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Instructional Leadership and Students Academic Performance: Mediating Effects of Teacher's Organizational Commitment

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Abstract. This study investigates the mediating effects of teacher organizational commitment on the relationship between principal's instructional leadership and students' academic performance. Principals' effective leadership performance is assumed to be responsible for students' academic performance. However, many findings from the literature indicate no significant direct effect between instructional leadership and students' academic performance. Therefore, the current study hypothesized that principals' instructional leadership indirectly enhances students' academic performances through teacher organizational commitment. Data obtained from 440 primary school teachers from the state of Azad Jammu & Kashmir of Pakistan and pre-existing school academic performance data obtained from each school participated. The data were analyzed using structural equation modeling, employing AMOS. The study's findings indicate that there is an indirect positive effect of principals' instructional leadership and students' academic performance through teacher's organizational commitment. Hence, schools with higher instructional leadership levels had better teachers, commitment to school, teaching work, teaching occupation, workgroup, and higher student's academic performances. Therefore,

increasing the instructional leadership practices in schools through teacher organizational commitment contributes to Pakistan's overall student academic performances. Therefore, it is recommended to use instructional leadership components in the curriculum that effectively train new principals.

Keywords: Instructional leadership; Primary school; Principal; Students' academic performance; Teacher organizational commitment

1. Introduction

Educationists, mentors, and investigators have long been concerned about finding factors contributing to learners' performance. In order to produce a knowledgeable nation, the better factor to be confronted is the student's academic performances and different factors that affect a student's academic performances (Wahlstrom, Thomas, Leithwood, & Anderson, 2010). State-funded schools always confronted with challenges of improving student academic performances in Pakistan (Hayat, Nisar, Sajjad, & Abbas, 2018). The documented investigation about the role of factors established back in the seventeenth century. Researchers indicated that along with classroom instruction, an essential element in students' academic performance, leadership contributes better than any other factor (Leithwood, Louis, Anderson & Wahlstrom, 2004). Several researchers have echoed this idea stating the importance of leadership, particularly instructional leadership in an educational institution (Louis, Murphy & Smylie, 2016).

Excellence is determined predominantly on the way schools are managed more than on the significant number of existing resources. Proficiency in schools and expansion of teaching and learning is primarily influenced by the quality of leadership delivered by the head teacher (Louis et al., 2016). Principals are supposed to take responsibility for setting targets, guaranteeing coordination and team spirit, managing the organization established on shared values, creating opportunities, demonstrating practices, and supervising (McLeskey, Billingsley & Waldron, 2016). Researchers concluded that one of the leadership styles that has garnered interest in the principal job and its different dimensions to improve students' academic performance is instructional leadership (Hallinger, Hosseingholizadeh, Hashemi & Kouhsari, 2018). Instructional leadership investigators agree that teaching and achievement are the core of instructional leadership (Boyce & Bowers, 2018).

Alongside principals, teachers are the prevailing variable correlational to enhance students' academic performances. The ever-salient process of transforming teaching practice and especially in low performing schools are correlational to students' academic performances (Hines, Moore, Mayes, Harris, Vega, Robinson & Jackson, 2017). Educators have to undergo the various opinions of those assessing whether they can positively influence students and their academic progress. Conversely, what may be more critical is how teachers evaluate themselves regarding their talent to affect student academic performance. Likewise, achieving school objectives depends on a considerable part of the enhanced comprehension of the sources, nature, and increase of a teacher's organizational commitment (Tentama & Pranungsari, 2016). Awareness of

teachers' level of commitment is vital because it reveals their understanding of how captivating and meaningful their work experiences (Zhang & Jing, 2016). Empirical studies have shown a strong correlation among instructional leadership, teachers, and students' academic performances (Bush, 2017; Paletta, Alivernin & Manganelli 2017). Many studies indicated the inconsistency of these variables in size and direction. Thus, it is essential to observe the relationship between principal instructional leadership, teacher's organizational commitment, and students' performances.

In this study the researcher has re-analyzed formerly reported databases to test numerous models associating instructional leadership with student academic performance. Hence, the researchers focused on the mediating effects of teacher organizational commitment as a mediating variable that has not been earlier perceived as a source of indirect effect on the relationship between instructional leadership and students' academic performance. The researchers investigated by assembling what was observed as a model and then established numerous variants of it. The researchers anticipated that instructional leadership impacts student academic performance by enhancing the organization's capacity in terms of a teacher by their commitment to the organization's goals. In the current study, the researchers expanded the model to inspect the indirect effects of instructional leadership on student academic performance, using earlier research on instructional leadership and school improvement to hypothesis routes structured into the model.

2. Literature Review

Researchers have long been concerned in determining factors contributing commendably for the excellence of learner's performance. There are some internal factors in schools and also some external that affect students' academic performance. Studies of effective schools have concluded that school leaders and teachers affect student's academic performances more than other factors (Gannouni & Ramboarison-Lalao, 2018). Theoretically, a trustworthy and robust combination of school leaders and teachers can increase student academic performance. From the last many years' number of different innovative benchmarks and milestones in studying educational leadership have been made, but one of the most prominent with a high rate of empirical studies focused on it is instructional leadership (Hallinger et al., 2018). Difficulties of restructuring educational institutes have been noted as reasons for supporting Instructional leadership in schools (Kulophas & Hallinger, 2019). Instructional leadership progressed substantially across the past number of years in Western countries and evident higher students' academic performances (Hallinger et al., 2018; Leithwood, Patten & Jantzi, 2010).

Empirical investigations of instructional leadership have likewise started to appear in the emerging societies of Asia as well (Hallinger et al., 2018). Instructional leadership is a multifaceted progression, which varies across settings, based on individual style, school background, and components. Based on local empirical research, most of the principals in Pakistan had insufficient time to provide innovation to the school due to their administrative duties and day to day matters (Adeel, Soaib, Suhaida & Ramli (2020); Nasreen & Odhiambo, 2018).

Academic work has progressed in determining leadership impacts on student academic performances, but the literature is distributed on leadership's direct or indirect effects on student academic achievements. The recent research indicated that correlation among principals' direct leadership and student academic performances is little (DiPaola & Hoy, 2015). Research emphasizes indirect leadership impacts and such focus is heavily mediated by external variables like the dynamism of relationship and connections between leaders and the subordinates, teacher's organizational commitment, and other factors (Sebastian & Allensworth, 2012). One such influential aspect that is highly effective is the teacher's organizational commitment. Ross and Gray (2006) verified a model postulating that principals can enhance student performances indirectly through teacher commitment and beliefs. It is associated with many encouraging outcomes, comprising negligible absenteeism, work engagement, and greater job contentment (Hallinger et al., 2018). Research has revealed that teacher commitment has a positive impact on student academic performance (Xiao & Wilkins, 2015).

Improving the visibility of classroom implementation through teachers undoubtedly associated with such benefits as better-quality instruction, enhanced teacher commitment, and developed teacher attitudes toward professional development (Hallinger et al., 2018). Many researchers have recognized the same inferences for principals who used to be in classrooms and form instructional competence through comprehensive feedback (Thoonen et al., 2011). However, this method needs the principal in numerous classrooms maximum times, which rapidly converts into an incontrollable assignment. Therefore, a core issue for leadership is the enacting of potent leadership mediators that offer modest guidance to practising leaders, so they would be more focused on their efforts that will affect classroom practices and student learning to foster student's academic performance.

3. Model

Instructional leadership was anticipated for this study for the reason that it is harmonious with broadly based tendencies of teacher authorization, various stakeholders' contributions to school improvements. Also, substantial evidence exists that revealed teacher's organizational commitment has a positive impact on student academic performance (Xiao & Wilkins, 2015). Improving the visibility of classroom implementation through teachers undoubtedly associated with such benefits as better-quality instruction, enhanced teacher organizational commitment and developed teacher attitudes toward professional development (Hallinger et al., 2018; Azodi, 2006).

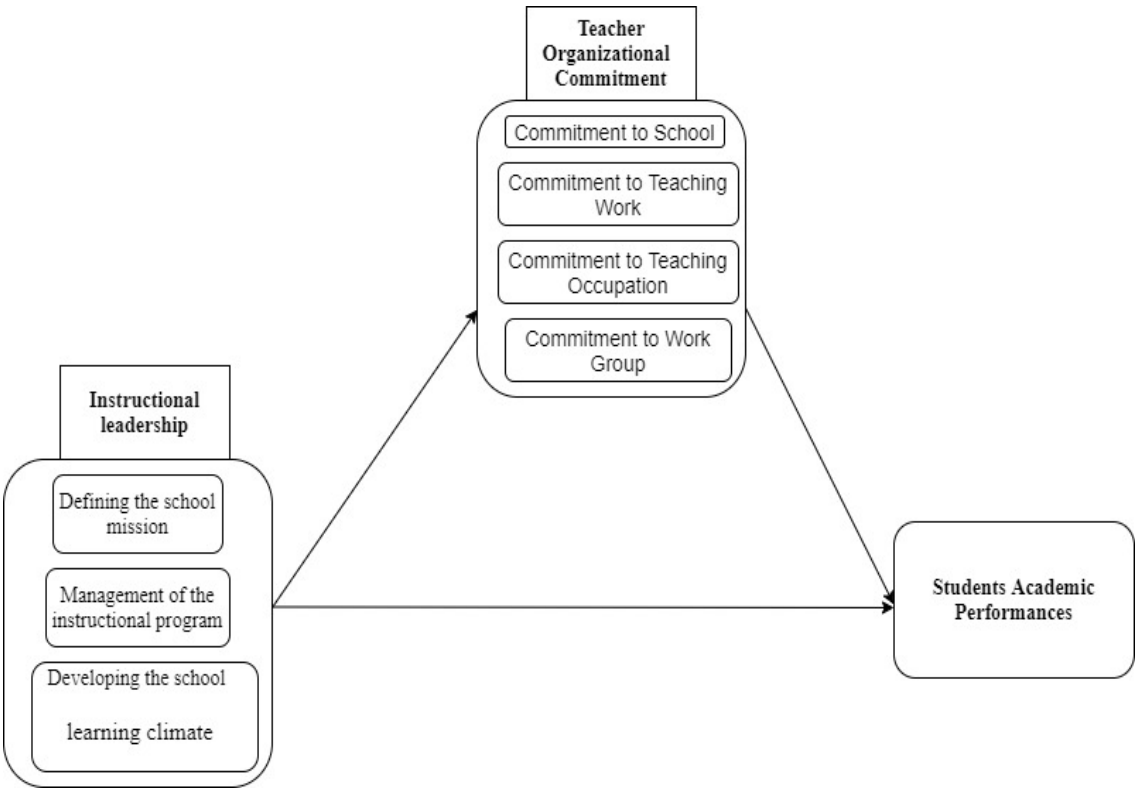

Figure 1. Hypothesized model linking Instructional leadership to student academic performance through teacher organizational commitment.

The model estimates that instructional leadership will affect teachers' organizational commitment delineated here as a commitment to school, teaching work, teaching occupation and workgroup. Zikhali and Perumal (2016) discovered from their empirical statistics that principal's instructional leadership practices had an encouraging influence on employees' commitment level in schools. A study conducted by (Ail, Taib, Jaafar, Salleh & Omar, 2015) using quantitative approaches explored instructional leadership and teachers' organizational commitment in Pahang Malaysia. The results displayed a significant relationship between the two variables. Concerning the implications of the study, the principal must practice his aptitude in instructional leadership expertise to nurture teachers' organizational commitment.

In Figure 1 above, four dimensions of organizational commitment were observed thus; commitment to school, commitment to teaching work, commitment to teaching occupation and commitment to the workgroup. The Figure further, recommends that all the dimensions of instructional leadership will contribute to each of the dimensions.

3.1 Path from organizational commitment to student's academic performance

It is anticipated that learner is a vital component of the educational process. Conferring to Tentama and Pranungsari, (2016) effective teachers require a high level of organizational commitment. It ultimately advocates that a high level of student accomplishment needs devoted teachers who contribute commendably. There is no uncertainty that the high level of student attainments is intensely

associated with a high level of organizational commitment. A study conducted by Avalos, (2011) found a positive relationship between teacher organizational commitment and students' academic performances. Also, in a study piloted by Joffres and Haughey, (2001) recommended that student performances, mainly in mathematics, are associated with specific components of communal schools. Students' performances in school appeared to be correlated to teacher commitment, cooperation, and concentration on students.

4. Method

In its basic framework, this study is quantitative research with a descriptive correlational research design. The researchers requested all primary teachers in the Muzaffarabad Division (three districts) of Azad Jammu and Kashmir Pakistan to participate. Schools were engaged if at least five teachers' responses were received from a school. Keeping in view the criteria we received responses of at least five teachers from (N = 79 schools; 440 teachers) out of total 217 schools and 1301 total teachers. To fulfill ethical considerations a consent letter was given to every participant to read and understand his/her right before participating in the study.

4.1 Sampling

For the present study cluster and simple random sampling was used to select an appropriate sample for the study. Campbell and Stanley (2015) identified that random selection of between 4 to 10 respondents in institute sufficiently represents the frame of mind and insights of the whole school. Accordingly, the researcher tried to get at least 5 from each school. To ensure the adequacy of the sample, a sample is chosen by noting the utmost quoted rules of thumb contained by multivariate analysis and the needs of data analysis using Structural Equation Modelling (SEM) with Analysis of Moment Structure (AMOS).

4.2 Instruments

The instruments for the study was adopted from prior studies (Celep, 2000; Hallinger & Murphy, 1985; Hallinger, 2013). Instructional leadership involved 50 items in determining teacher observations that their principal leads by defining the school mission, managing the instructional program and developing the learning climate of the organization and motivates its members to adjust to the demands of a competitive environment. Teacher commitment to an organization comprised of four variables: commitment to school, commitment to teaching work, commitment to teaching occupation and commitment to the workgroup. All dimensions consisted of five (05) items, each a total of 20 items to measure the overall organizational commitment of the teachers. Likert Scale with a 5-point scale (from 1 strongly Disagree to 5 Strongly Agree) were used to measure respondent's responses. The adequacy of the variables was tested with confirmatory factor analysis. Teachers completed the survey in November 2019. In this study student's academic performance characterized by the overall performance in each subject taken by the grade 5th students in a standardized examination across the state and culminated in a Grade Point Average (GPA). The GPA score was taken into account student's academic performance in course

work and examinations. The example method of calculating the student's academic performances is as shown below:
GPA = Sum of (number of grade *grade point) /Total number of the student taking the subjects. The minimum and maximum GPA scores are 1.0 (Grade A) and 5.0 (Grade E) respectively. This GPA score infers that the lower the score, the better the students had performed academically.

Table 1 describes the variables. All were reliable (alphas ranged from .84 to .93). Student academic performances correlated with all variables in the model.

Table 1: Results of Individual Reliability Test of the Constructs in the Instruments

Variables	Variable	Items	Cronbach's Alpha(Pilot Study)	Cronbach's Alpha(Main Study)
Principal Instructional leadership	FSG	5	0.934	0.911
	CSG	5	0.702	0.867
	SEI	5	0.867	0.846
	CTC	5	0.913	0.927
	MSP	5	0.874	0.932
	PIT	5	0.902	0.894
	PPD	5	0.907	0.913
	MHV	5	0.892	0.925
	PIFT	5	0.898	0.935
	PIFL	5	0.926	0.933
Techer's Organizational Commitment	CTS	5	0.802	0.866
	CTW	5	0.842	0.876
	CTO	5	0.894	0.885
	CTWG	5	0.899	0.895

The study has been subjected for normality test, the skew of all variables and items were laid between ±3 while the kurtosis was laid at ±7 (Byrne, 2013). Such reading can be interpreted as the data set of all items having normal distribution and thus, can be considered as well-modeled. Specifically, the skew and kurtosis readings can be seen within the range of -.299 to -.208 and -1.534 to -1.433 respectively.

5. Results

The process of determining appropriate methods in analyzing data was based on the hypothesis of the study. Statistical Package for Social Sciences (IBM SPSS) version 23 and the Analysis of Moment Structures (AMOS) version 23-based SEM was utilized to analyze the data obtained in this study. Furthermore, the study of discriminant validity and convergent validity through CFA and AMOS was used to validate the model of measurement. Conducting path analysis, the AMOS software was used again to examine the research hypotheses and construct the structural model. The SPSS was used to detect univariate outliers and conduct the frequency analysis (i.e., sample profile), descriptive analysis and internal reliability/Cronbach Alpha.

The path statistics displayed in Figure 2 are standardized regression weights. Figure 2 offers support for the indirect effects model of principal assistance to student's academic performance. The figure indicates that principals who implement instructional leadership styles contribute to teachers' organizational. There was an indirect effect of instructional leadership on student's academic performance. The path coefficients and the results of examining hypothesized mediating effects are presented in Table 3.

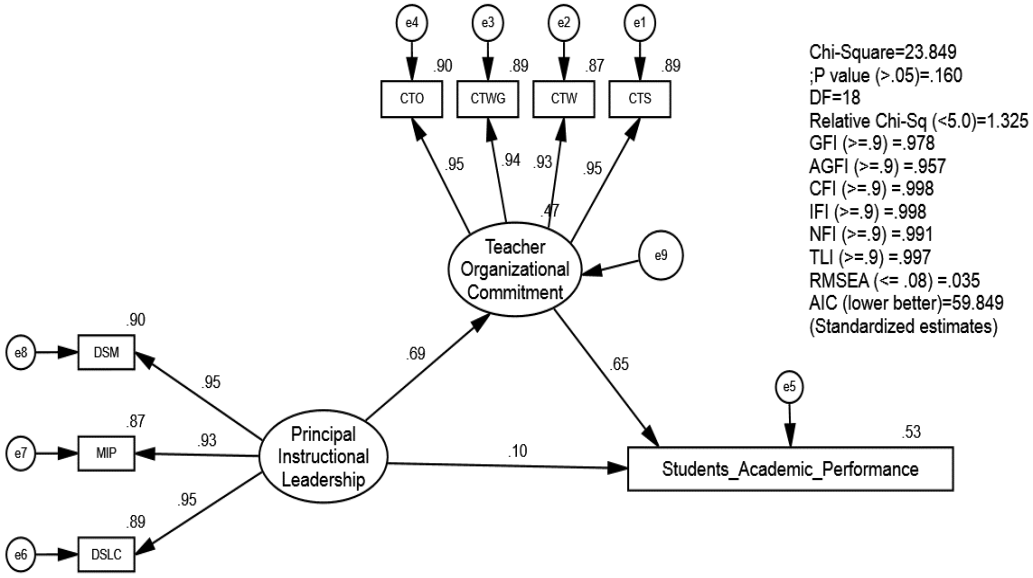

Figure 2. Base model linking instructional leadership to student academic performance through teacher organizational commitment

Table 2: Summaries of the Goodness-of-fit Indices of the Overall Measurement Model

CMIN	DF	CMIN/DF	RMSEA	AGFI	GFI	CFI	NFI	TLI
23.849	18	1.325	.035	.957	.978	.998	.991	.997

Each of the criteria for the goodness of fit was met. (Table 2 displays the summaries of the goodness of fit statistics for the model, for the exploration and validation samples).

Table 3: Results of Examining Mediation Effect of (TOC) on the Relationship between (PIL) and (SAP)

Model /Hypothesized Path	Beta	P	95% Confidence BC CI LB	UB
Direct Model				
PIL → SAP	.550	.000		
Full Mediation				
PIL → SAP	.103	.097		
Std. Indirect Effect (SIE)	.447	.000	.035	.560

The result showed that there is a significant relationship between Principal Instructional Leadership (PIL) and Student Academic Performance (SAP) in the

absence of Teacher Organizational Commitment (TOC), by way of the standardized total effect of .550 and P-value of 0.000. Therefore, the total effect of Principal Instructional Leadership (PIL) as IV on Student Academic Performance (SAP) as DV without the inclusion of Teacher Organizational Commitment (TOC) as M was statistically significant.

This relation remains insignificant after the inclusion of Teacher Organizational Commitment (TOC) into the model, with a standardized direct effect of 0.103 and a P-value of 0.097. Hence, the direct effect of Principal Instructional Leadership (PIL) as IV on Student Academic Performance (SAP) as DV with the inclusion of Teacher Organizational Commitment (TOC) as M was statistically not significant. Further, the results revealed that Principal Instructional Leadership (PIL) had a full mediation effect on Student Academic Performance (SAP) through Teacher Organizational Commitment (TOC) with the standardized indirect effect of 0.447 and P-value of 0.000 with LB .035 and UB is .560 and degree of mediation of teacher organizational commitment was full mediation.

6. Discussion

The results of the mediation analysis indicated that Teacher Organizational Commitment mediated the effects of Principal Instructional Leadership on Student's Academic Performance, i.e. full mediation. The results indicated that principal instructional leadership had a significant indirect positive effect on student's academic performance through teacher organizational commitment with standardized indirect effect (SIE) of 0.447 and P-value of 0.000. These findings remained consistent with previous research that has explored direct effects of leadership on student learning outcomes has stated weak effects, while research that has incorporated mediating variables has reported significant effects (Leithwood & Jantzi, 1999). Principals in this data analysis observed by their teachers as a practitioner of instructional leadership and enhance teamwork and commitment among teachers that improve Teacher's organizational commitment to generate new idea and knowledge, in turn, promotes student's academic performance.

Principals generally have potent effects on school processes than on student's academic performance, and statistically significant assistances to academic performances dependent on indirect effects have been demonstrated. These findings advocate that principals should exhibit instructional leadership practices as this expertise help to develop unity of vision and mission through the commitment and teamwork amongst teachers. Instructional leadership practices can bring teachers out of isolation and lead towards a commitment to teaching occupation for improvement. Principals can improve cooperation, production, and commitment by encouraging strong organizational commitment that emphasis improving the school environment and ultimately, student's academic performances. These findings are consistent with the findings of past studies. Empirical studies have discovered that school principal's work as instructional leaders has been associated indirectly with student's academic performances (Alig-Mielcarek, 2003; Hallinger, 2003). Alig-Mielcarek (2003) proposed that performing the dimensions of instructional leadership offers good foundations for

creating a climate that presses for academic consistency. On the other hand, principals will also require to offer resource support, through monitoring and informal discussions, that teachers have resources and classroom materials to teach curriculum efficiently.

7. Implications

7.1 Theoretical Implications

The focus area of this study, student's academic performance, is one of the educational development agendas of societies, regions, and nations as a whole. Therefore, the main contribution of this study concerns empirical literature by modifying and testing a framework that improves our knowledge, which indicates that instructional leadership and teacher organizational commitment are indeed antecedents to students' academic performances in the context of Pakistan. This study fills the existing gap in much western context literature on instructional leadership, teacher organizational commitment and students' academic performances, and it has proven that teacher organizational commitment is a valid mediator in this relationship. Hence, no doubt this study extends the Hallinger and Murphy, (1985) instructional leadership model and Celep (2000) model of organizational commitment.

The findings of the current study also underscore the importance of respondent's demographic background (such as teachers experience, years of service with the current principal), also finding indicates that these demographic factors influenced the perceptions of instructional leadership, teacher organizational commitment and students' academic performances, which then tried to explain the Pakistani level of response to the theories and models.

7.2 Practical Implications

As contained in educational reform there is an amplified emphasis on holding schools responsible for all student performances at all levels. Principals and teachers are under huge pressure to nurture student's performance scores that indicate school academic outcomes. Nevertheless, findings of this study have provided evidence base information that may be useful to assist practitioners and administrators to develop and manage policy directions regarding human resource management in the institutions. Also to regulate policies and practices that would have a positive impact on instructional leadership, teacher organizational commitment and students' academic performances such that principals, teachers, policymakers and stakeholders can make transformations to meet these challenges. By displaying behaviors consistent with instructional leadership through developing a positive organizational commitment will increase student academic performances.

Accountability is now filtering down to individual schools and classroom levels. Leading a school to meet these demanding standards is becoming imperative, not an exception. Leaders in schools need tangible activities they can implement to nurture a climate for accomplishments to flourish. This study offers principals with numerous suggestions for implementing instructional leadership behaviors and building a strong commitment that can establish a vision of academic success

for all students. Principals may start, in association with staff, students and community, to cultivate and communicate common goals (Murphy, 1990). Practitioners may offer mastery experiences for teachers by working together with them to develop school goals and curriculum; by ensuring the accessibility of instructional resources and by giving ample preparation time with associates. Instructional leaders may sort out vicarious experiences for their resources by displaying instructional strategies for educators who have had challenges enhancing student academic performance. Principals can also provide mediated experiences by targeting teachers with low levels of commitment to learn and observe an exemplary model of classroom instruction devised by the lead teachers and administrators. The present study has successfully developed a sound operational model and it is hoped to address the problem of students' academic performances by using a new model on the relationship between instructional leadership, teacher organizational commitment, and students' academic performances. Principal working towards improving instructional leadership skills in managing instructional programs might improve their organizational commitment and could, in turn, possibly improve student's academic performances (Blasé & Blasé, 2000).

8. Limitations

The study is not an exception like other research has some limitations the first involved the data collection method. Methodologically, restraint to quantitative research infers that relationships among leaders and other factors can be documented but cannot be completely understood.

The second limitation of the study researcher concentrated solely on primary schools situated in a single state of Pakistan. Because of reduced size and complication, primary schools are generally considered as a more encouraging environment for instructional leadership than other school levels (Bellibas, Bulut, Hallinger & Wang, 2016). Thus, it is possible that to some extent, different patterns might be established in other schools levels or primary schools sited somewhere else in Pakistan. The third limitation is to quantify Students' Academic Performances (standardized examination across the whole state of grade V). To determine comprehensive academic performances, it would be required to administer several tests during a student's academic career. The fourth limitation is the instruments that were used in the study are from the western country, which is already established. The researcher had minimal time to adopt and adapt a few tools and develop a new instrument that will suit with Pakistani context.

9. Conclusion

The purpose of the article is to investigate the mediating effect of teacher organizational commitment on the relationship between principal's instructional leadership and students' academic performance. The article made a valid hypothesis – Principal's instructional leadership enhances students' academic performance indirectly through teacher organizational commitment. For the study, cluster and simple random sampling were used to select the samples. The sample data from 440 primary school teachers have been collected. The data has been analyzed through structural equation modelling, employing AMOS.

The findings of the study appear very useful to the academic world. It is proved that there is an indirect positive effect of principal's instructional leadership (IL) on students' academic performance (SAP) through teachers' organizational commitment (TOC). It is also proved that teacher organizational commitment is a valid mediator in the relationship between instructional leadership and students' academic performance. The implication is that with higher levels of instructional leadership have better teachers commitment to schools, pedagogy works, and higher students' academic performance. Hence investing in instructional leadership (IL) practices in schools through teacher organizational commitment makes a vital contribution to overall student performances.
The study makes some practical insights as there is pressure on schools from parents and society to enhance the student performances. The study also makes a scope for further research using different measurements of academic performances. The instructional leadership components can be probed.

10. Recommendations

The current study promoted research about principal leadership by the contribution of an effective and reliable path that affects a student's academic performance. The student's academic performance model hypothesized in this study was supported by structural equation modelling. Through the exercise of monitoring the teaching and learning process, principals may work with teachers to categorize professional advancement needs. This study indicated that principals who promote professional development impacted academic performance. Base on the findings and their interpretations, the current study recommends the following for future research:
1) Future research should be conducted using different measurements of academic performances.
2) Future study should do a case study using mixed-methods that gathers insight from the principals on how they perceive their instructional leadership behavior effects on student's academic performance.
3) Future research should examine the use of instructional leadership components in the curriculum that effectively train new principals.
4) Future studies should be conducted to replicate the current study using different instruments for instructional leadership and teacher organizational commitment.

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