin, & Li, 2019).

Akram et al., (2017 divided_Instructional leadership is divided into following dimensions by, including the school leader's position as a curriculum implementer, monitoring students' progress, protecting instructional time, and providing professional development to teachers.

Dimensions of Instructional Leadership:

The following dimensions of instructional leadership were included in the current study as factors influencing teachers' professional development: (1) school leader as a curriculum implementer; (2) monitoring students' progress; and (3) protecting teachers' instructional time. Teacher professional development is a competency-based requirement for teaching that includes expertise, skills, and values that help teachers meet their professional objectives and track and assess student success and outcomes (Akram & Zepeda, 2015; Suleman, Aslam, Sarwar, Shakir, & Hussain, 2011).

School head teacher as a curriculum implementer and teacher's professional development

(Liu & Hallinger, 2018) examined the impact of principals' instructional leadership on teacher professional learning in China at middle schools through (Hallinger & Murphy, 2013) PIMRS. They found that providing professional development by principals has a moderate level of direct and indirect effects on teacher professional learning or effectiveness. However, (Ismail, Don, Husin, & Khalid, 2018b; Ismail, Mansor, Iksan, & Nor, 2018a; Ismail et al., 2018b) assessed the relationship of instructional leadership and teachers' functional competency across the 21st Century in Malaysia and found that instructional leaders' practices curriculum implementer has a significant and positive relationship with teacher competencies or teacher professional development at secondary schools. The Outcomes of their research revealed that instructional leadership provided by the school principals has a significant effect on teachers' competencies in the secondary schools.

Similarly, (Ismail et al., 2018b) used (Hallinger & Murphy, 2013) model and examined the influence of principals' instructional leadership on science teaching competencies in Malaysia at the secondary school level and found that those instructional leaders' which practices as curriculum implementers have significantly effect on science

teachers' teaching competencies. Thus the review of literature supported hypothesis 1 of the current study.

H_1: The secondary school head teacher as a curriculum implementer has a significant positive effect on teacher's professional development.

School head teacher as monitoring students' performance and teacher's professional development

Measuring student progress involves evaluating student learning progress by diagnostic, formative, standardised, and criterion-based evaluations for curriculum, evaluation. (Cotton, 2003) stressed the importance of improving accountability over time through progress measurement and student progress data in order to inform programmes. The school head teachers' role in monitoring student progress entails not only assisting in the timely collection of data, but also reviewing the data in order to direct the next step (Leithwood, Harris, & Hopkins, 2020). Improving teaching and learning remained the most significant obstacle faced by head teachers, as a leader of the school to manage the instructional program is the responsibility of a head teacher. The head teacher also administers the curriculum and instructional programs, coordination, supervision, and evaluation (Hallinger, Wang, & Chen, 2013). The school head teacher as an instructional leader also regularizes professional support and development for teachers (Ali, 2017).

The association of instructional leadership and teachers' functional competencies was measured at the primary and secondary school levels in Malaysia using (Hallinger & Murphy, 1985) instructional leadership model. Instructional leadership practices of the school head teachers that include measuring student progress are found to have a significant and positive effect on teacher competencies or professional development at primary and secondary school levels (Ismail et al., 2018b). Similar results were found from another research in Malaysia (Ismail et al., 2018a) and China (Liu & Hallinger, 2018) when (Hallinger & Murphy, 1985) model was used to assess the influence of head teachers instructional leadership on the teaching competencies of science teachers. Both research studies found that head teachers' role in measuring students' progress significantly affected teachers' competencies. These studies' results revealed a significant positive effect of instructional leadership practices of a head teacher on monitoring student progress and teacher professional development. Thus, the past empirical studies encouraged to formulate H_2 for the current study.

H_2: The head teacher as an instructional leader of monitoring progress has a significant positive effect on teacher professional development.

School head teacher as an instructional leader to protect instructional time and teacher's professional development

The school head teacher as an instructional leader protects instructional time, which means that the head teacher ensures that the school's procedures provide uninterrupted slots of instructional time in the classrooms. A good head teacher as instructional leader always maintains high visibility across campus and in classrooms to

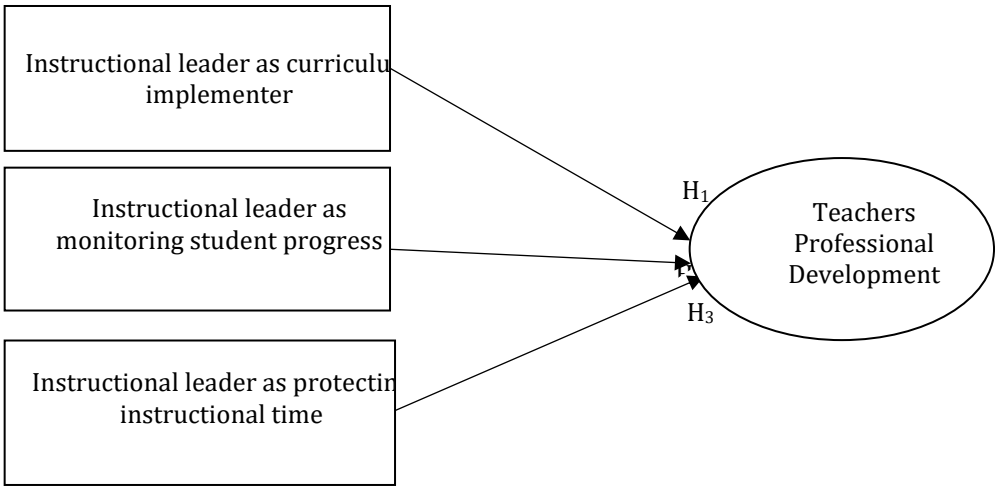
ensure his/her constant contact with students and teachers, he/she as an instructional leader also regularizes professional support and development for teachers (Ali, 2017; Craig, 2017).

The school head teachers' instructional leadership practices that protect instructional time were found to have a significant and positive effect on teacher competencies or professional development in the secondary school (Ismail et al., 2018b). Similar results were found from another research in Malaysia (Ismail et al., 2018a) 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. So the previous research studies found that head teachers' role in protecting instructional time, significantly affects teachers' competencies or professional development. These studies revealed a significant positive effect of head teachers' instructional leadership practices as protecting instructional time on teacher professional development competencies, thus it encouraged to formulate H_3 for the current study.

H_3: The secondary school head teachers as an instructional leader for protecting instructional time has a significant positive effect on teacher professional development.

Conceptual Framework

The conceptual framework depicts that instructional practices of secondary school head teacher concerning the school leader as a curriculum implementer, monitoring students' progress, and protecting instructional time directly affect teachers' professional development.



Error! Reference source not found. Adapted from: (Akram, Kiran, ILGAN, 2017)

Material and Methods

Secondary school teachers' perceptions of their head-teachers' instructional leadership and its impact on teachers' professional growth were evaluated using a quantitative research approach.

Sample and Data Collection

The targeted population for the current research was secondary school teachers of Karachi Sindh. The reason for selecting secondary schools of Karachi, because of its multicultural population and it represented of both urban and rural areas which could support understanding of the instructional leadership in various contexts. Using the stratified random sampling technique, 430 survey questionnaires were distributed among the teachers working in secondary schools in Karachi, 380 questionnaires were returned and response rate was 88 percent, out of 380 six (6) were rejected as they were in-completed in data screening. The final dataset contained 374 questionnaires which were used for further analysis.

Instrumentation

Instructional Leadership Questionnaire (ILQ)

The instructional leadership questionnaire was adapted after seeking permission from the author (Akram et al., 2017). The instructional leadership questionnaire (ILQ) meets the technical reliability and validity requirements as a research instrument. In the current study, the items of the instructional leadership questionnaire were arranged in four categories, including school leader as curriculum implementer (CI), monitoring student progress (MP), protecting instructional time (IT), and teachers' professional development (PD). The instrument has 20 items (CI = 4 items; MP = 5 items; IT = 4 items and PD= 7 items). The instrument was pilot tested before collecting the primary data. Three items were deleted from the questionnaire due to low factor loading in the pilot study phase, one from curriculum implementer and two from protecting instructional time. The overall reliability of the instrument sub-sections was between the acceptable ranges (Refer to Table 1)

Table 1
Reliability of the Instruments

Factors	Cronbach's Alpha	Number of Items
CI	0.910	04
MP	0.935	05
IT	0.919	04
Teacher Professional Development	0.910	07

Results and Discussion

Demographics profile of the participants

Table 2 provides demographic details of the participants. The table indicates that amongst the total valid sample (n = 374), there were 65.8 percent of females and 34.2 percent of male teachers which participated in this study, and (62%) were having master's qualification. A reasonable percentage of teachers (51.6%) having professional qualifications M.Ed., and holding 6-10 years of teaching experience with the percentage of (44.4%).

Table 2
The Research Demographic details

Demographic with sample size n= 374 Primary School teachers		Frequency (f)	Percentage (%)
Gender	Male	128	34.2
	Female	246	65.8
	Total	374	100
Academic Qualification	Intermediate	09	2.4
	Graduation	85	22.7
	Masters	232	62.0
	M.Phil	47	12.6
	PhD	01	0.3
	Total	374	100
Professional Qualification	PTC	23	6.1
	ADE	05	1.3
	B.Ed	153	40.9
	M.Ed	153	51.6
	Total	374	100
Teaching Experience	1-5years	86	23.0
	6-10years	166	44.4
	11-15years	52	13.9
	16-20years	30	8.0
	More than 20 years	40	10.7
	Total	374	100

Data Analysis

Smart PLS was used to test the hypothesis and confirm the validity and reliability of the external model (Ringle, Wende, & Becker, 2015). For Partial least squares structural equation modelling (PLS-SEM), it is one of the most advanced statistical methods available.

The Measurement Model (Outer Model)

For the outer model's assessment to be valid and reliable, content validity, convergent validity, and discriminant validity were all examined to be sure. This phenomenon was detected in the model when factor loading was higher than 0.7. (Hair, Ringle, & Sarstedt, 2011). (See Table 3 below.). In terms of internal consistency reliability, Cronbach's alpha represents the lower constraint, and composite reliability (CR) represents the upper bound (Hair, Risher, Sarstedt, & Ringle, 2019). Each variable's alpha and CR values are more significant than the threshold value (minimum = 0.7), as shown in Table 4. This means that the study's reliability and validity have been established (Hair et al., 2019). As long as the factor loadings were more significant than 0.7 and the average variance extracted (AVE) values were more significant than 0.5, the convergent validity

was maintained, implying that each group of items measures the same factor. (See Tables 3 and 4).

Table 3

Factor Loadings	IP	OC	PR	TE
Ci1	0.849			
Ci3	0.868			
Ci4	0.842			
Ci5	0.916			
IT1		0.782		
IT2		0.837		
IT3		0.887		
IT4		0.771		
MP1			0.759	
MP2			0.771	
MP3			0.711	
MP4			0.737	
MP5			0.832	
PD1				0.813
PD2				0.839
PD3				0.834
PD4				0.742
PD5				0.858
PD6				0.882
PD7				0.851

Ci= Curriculum Implementer;
IT=Instructional Time;
MP= Monitoring Progress;
PD= Teacher Professional Development.

Table 4
Construct Reliability and Validity

Constructs	**Cronbach's Alpha**	**Composite Reliability**	**Average Variance Extracted (AVE)**
Ci	0.892	0.925	0.756
IT	0.837	0.892	0.673
MP	0.820	0.874	0.582
PD	0.926	0.940	0.693

Three findings were analysed to confirm that a collection of items would differentiate a factor from other factors. (1) As opposed to cross-loadings of the items in factors, rows and columns (Fornell & Larcker, 1981), all items firmly loaded against their respective domain (see Table 5); and (2) All values of Heterotrait-Monotrait (HTMT)

ratios (Refer to Table 6) are 1. As a result, the discriminant validity test (HTMT inference) opposes the null hypothesis (H0: HTMT 1) and favours the alternative hypothesis (H1: HTMT 1) over the null hypothesis (H0: HTMT 1) (Henseler, Ringle, & Sarstedt, 2015).

Table 5
Cross Loading and Loadings

Items	Curriculum Implementer	Instructional Time	Monitoring Progress	Professional Development
Ci1	**0.849**	0.761	0.633	0.745
Ci3	**0.868**	0.756	0.610	0.735
Ci4	**0.842**	0.635	0.688	0.776
Ci5	**0.916**	0.790	0.715	0.809
IT1	0.561	**0.782**	0.567	0.621
IT2	0.713	**0.837**	0.581	0.655
IT3	0.724	**0.887**	0.550	0.674
IT4	0.767	**0.771**	0.586	0.674
MP1	0.659	0.564	**0.759**	0.626
MP2	0.590	0.465	**0.771**	0.605
MP3	0.598	0.581	**0.711**	0.635
MP4	0.533	0.560	**0.737**	0.526
MP5	0.517	0.484	**0.832**	0.611
PD1	0.656	0.593	0.603	**0.813**
PD2	0.770	0.611	0.659	**0.839**
PD3	0.704	0.621	0.671	**0.834**
PD4	0.676	0.611	0.617	**0.742**
PD5	0.738	0.771	0.685	**0.858**
PD6	0.760	0.732	0.627	**0.882**
PD7	0.819	0.709	0.735	**0.851**

Table 6
Heterotrait-Monotrait Ratio (HTMT)

	Curriculum Implementer	Instructional Time	Monitoring Progress	Professional Development
Ci				
IT	0.846			
MP	0.888	0.841		
PD	0.728	0.690	0.667	

The Structural Model (Inner Model) and Hypotheses Testing

After evaluating and assessing the research model's validity and reliability, the Partial Least Squares-Structural Equation Modelling (PLS-SEM) in Smart PLS 3.2.8 was used to evaluate the study's proposed hypotheses (Ringle et al., 2015). The PLS-SEM

methodology was chosen for this analysis because it produces better estimates than other covariance-focused approaches (Hair, Ringle, & Sarstedt, 2013). As seen in Table 7, all facets of school leadership, such as curriculum implementer (CI) (t = 10.751, p = 0.000), instructional time (IT) (t = 2.933, p =0.004), and monitoring students' progress (MP) (t = 7.478, p =0.000), have a significant and positive effect on teacher professional development. As a result, all three hypotheses (H1, H2, and H3) for the current study were found to be supported. (See table 7)

Table 7
Hypothesis testing results

No	Variables	Original Sample (O)	Sample Mean (M)	Standard Deviation(SD)	T Statistics	P Values	f^2	Decision
H1	Ci -> PD	0.559	0.559	0.052	10.751	**0.000**	0.387	**Supported**
H2	IT -> PD	0.144	0.143	0.049	2.933	**0.004**	0.032	**Supported**
H3	MP-> PD	0.265	0.266	0.035	7.478	**0.000**	0.158	**Supported**

$P < 0.05$

Predictive Relevance of the Model

R-square and Stone-Geisser's cross-validated Redundancy were used to assess the predictive value's predictive value (Q square). The R-squared value, also known as the coefficient of determination, is an essential criterion for evaluating the PLS-SEM structural model (Hair et al., 2013). The R-squared threshold value is 0.10 (Falk & Miller, 1992). Table 9 shows that all instructional leadership variables account for 81.8 percent (R-square = 0.818) of teacher professional development, indicating that the current study meets the R-square requirement. The meaning of Cross-Validation Redundancy (Q^2) was also investigated to ensure the study model's accuracy (Stone, 1974). The research model's predictive relevance was defined when the Q^2 value > 0 (Q^2 = 0.554). (Refer to Table 9). According to (Hall & Cohen, 1988), effect sizes (f^2) of 0.02, 0.15, and 0.35 indicate low, moderate, and strong effects, respectively. Table 7 indicates the effect size (2) of all instructional leadership variables, suggesting that the three instructional leader behaviours used in this analysis have a strong (CI), moderate (MP), and weak (IT) effect on teacher professional development.

Table 9
Predictive relevance of the construct

	R Square	Adjusted R-Square	Q-Square
Professional Development (PD)	0.818	0.816	0.554

Conclusion

That is what this study set out to find out. It looked at whether three variables, namely, the school leader as curriculum implementer, instructional time protection, and monitoring student progress, had a substantial positive impact on teacher professional development. H1, H2, and H3 were evaluated using Smart PLS. Three variables were shown to have considerable positive effects on the professional growth of teachers. It has

been shown in previous research that leadership activities, such as Curriculum Implementation (CI), Protecting Instructional Time, and Monitoring Students' Progress (MP), have a significant impact on teacher professional development (Ali, 2017; Hallinger & Chen, 2015; Hallinger & Hosseingholizadeh, 2020; Shengnan & Hallinger, 2020). In the current study, however, Curriculum Implementer (CI) had the largest significant positive effect (2 = 0.387), while Monitoring Students' Progress (MP) had a medium effect (2 = 0.158), and Protecting Instructional Time (IT) had a very weak effect (2 = 0.032). As a result of the findings, secondary school teachers in Karachi place a high value on implementing a leadership behaviour curriculum, such as improving student enrolment and providing teachers with professional opportunities. There is a strong correlation between the quality of education and the quality of school leaders in Pakistan.

School heads' curriculum implementer behaviour enhances the classroom activities of secondary school teachers and their professional development. Similarly, opportunities for teachers to engage in professional development play an essential role in improving teachers' everyday teaching activities and, as a result, improving student outcomes. Secondary school teachers across Sindh are dealing with various problems, many of which are related to school leaders' curriculum implementation, the protection of instructional time, and the monitoring of students' progress, all of which have a negative effect on teacher professional development (Mujahid & Noman, 2015). The current study's results portray general perceptions of teachers employed in public schools and dealing with problems relating to the school head as curriculum implementer. It was also discovered that the school head is monitoring students' progress and protecting instructional time directly impacted teacher professional development (Ahmad et al., 2020).

Recommendations

These recommendations are based on the findings of the current study:

- The current study indicated that instructional leadership as a curriculum implementer positively impacts teacher professional development. Consequently, secondary head-teachers in Karachi and secondary school principals in Sindh focus on student learning, classroom teaching, and learning linked with school goals.

- The current study found that the school head-teachers behaviour in evaluating student progress positively impacts professional development. Teachers should be encouraged to employ new ways to increase student learning and teacher professional development.

- The current study offered reasonable evidence to support the instructional leader's role in protecting teachers' instructional time on school grounds as having a significant favourable influence on professional development. As a result, the report suggests that secondary school principals in Sindh value instructors who attend classes regularly and safeguard their classroom time.

- It is suggested that the concerned government official recognize secondary school teachers' and head teachers' performance in improving leadership behaviours as

curriculum implementers, protecting instructional time, and monitoring students' progress, so that teachers in secondary schools in Karachi and throughout Pakistan's Sindh province are motivated to work for their schools and students..

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