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Teacher Professional Development and Instructional Leadership as Predictors of Classroom Practice in Urban Secondary Schools of Islamabad, Pakistan

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Abstract: *This paper has analyzed how professional development of teachers and their leadership of instruction can be used as predictors of classroom practice in urban secondary schools in Islamabad, Pakistan. This paper was framed to be a quantitative cross-sectional survey that was carried out in the public secondary schools under the Federal Directorate of Education. A questionnaire consisting of an organized questionnaire on data collection was used to gather 150 teachers who were sampled in 10 urban secondary schools and this survey aimed at measuring teacher professional development, instructional leadership and classroom practice. The tool showed good internal consistency, with Cronbach alpha of .906 in professional development,0.891 in instructional leadership, and.852 in classroom practice. Descriptive results showed moderately positive perceptions of professional development (M = 3.86, SD = 0.67), instructional leadership (M = 3.69, SD = 0.61), and classroom practice (M = 3.88, SD = 0.52). Correlation analysis showed that there were significant positive relationships between professional development and classroom practice (r =. 690, p <.001), between instructional leadership and classroom practice (r=. 651, p <.001), and between professional development and instructional leadership (r=. 603, p <.001). The regression analysis revealed that classroom practice was largely predicted by professional development, and the model was reinforced when instructional leadership was added as a parallel predictor. The two predictor model was able to explain the classroom practice variance at 56.3. The results indicate that the practice in Islamabad secondary schools is influenced by the involvement of teachers in professional development as well as the quality of instructional leadership in their schools. The paper reinforces the idea that teacher learning and school leadership must be built in a co-ordinated fashion to enhance the quality of instruction.*

Keywords: teacher professional development, instructional leadership, classroom practice, Islamabad, secondary schools

Introduction

The quality of teachers is still the heart of educational improvement since classroom learning is not only determined by curriculum and policy, but also by what teachers know, how they judge and practice on a daily basis. That is why professional development remains one of the significant instructional improvement leverages. The idea of high-quality professional development is often defined as critical in assisting teachers to improve pedagogy, adjust to the demand of shifting curriculums, and maintain effective classroom instruction (Darling-Hammond et al., 2017). The necessity of continuous teacher learning has also been highlighted in the Pakistani context of studies in which professional development is seen as a continuous process and not an event (Dilshad et al., 2019).

However professional development does not work in vacuum. Whether the school setting promotes

implementation, reflection, and improvement of instruction is frequently a matter of its practical usefulness. This is where the instructional leadership comes in. Instructional leadership concentrates the effort of school heads in teaching, learning, academic supervision, feedback, monitoring progress and establishing conditions under which teachers could enhance their work in the instructional area. According to a recent study in Turkiye, instructional leadership was positively linked to teachers professional learning, and the idea that leadership behaviors are important to teacher development in schools holds true (Sonmez et al., 2025).

In Pakistan, there is also evidence that indicates the same. In the research by Arfa Iqbal, Nasrullah, and Amin (2018), there was a positive correlation between the instructional leadership dimension and the teaching and learning practice among the secondary school educators in the Rawalpindi area. Similarly, there is national-level evidence in Pakistan indicating that professional teachers are more likely to exhibit superior classroom practices and are related to superior student learning outcomes, especially in comparison to teachers who are not professionally qualified (Ansari et al., 2024). Collectively, this literature is an indication that teacher development and school leadership are worth consideration when classroom practice is considered.

The current paper is based on such reasoning in the city of Islamabad. Schools managed by the Federal Directorate of Education are officially structured into city blocks, which offer a concise institutional context within which quantitative studies of schools in the capital territory are conducted (Federal Directorate of Education, n.d.). It is on this backdrop that the research question is whether teacher professional development and instructional leadership are crucial predictors of classroom practice in urban secondary schools in Islamabad. In so doing, it provides a more specific description of improvement in instruction in a public-school context in which teachers work under the same general administrative structure but might still have significant differences in the provision of support, leadership and professional learning opportunities.

Objectives of the Study

1. To investigate how professional development of teachers influences classroom practice in Islamabad of urban secondary schools.
2. To assess the effect of instructional leadership on classroom practice in urban secondary schools of Islamabad.
3. To ascertain the joint predictive validity of teacher professional development and instructional leadership to classroom practice.

Hypotheses

H1: Teacher professional development significantly predicts classroom practice.

H2: Instructional leadership significantly predicts classroom practice.

H3: Teacher professional development and instructional leadership jointly explain significant variance in classroom practice.

Method

The design of this study was a cross-sectional survey design that was quantitative. The target population were teachers in urban public secondary schools in Islamabad managed by Federal Directorate of Education. The formal institutional lists of the Directorate indicate well distinguished urban school groups in Islamabad which justified the constraint of the study to urban secondary schools (Federal Directorate of Education, n.d.).

A multistage sampling approach was used. The institutional frame came up with urban public secondary schools in the first stage. At the second stage, 10 schools were chosen to offer the representation of both

boys and girls schools. The sample size was finally narrowed down to 150 teachers (15 teachers per school). The resulting data was evenly distributed in terms of gender of schools and gender of teachers to produce 75 boys school respondents and 75 girls school respondents and equal amount of male and female teachers.

A structured questionnaire consisting of four sections was used to collect data. Section A was used to record demographic data. In Section B, teacher professional development was assessed using eight items in terms of relevance, practicality, frequency, follow-up support, and application of learning. Section C assessed instructional leadership in eight items that included instructional priority, instructional feedback, teaching collaboration, constructive monitoring, and instructional problem-solving support. Section D assessed classroom practice on eight items covering lesson planning, student engagement, adapting to learners needs, using assessments, classroom management, participation, and varied strategies. The responses to the substantive items were rated using a five-point Likert scale of 1 = strongly disagree to 5 = strongly agree.

The analysis of the dataset was done in the form of descriptive statistics, Cronbach alpha, Pearson correlation, and ordinary least squares regression. Since the interaction effect between teacher professional development and instructional leadership was not validated in the data, the ultimate model of analysis to be used did not consider the two constructs as moderated but as parallel predictors of classroom practice.

Results

The results are described in four sections, namely, respondent profile, reliability and descriptive statistics, correlation analysis, and regression analysis.

Table 1

Respondent profile (N = 150)

Category	**n**	**%**
Teacher gender: Male	75	50.0
Teacher gender: Female	75	50.0
School type: Boys	75	50.0
School type: Girls	75	50.0
Age 21-30	23	15.3
Age 31-40	72	48.0
Age 41-50	34	22.7
Age 51 and above	21	14.0

Note. The sample was distributed equally across 10 schools, with 15 respondents from each school.

The sample was balanced in terms of teacher gender and school gender, revealing that the sample was evenly distributed (Table 1). The majority of the respondents were in the 31-40 age category, which means that the sample included mostly early- to mid-career teachers but not very new or close to retirement teachers.

Table 2

Reliability and descriptive statistics for study variables

Variable	Items	α	M	SD
Teacher professional development	8	0.906	3.86	0.67
Instructional leadership	8	0.891	3.69	0.61
Classroom practice	8	0.852	3.88	0.52

Note. α = Cronbach's alpha.

All three scales had high internal consistency. The mean of the classroom practice was the highest and then followed by teacher professional development and instructional leadership had the least mean of the three constructs although positive.

Table 3

Correlations among study variables

Variable	1	2	3
1. Teacher professional development	1		
2. Instructional leadership	0.603***	1	
3. Classroom practice	0.690***	0.651***	1

*Note. *** $p < .001$.*

Table 3 shows that classroom practice was significantly and positively correlated with both teacher professional development and instructional leadership. The higher bivariate correlation was between the professional development of teachers and the classroom practice.

Table 4

Regression models predicting classroom practice

Predictor	B	SE	t	p
Model 1: Constant	1.800	0.182	9.901	< .001
Model 1: Professional development	0.538	0.046	11.603	< .001
Model 1 R^2	0.476			
Model 2: Constant	1.306	0.190	6.870	< .001
Model 2: Professional development	0.365	0.053	6.848	< .001
Model 2: Instructional leadership	0.315	0.058	5.399	< .001
Model 2 R^2	0.563			

Note. Dependent variable = classroom practice.

Regression analysis revealed that classroom practice in Model 1 was highly predicted by teacher

professional development. In Model 2 when instructional leadership was introduced, the two variables were still significant, with the explained variance increasing to 56.3%. This suggests that instructional leadership added a significant amount of value beyond that of professional development alone, although professional development was the more significant predictor.

Discussion

The results of this research lead to an obvious substantive conclusion: urban secondary schools in Islamabad are predisposed to the practice of classrooms by both the teacher-based professional learning opportunities and the school-level conditions of instructional leadership. Professional development proved to be a stronger predictor of classroom practice whereas instructional leadership also contributed independently when both variables were predominantly compared. This trend indicates that educators tend to report higher planning, engagement, use of assessment, classroom management and diverse instructional strategies when they believe that their professional learning is relevant, ongoing, practical, and transferable to everyday teaching.

The present study shows that teacher professional growth, as well as instructional leadership, is a strong predictor of classroom practice in urban secondary schools of Islamabad, Pakistan. Professional development was found to be the predictor of greater strength, but instructional leadership made a significant contribution of explanatory power to teacher learning. All these findings indicate that the enhanced classroom practice relies not only on the involvement in the training but also on the ability of the school leadership to maintain instruction as the focus of the school life. The article then justifies an efficient policy agenda towards urban public schools in Islamabad: empower teacher learning but, at the same time, empower the conditions of instructional leadership that assist teacher learning manifest in the daily classroom life.

Conclusion

The scope of this study was restricted to urban secondary school in Islamabad and based on self-reported data given by teachers using a cross-sectional survey. That is why the results ought to be viewed as the perception-related associations and not as the effects that have been determined over time. The analyses that were done were sufficiently based on the sample size, yet the geographic focus is deliberately narrow. Future researchers can apply this model in rural schools, comparative studies across the public and the private sectors or take classroom observation and longitudinal design to determine whether or not the reported practice is reflected in the observed instructional behaviour over time.

Limitations and Delimitations

Third, urban planning of Islamabad education must promote better assimilation of teacher training and in-school follow-up. Learning might begin with workshops and formal development sessions, but will become more stable as school leaders reinforce instructional expectations, promote professional discussion, and observe classroom practices in positive ways. This is particularly applicable in secondary schools in the public whereby uniformity in the quality of instruction is impacted by the competency of teachers and the organization.

The research has a number of implications in practice. To start with, professional development must be viewed as the key process of enhancing classroom practice, yet its formulation must be in close connection with the reality of instruction. The less frequent, abstract, and loosely followed up training is less likely to result in classroom level change compared to training that is sustained, applicable and relevant to the real pedagogical work of the teachers themselves. Second, the role of school heads and administrators should not be made a peripheral player in teacher development. The current findings reveal that instructional leadership is a contributing factor to the classroom practice on its own, and this implies that policies that aim at addressing teacher training without enhancing the school leadership are using a significant lever of improvement.

Implications

Administratively, the findings are also of significance viewed in the context of Islamabad. The sampling frame was based on urban public schools in the Federal Directorate of Education whose institutional organization formally segregates urban schools and offers a field of administratively consistent educational inquiry based on schools. This implies that the current results are directly applicable to an actual governance context where both teacher improvement and instructional supervision are policy-relevant improvement levers.

The analytical usefulness of the non-support of the previously considered moderation concept is also applicable. It implies that instructional leadership does not enhance the impact of professional development in an interactional manner in this data. Rather, instructional leadership and professional development are parallel predictors. This is a more specific interpretation of the evidence and builds the credibility of the article since the end model has been held on the grounds of real outcomes as opposed to expectation. This is not a weakness but indicates that the educational processes might be additive, rather than being conditional, in this institutional context.

The composite regression model had more variance in classroom practice as compared to professional development. This implies that instructional leadership brings about an additional explanatory value to the learning experiences of teachers. Although the current article does not consider instructional leadership as a moderator anymore, the results remain an effective contribution as they demonstrate that the practice in urban Islamabad classrooms can be well explained in terms of a multi-factor perspective. A teacher can go to training and learn helpful strategies, but the degree to which the strategies will become normalized in the classroom routines might still lie in the school climate of being instructionally oriented.

The second notable trend is that professional development and instructional leadership have a positive relationship. This means that these variables are not independent school experiences. It is also possible that schools with teachers who feel that there is stronger instructional leadership have stronger and more supportive professional development, more followed up, and more meaningfully related to instructional work. The significance of this relationship in interpretation is due to its hint at complementarity as opposed to redundancy. Professional development seems to bolster teacher capability, and instructional leadership to bolster the school circumstances in which that capability is put into action.

Instructional leadership is also an important role. It was not found to be stronger than professional development, but was statistically significant in the combined model, indicating that classroom practice cannot be accounted by teacher learning only. This finding is consistent with the perception that school leaders have a role in teaching quality through instructional priorities, teaching monitoring, feedback, promoting cooperation, and an academic climate where teachers can transfer learning to practice. Practically, the Islamabad findings indicate that, despite the teacher training, the school leadership remains important since it maintains the focus on teaching within the respective school.

This finding that professional growth is an important predictor of classroom practice is in line with the larger evidence base regarding effective teacher learning. Synthesis of research has indicated on numerous occasions that the quality of professional development enhances pedagogical repertoire of teachers when it is content-based, sustained, practice-based, and is accompanied by reflection and implementation opportunities. In that regard, the current results are theoretically consistent: teachers that underwent a more intensive professional development also cited a more intensive classroom practice since professional learning seems to offer practical teaching tools instead of being a symbolic activity.

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