

MIDDLE LEADERSHIP CAPACITY AND CURRICULUM DELIVERY QUALITY IN PAKISTANI SECONDARY SCHOOLS: A QUANTITATIVE STUDY WITH GENDER AND EXPERIENCE AS MODERATORS

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Abstract

This study was an effort to explore the relationship between leadership capacity of the department head and subject coordinator with the quality of teaching and learning of the curriculum in secondary schools of Pakistan. It also investigated whether this relationship can be accounted for by teacher professional development, and whether gender, leadership experience and school sector (public or private) affects the strength of this relationship. The data were gathered from 264 department heads and teachers of 32 secondary schools in Punjab and Khyber Pakhtunkhwa. The results indicated that the quality of delivery of curriculum and the capacity of middle leadership had a strong positive correlation ($r = .66$), and middle leadership capacity explained 44% of the variance in curriculum quality between departments. A large proportion of this relationship (42%) could be attributed to teacher professional development. The strongest findings were from female department leaders and leaders with more experience, and a slightly stronger relationship between leadership capacity and curriculum innovation for private schools than public schools. The results indicated that investing in leadership skills of department heads could be a meaningful effort to enhance teaching of the curriculum in secondary schools of Pakistan.

Keywords: middle leadership; department heads; curriculum delivery quality; curriculum innovation; teacher professional development; secondary schools; Pakistan; gender; leadership experience

Introduction

The load of the one who sits between the office of the principal and the door of the classroom in any school is greater than the rest of us know. It is the head of the department or the subject coordinator - the middle leader. According to Bennett et al. (2003), it is a role that is basically translational in that department heads get the big picture as envisioned by the senior management, and transform it into one that can be implemented by teachers in their day-to-day classroom activities. Although this role is central, it is much less researched than principal leadership or classroom teacher leadership, especially when one is not in a Western education system (Busher, 2005; Gurr & Drysdale, 2013).

The secondary education system in Pakistan contains over 45,000 schools as well as a few hundred thousand teachers, but the middle management in these schools is frequently ignored by many people. Heads of departments are often promoted due to seniority instead of proven leadership skills, they get minimal or no formal training in leadership, and they operate in cultures within institutions that value compliance in administration over leadership in the

curriculum (Ali and Ahmad, 2022; Khan et al., 2020). The outcome is a veneer of leadership that is on paper in any school but, in reality, is frequently not the curriculum leadership capacity that international research correlates with departmental improvement (Leithwood et al., 2020; Muijs and Harris, 2006).

This paper is specifically concerned with secondary schools in Pakistan. It explores the relationship between the ability of the department heads and the quality of curriculum delivery, the role of teacher professional development in the relationship and how gender, leadership experience and sector of school influence these trends. The study will focus on a single institutional context instead of being distributed in vastly different contexts to create results that can be directly applicable to school leaders and policymakers operating in the secondary system.

Research Gap

Current literature on middle leadership in Pakistan has concentrated primarily on the administrative aspect of the department head position, such as timetabling, exam organization, and supervision of the staff but not curriculum leadership and its impact on classroom performance (Ali and Ahmad, 2022). None of the published quantitative research studies have involved the measurement of middle leadership capacity through a validated multi-dimensional measure and, subsequently, as a predictor of the quality of curriculum delivery in Pakistani secondary schools. Similarly, although teacher professional development has been supposed to be the vehicle by which middle leadership capacity is converted to improved curriculum delivery, this has not been an empirically tested assumption in a South Asian school setting in the past. This paper not only fills these gaps under one, combined design, but also reports on the influence of gender, experience in leadership, and sector of school on these relationships.

Problem Statement

The provision of the curriculum in most Pakistani secondary school remains below its potential and a common reiteration of the issue is to do with the lack of middle leadership capacity. Department heads are often incompetent in translating curriculum policy into classroom practice; subject coordinators are often incompetent in coaching and mentoring their teachers to develop their pedagogical potential; and few departments have systematic means of monitoring and improving performance. In the absence of evidence on which aspects of middle leadership capacity have the most significant influence, and how gender, experience, and sector of school influence this association, investment in leadership development may end up being generic instead of being specific to where it is most likely to have the most impact.

Importance of the Research

The research has both a theoretical and practical contribution. In theory, it determines the applicability of the middle leadership framework by Bennett et al. (2003) to the Pakistani secondary school context and adds a mediating variable, teacher professional development, a pathway that has not been previously theorised and tested empirically in this context. In practice, the results provide school leaders, HR planners, and provincial education departments with preliminary information on the areas to target middle leadership development. Having 264 participants (representative of 32 schools in 2 provinces in both the public and the private sectors) this research surpasses the small, single-context studies that are prevalent in the literature at the moment.

Research Objectives

1. To test the correlation between the middle leadership capacity and the quality of curriculum delivery in Pakistani secondary schools.
2. To test the mediating role of teacher professional development to the relationship between middle leadership capacity and quality of curriculum delivery.

3. The research question is to determine the dimensions of middle leadership capacity that are most significantly related to quality of curriculum delivery and curriculum innovation.

Research Questions

1. Do middle leadership capacity majorly predict quality curriculum delivery in Pakistani secondary schools?
2. Is there a mediation effect of teacher professional development between the middle leadership capacity and the quality of curriculum delivery?
3. Are there any gender, leadership experience, and school sector moderators to the relationship between middle leadership capacity and quality of curriculum delivery?

Literature Review

Introduction to Middle Leadership: Concepts and Definitions

Middle leadership is the term that refers to the leadership role of the members of staff who are in-between the top management and the classroom teachers, and who are usually charged with the responsibility of a subject department or a year group (Bennett et al., 2003; Busher, 2005). Scholars have come to understand this role in various overlapping fashions: translational, translating senior leadership vision into departmental practice (Bennett et al., 2003); as boundary-spanning, being between the demands of senior management and the potentials of classroom teaching (Gurr and Drysdale, 2013); and as curriculum leadership, as a way of ensuring that the quality of the subject is supported by the development of teachers and the management of resources (Busher and Harris, 1999; Muijs and Harris, 2006).

Middle leadership capacity, which is applied in this research, can be defined as the knowledge, skills, and practices which enable a head of a department to perform these functions well. Based on Becker (1964) human capital model, capacity may be seen as a kind of professional capital accumulating through experience, training and reflective practice, and influencing departmental results, respectively. High capacity middle leaders are likely to be strong in four aspects: strategic translation, where they translate the institutional goals into departmental plans; curriculum management, where they make sure that there is coherence and consistency among the departments; team development where they mentor and coach their staff and accountability practice where they monitor and improve departmental performance in a systematic manner.

Quality of Curriculum Delivery and Innovation

Curriculum delivery quality is the degree to which the intended curriculum delivery is consistent, accurate and effective across the classrooms in a department, such as delivery consistency, instructional practices variation and assessment-learning outcomes congruency (Fullan, 2007; Hallinger, 2005). Curriculum innovation is described as the level at which a department modifies and advances curriculum based on new subject knowledge, student comments and the new pedagogical evidence (Hargreaves and Fullan, 2012). Both constructs are hypothesised to be largely reliant upon the middle leadership, as it is the department heads who will decide who will teach, and how well the teaching will proceed, where there may be gaps, and what conditions will be necessary to allow improvement to occur.

The quality of middle leadership is always associated with the outcomes of the departments by international research. Muijs and Harris (2006) reported a positive prediction of departmental student achievement with $r = .42$ by the subject leader effectiveness in English secondary schools. Similar Pakistani evidence has been virtually nonexistent as yet, and that is one of the reasons why the current study was carried out.

Teacher Professional Development, as a Mediating Process

Teacher professional development is considered one of the primary channels through which middle leadership capacity is believed to affect the quality of curriculum implementation the continuous enhancement of pedagogical knowledge, subject mastery and classroom instruction

of teachers (Darling-Hammond et al., 2017). Department heads of high capacity invest in their teachers by coaching them, observing their lessons and providing feedback, determining individual development needs and creating a departmental culture where continuous learning is the rule. This is because a strategically competent department head will not be able to enhance curriculum delivery without this investment, as it is ultimately the knowledge and skill of classroom teachers that determines what occurs in lessons.

The rationale behind the mediation route that will be tested here is the following: middle leadership capacity produces a stronger teacher professional development which consequently produces a stronger delivery of the curriculum. The review by Darling-Hammond et al. (2017) revealed that the quality of in-school professional development leadership (effect size $d = 0.62$) was among the best predictors of the changes in teacher practice, which is significantly higher than the impact of external training offered in isolation. This identifies department heads as one of the main gatekeepers of quality teacher development.

Gender and Middle Leadership

Gender differences in leadership style are always found, with female leaders more likely to adopt a relational style of leadership, such as collaborative decision-making, mentoring, and emotional attunement, and male leaders more likely to have a directive, task-oriented style of leadership (Eagly and Carli, 2007; Purvanova and Muros, 2010). This relational orientation can be especially effective in the context of education where the translation of leadership capacity into the quality of curriculum is just the type of activity that can be used to bring changes in the teaching practice. When the female department heads direct their leadership potential more frequently into these relational activities, the potential could be converted into greater curriculum results than the same potential in a department led by male department heads.

As a Moderator Leadership Experience

The converting leadership capacity to outcomes is likely to be influenced by experience. According to the human capital theory by Becker (1964), the returns to capacity with experience increase with experience: an experienced department head whose formal capacity is moderate may do better than a less experienced one with a higher formal capacity, since experience conveys institutional knowledge, professional trust and judgement which enable capacity to be used more productively. Experience is found to be a significant moderator of the leadership outcome relationship (Gurr and Drysdale, 2013; Muijs and Harris, 2006), but this was not investigated in Pakistani secondary schools.

Secondary schools in Pakistan, both public and private

In Pakistan, both public and private secondary schools follow curriculum frameworks that are broadly similar, established by provincial education departments and examination boards, although they vary in a number of ways that might influence the translation of middle leadership capacity into outcomes. Privately-run schools tend to enjoy a little more flexibility in organising the teaching time, additional curricular and experimenting with new teaching methods, whereas publicly-run schools are likely to be more centralised in their operations as well as expectations (Ali and Ahmad, 2022). These differences can imply that in the case of the private school, the ability of a department head is freer to be turned into curriculum innovation, whereas in the case of the public-school ability to do so is manifested primarily through consistency within a given structure.

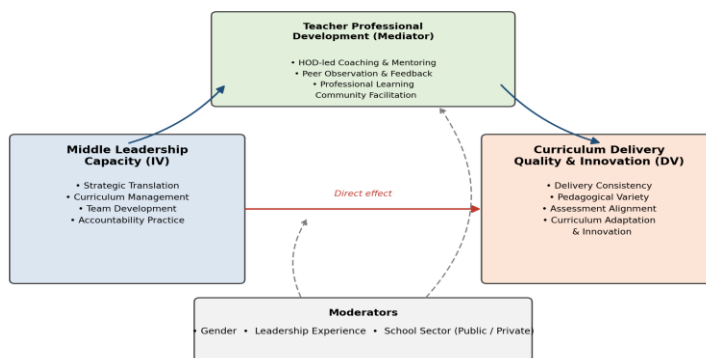
Conceptual Framework

The conceptual model for this study positions middle leadership capacity – made up of strategic translation, curriculum management, team development, and accountability practice – as the main predictor of curriculum delivery quality, which includes delivery consistency, pedagogical variety, assessment alignment, and curriculum adaptation and innovation. Teacher professional development, which encompasses coaching and mentoring, peer observation and

feedback, and facilitation of professional learning communities explains or mediate, in part, the relationship between these two. The direct and the mediated relationships are both anticipated to be different, or to be moderated, based on the gender of the head of the department, years of leadership experience, and the sector the school falls in, be it the public or the private sector.

Figure 1

Conceptual Framework: Middle Leadership Capacity and Curriculum Delivery Quality in Pakistani Secondary Schools

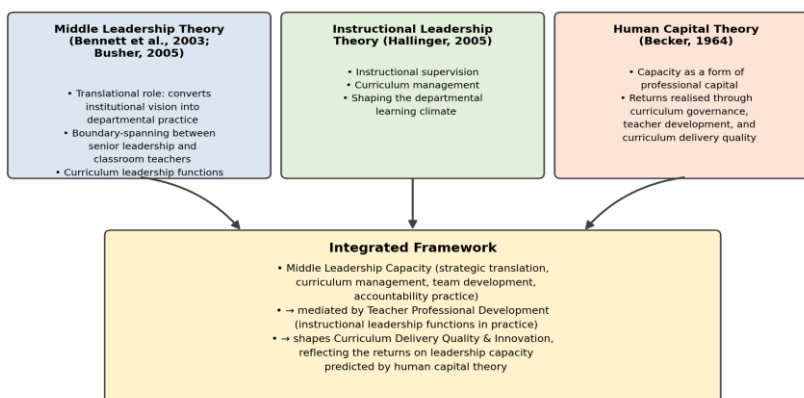


Theoretical Framework

Three theoretical perspectives inform this study. First, Middle Leadership Theory (Bennett et al., 2003; Busher, 2005) explains how department heads carry out translational, boundary-spanning, and curriculum leadership functions that determine whether institutional curriculum goals are realised at the departmental level. Second, Instructional Leadership Theory (Hallinger, 2005) identifies the specific functions – instructional supervision, curriculum management, and shaping the learning climate – through which middle leaders are most likely to influence classroom practice. Third, Human Capital Theory (Becker, 1964) frames middle leadership capacity as a form of professional capital whose value is realised through better curriculum governance, stronger teacher professional development, and ultimately better curriculum delivery outcomes.

Figure 2

Theoretical Framework: Three Integrated Theories Underpinning Middle Leadership Capacity and Curriculum Quality



Methodology

Research Design

The study design was a quantitative cross-sectional survey, which enabled correlation, comparative, mediation and moderation analysis in answering the above research questions (Creswell and Creswell, 2018). The cross-sectional design suited well since the study was aimed at analyzing relationships between variables at a given time, with a stratified sample of secondary schools.

Population and Sample

The target group consisted of middle leaders (department heads and subject coordinators) and their immediate school departmental colleagues (classroom teachers) in secondary schools in Punjab and Khyber Pakhtunkhwa (KPK) provinces, Pakistan. The sample was comprised of 264 participants (32 secondary schools, 16 each in the public and the private sector). In both schools, the department head and all full-time available departmental teachers were invited to take part in both schools.

Table 1

Demographic Characteristics of the Sample (N = 264)

Characteristic	Category	n	%
Role	Department Head/Coordinator	128	48.5
	Classroom Teacher	136	51.5
Gender	Male	152	57.6
	Female	112	42.4
Province	Punjab	156	59.1
	KPK	108	40.9
Sector	Public	140	53.0
	Private	124	47.0
Leadership Experience	1–3 years	52	19.7
	4–7 years	74	28.0
	8–12 years	66	25.0
	13+ years	72	27.3
Qualification	Bachelor's/B.Ed.	92	34.8
	Master's/M.Ed.	124	47.0
	M.Phil./PhD	48	18.2

Note. N = 264. Percentages are rounded and may not sum to exactly 100 due to rounding.

Reliability Analysis

Cronbach's alpha values indicated good to excellent internal consistency across all instruments. The Middle Leadership Capacity Inventory (MLCI) yielded an overall alpha of .92 (subscale range .85–.90). The Teacher Professional Development Scale (TPDS) yielded an alpha of .88. The Curriculum Delivery Quality and Innovation Scale (CDQI) yielded an overall alpha of .90 (curriculum delivery quality: .88; curriculum innovation: .86). All values

comfortably exceeded the recommended threshold of .70 (Nunnally, 1978), with all subscale alphas exceeding .80.

Data Collection Instruments

Middle Leadership Capacity Inventory (MLCI). A 24-item scale developed for this study, drawing on Bennett et al. (2003), Busher (2005), and Muijs and Harris (2006), measured four middle leadership capacity dimensions on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree): Strategic Translation (6 items; e.g., “Our department head effectively translates school strategy into concrete departmental goals”), Curriculum Management (6 items; e.g., “Our HOD ensures that curriculum delivery is consistent and coherent across all teachers in the department”), Team Development (6 items; e.g., “Our HOD actively mentors and coaches individual teachers to strengthen their pedagogical skills”), and Accountability Practice (6 items; e.g., “Our HOD monitors departmental performance systematically and uses evidence to drive improvement”). Teachers rated their HOD; HODs rated their own capacity.

Data Analysis

Data were analysed using IBM SPSS 27.0 in five stages: (1) descriptive statistics and reliability analysis; (2) Pearson correlation analysis; (3) simple and hierarchical multiple regression identifying overall and subscale-level predictors; (4) independent samples t-tests comparing the main study variables by gender and school sector; and (5) mediation and moderation analyses using Hayes's (2022) PROCESS macro (Model 4 for mediation, Model 1 for moderation, with 5,000 bootstrap samples). Effect sizes were interpreted throughout using Cohen's (1988) benchmarks.

Results

Descriptive Statistics

Overall, middle leadership capacity was moderate to high ($M = 3.56$, $SD = 0.61$). Curriculum delivery quality was also moderate to high ($M = 3.61$, $SD = 0.65$), curriculum innovation was moderate ($M = 3.39$, $SD = 0.71$), and teacher professional development quality was moderate ($M = 3.44$, $SD = 0.68$). Participants from private schools rated middle leadership capacity marginally higher ($M = 3.61$, $SD = 0.59$) than participants from public schools ($M = 3.52$, $SD = 0.62$), although this difference was not statistically significant (see Table 5).

Table 2

Descriptive Statistics for All Study Variables (N = 264)

Variable	M	SD	Min	Max	α
Middle Leadership Capacity (MLC) — Total	3.56	0.61	1.38	5.00	.92
Strategic Translation	3.52	0.67	1.00	5.00	.86
Curriculum Management	3.61	0.64	1.17	5.00	.88
Team Development	3.48	0.69	1.00	5.00	.85
Accountability Practice	3.63	0.66	1.17	5.00	.90
Teacher Prof. Development (TPD)	3.44	0.68	1.13	5.00	.88
Curriculum Delivery Quality (CDQ)	3.61	0.65	1.27	5.00	.88
Curriculum Innovation (CI)	3.39	0.71	1.18	5.00	.86

CDQI Composite	3.50	0.67	1.23	5.00	.90
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Note. N = 264. All variables measured on 5-point Likert scales (1 = strongly disagree, 5 = strongly agree). α = Cronbach's alpha. CDQI = Curriculum Delivery Quality and Innovation composite score.

Correlation Analysis

Table 3 presents the Pearson correlation matrix. Middle leadership capacity was strongly and positively correlated with curriculum delivery quality ($r = .66, p < .001$), curriculum innovation ($r = .60, p < .001$), and teacher professional development ($r = .70, p < .001$). Teacher professional development was also strongly correlated with curriculum delivery quality ($r = .64, p < .001$) and curriculum innovation ($r = .59, p < .001$). All MLC subscales showed significant positive correlations with the primary outcomes, with curriculum management ($r = .63$ with CDQ) and team development ($r = .64$ with TPD) standing out as the strongest individual subscale correlates. School sector showed only small and largely non-significant correlations with the main study variables, with the exception of a small positive correlation with curriculum innovation ($r = .14, p < .05$), suggesting a modest advantage for private schools in this area.

Table 3

Pearson Correlation Matrix: Middle Leadership Capacity, Teacher Professional Development, and Outcomes

Variable	1	2	3	4	5
1. MLC Total	—				
2. Teacher Prof. Dev.	.70	—			
3. Curriculum Delivery Q.	.66	.64	—		
4. Curriculum Innovation	.60	.59	.68	—	
5. Sector (0=Public, 1=Private)	.09	.07	.10	.14	—

Regression Analysis

Simple linear regression confirmed that middle leadership capacity significantly predicted curriculum delivery quality (CDQI composite). The overall model was highly significant ($F(1, 262) = 207.94, p < .001$), confirming middle leadership capacity as a substantial predictor of curriculum delivery quality.

Table 4

Simple Linear Regression: Middle Leadership Capacity Predicting Curriculum Delivery Quality

Predictor / Model	B	SE	β	t-value	p
Constant	1.23	0.16	—	7.69	< .001
Middle Leadership Capacity	0.64	0.04	.58	14.42	< .001
Model: $R^2 = .44$ Adj. $R^2 = .44$ $F(1, 262) = 207.94, p < .001$					

Note. N = 264. B = unstandardized coefficient; β = standardized coefficient. DV = CDQI composite. Large effect by Cohen's (1988) criteria ($R^2 = .44$).

Hierarchical regression examining the contribution of MLC subscales to CDQI identified curriculum management ($\beta = .44, p < .001$) and team development ($\beta = .40, p < .001$) as the

strongest individual predictors of curriculum delivery quality. This pattern indicates that different dimensions of middle leadership capacity drive different curriculum outcomes, with implications for how leadership development is targeted.

Gender and Sector Comparisons

Independent samples t-tests revealed significant gender differences in MLC ratings and curriculum outcomes. Female department heads were rated significantly higher in middle leadership capacity by their colleagues ($M = 3.72$, $SD = 0.55$) than male department heads ($M = 3.44$, $SD = 0.63$; $t(262) = 3.88$, $p < .001$, $d = 0.48$, a moderate effect). as well as significantly higher curriculum innovation and teacher professional development.

By contrast, differences between public and private schools were small and mostly non-significant. Middle leadership capacity did not differ significantly between public schools ($M = 3.52$, $SD = 0.62$) and private schools ($M = 3.61$, $SD = 0.59$; $t(262) = 1.24$, $p = .216$, $d = 0.15$). Curriculum delivery quality also did not differ significantly by sector (public: $M = 3.58$, $SD = 0.66$; private: $M = 3.65$, $SD = 0.64$; $t(262) = 0.89$, $p = .374$, $d = 0.11$), nor did teacher professional development (public: $M = 3.40$, $SD = 0.69$; private: $M = 3.49$, $SD = 0.67$; $t(262) = 1.14$, $p = .255$, $d = 0.14$). Curriculum innovation showed a small but marginally significant difference favouring private schools (public: $M = 3.33$, $SD = 0.70$; private: $M = 3.47$, $SD = 0.71$; $t(262) = 1.68$, $p = .094$, $d = 0.21$).

Table 5

Independent Samples t-Tests: MLC and Curriculum Outcomes by Gender and School Sector

Variable	Group 1 M (SD)	Group 2 M (SD)	t-value	p	d
MLC — Gender	Male: 3.44 (0.63)	Female: 3.72 (0.55)	3.88***	< .001	0.48
CDQ — Gender	Male-led: 3.49 (0.66)	Female-led: 3.76 (0.61)	3.43***	.001	0.43
CI — Gender	Male-led: 3.29 (0.70)	Female-led: 3.53 (0.69)	2.78**	.006	0.35
TPD — Gender	Male-led: 3.33 (0.68)	Female-led: 3.58 (0.66)	3.04**	.003	0.38
MLC — Sector	Public: 3.52 (0.62)	Private: 3.61 (0.59)	1.24	.216	0.15
CDQ — Sector	Public: 3.58 (0.66)	Private: 3.65 (0.64)	0.89	.374	0.11
TPD — Sector	Public: 3.40 (0.69)	Private: 3.49 (0.67)	1.14	.255	0.14
CI — Sector	Public: 3.33 (0.70)	Private: 3.47 (0.71)	1.68	.094	0.21

Mediation Analysis

Hayes's (2022) PROCESS macro (Model 4, 5,000 bootstrap samples) tested teacher professional development as a mediator. The direct effect of MLC on CDQI remained significant after controlling for TPD ($B = .37$, $SE = .06$, $\beta = .34$, $t = 6.17$, $p < .001$), indicating partial mediation.

Table 6

Mediation Analysis: Teacher Professional Development as Mediator of the MLC–Curriculum Quality Relationship

Path	B	SE	β	t	95% CI
MLC → Teacher Prof. Dev. (a)	0.78	0.05	.55	15.60	[.68, .88]
TPD → CDQI Composite (b)	0.37	0.06	.34	6.17	[.25, .49]
MLC → CDQI direct (c')	0.37	0.06	.34	6.17	[.25, .49]
MLC → CDQI total (c)	0.64	0.04	.58	14.42	[.56, .72]
Indirect: MLC → TPD → CDQI	0.29	0.05	—	—	[.19, .39]
Indirect: MLC → TPD → Curr. Innov.	0.26	0.05	—	—	[.17, .36]
Proportion mediated (CDQI): PM = 42%	—	—	—	—	[.30, .54]

Moderation Analysis

Three moderators were tested using PROCESS Model 1. Gender significantly moderated the MLC–CDQI relationship ($\beta = .15, p = .013$): female-led departments showed a stronger MLC-to-curriculum-quality relationship ($\beta = .70, p < .001$) than male-led departments ($\beta = .50, p < .001$).

Table 7

Moderation Analysis: Gender, Experience, and School Sector as Moderators of MLC–Curriculum Quality

Moderator / Interaction	B	SE	β	t	p
Mod. 1: Gender (0=Male, 1=Female) — DV: CDQI					
MLC	0.58	0.05	.53	11.60	< .001
MLC × Gender	0.20	0.08	.15	2.50	.013
MLC on CDQI: female-led departments	0.76	0.07	.70	—	< .001
MLC on CDQI: male-led departments	0.55	0.07	.50	—	< .001
Mod. 2: Experience (years, centred) — DV: CDQI					
MLC	0.58	0.05	.53	11.60	< .001
MLC × Experience	0.03	0.01	.14	2.17	.031
MLC on CDQI (+1 SD experience)	0.71	—	.65	—	< .001
MLC on CDQI (–1 SD experience)	0.49	—	.44	—	< .001

Mod. 3: Sector (0=Public, 1=Private) — DV: Curriculum Innovation					
MLC	0.54	0.06	.48	9.00	< .001
MLC × Sector	0.16	0.08	.14	2.00	.046
MLC on CI: private schools	0.68	0.08	.60	—	< .001
MLC on CI: public schools	0.51	0.09	.46	—	< .001

Discussion

Objective 1: Middle Leadership Capacity and Curriculum Quality.

The high positive correlation between middle leadership capacity and the quality of curriculum delivery ($r = .66$, 0.58 , $R^2 = .44$) is a validation of the fact that middle leadership capacity is a large-effect predictor of departmental curriculum outcomes in Pakistani secondary schools - the first systematic quantitative study of this relationship within the Pakistani context. This magnitude of effect is generally in line with the results of Muijs and Harris (2006) who found that the effectiveness of subject leaders related to departmental performance in English secondary schools at $r = .42$, and with the estimate of $r = .45$ by Hallinger (2005) as to the relationship between principal instructional leadership and curriculum quality. This raises the possibility that middle leadership can be, in any case, as effective as the senior leadership, on the day to day basis of what occurs in the departments.

Objective 2: Teacher Professional Development as Intermediary.

This finding of a partial mediation, whereby teacher professional development accounts 42% of the total impact of middle leadership capacity on quality of curriculum delivery, leads to the conclusion that teacher professional development is a significant but not exclusive mediator of the influence of middle leadership capacity on curriculum outcomes. The large direct effect that remains ($= .34$) indicates that the departmental heads also have other ways of impacting curriculum quality: the curriculum planning and management decisions that directly determine what is taught and how; the accountability practices that define and sustain standards; and the overall normative and motivational impact that competent leadership has on the professional culture of a department.

It is informative that curriculum innovation is mediated by teacher professional development ($PM = .48$) more than it is mediated by delivery quality ($PM = .42$). Innovation, which is even more distant as a regular practice, seems to be more reliant on intentional investment into the professional development in order to materialise in the classroom. Even without significant investment in professional development, a department head can enhance consistency of delivery to some degree by merely keeping track of the teachers and holding them responsible. To promote real curriculum innovation, it appears necessary to invest in the developmental capacity of teachers - to make room to experiment and to provide the type of challenge that develops new capacities - otherwise the potential to innovate which high middle leadership capacity opens is not likely to be realised in practice.

Objective 3: Moderating Variables

The observed gender moderation finding, that the association between MLC and curriculum quality is stronger in female-led departments ($\beta = .70$) than in male-led departments ($\beta = .50$), is in line with the theoretical prediction that the relational orientation of female middle leaders aids in bridging capacity to outcomes by promoting team building and collaborative curriculum planning, dimensions that are most directly connected to quality of delivery. Department heads who invest capacity in coaching, mentoring, and collective curriculum development establish the relational conditions of improvement their level of capacity anticipates; leaders who turn

to management of task and administrative control with much of the same capacity might find a smaller payoff in quality of curriculum.

The experience moderation result, that more experienced department heads yield better quality returns on curriculum with each unit of capacity, is consistent with the human capital theory hypothesis that contextual knowledge, relational capital, and tactical judgement developed through experience enhances the yield of leadership capacity. An experienced departmental head will be able to provide to the job a sense of the institutional understanding of what works within that specific school, the professional trust involved in hard developmental conversations, and the credibility that arises with established subject knowledge. These experiential resources add to the impact of formal leadership capacity in a manner that newer leaders, despite having similar formal capacity, will not be able to match in the short-term.

The sector moderation results a greater MLCto-curriculum-innovation relationship in the private schools ($=.60$) than in the public schools ($=.46$) with no significant sector difference in quality of delivery is probably due to the fact that room department heads in the former schools are more likely to be required to implement new methods, whereas in the latter schools they are not. In Pakistan, private high schools tend to be somewhat freer to schedule, to import additional resources, and to experiment with new instructional approaches, which can enable the ideas of a good department head to be more fully realised. Public schools are more likely to be run on a more standardised platform by provincial education authorities and examining bodies which can limit innovation irrespective of leadership ability though this does not seem to limit the uniformity of provision, where capacity appears to have an equally significant role in both sectors.

Key Findings Summary

1. The capacity of middle leadership is a robust predictor of the quality of curriculum delivery and curriculum innovation in Pakistani secondary schools ($R^2 = .44$) with curriculum management and team development being the most significant capacity dimensions.
2. Middle leadership capacity and curriculum quality are partially mediated by teacher development, which can explain 42 percent of the entire impact, which supports the notion that structured teacher development is a significant - albeit not exclusive - channel whereby leadership capacity enhances curriculum delivery.
3. Return to curriculum quality is higher among female department heads and higher experienced leaders at the same level of leadership capacity, indicating the importance of relational leadership skills and experience advantage.
4. The relationship between leadership capacity and curriculum innovation is slightly stronger in the private schools than in the public schools, but the relationship with delivery consistency is comparable between the two sectors.

Conclusion

The research offers the initial systematic quantitative data indicating that middle leadership capacity is a strong predictor of the quality of curriculum delivery and curriculum innovation in Pakistani secondary schools and that the relationship is significantly mediated by the quality of teacher professional growth that the department heads are able to promote in their teams. The high effect sizes, the significant proportion of the relationship that is explained by professional development, and the moderate effect that is practically applicable by the gender, leadership experience, and school sector all add up to an evidence base that is both theoretically based and practically applicable.

The most obvious implication is that middle-level leadership should be given much more focus than it has been accorded in the secondary education system of Pakistan. The focus of policy attention on leadership development has been on principals and investment in teacher professional development has been on a large scale in itself. The intermediary layer, between

senior strategy and teacher development and curriculum quality, has been left to seniority-based appointment and informal, on-the-job learning, to a significant extent. This research is an empirical argument to change that.

Gender and experience results provide interesting details. When female department heads and experienced department heads perform better on curriculum outcomes with equivalent formal capacity, then appointment and development systems that take relational leadership competencies into account, and enable early-career department heads to develop capacity faster, can lead to compounding improvements in curriculum quality in the long run. The sector findings indicate that middle leadership development in private schools could be fruitfully focused on innovating curriculum and development in public schools could be more focused on reinforcing consistency and coherence in the delivery of the curriculum within existing structures.

Recommendations

For School Leaders and HR Planners

School leaders ought to come up with structured middle leadership programmes, which are differentiated by level of experience. The foundational training on curriculum management and team development, the two dimensions that are most closely associated with the quality of curriculum, seems to be of greatest benefit to department heads in their early-career stage, whereas more established department heads would be more benefited by the advanced training on curriculum innovation and strategic leadership.

Department head positions should explicitly be weighted in terms of demonstrated curriculum leadership and teacher development skills, in addition to subject knowledge and seniority. The gender moderation result, indicating the significance of relational leadership orientation in terms of curriculum quality results, implies that the selection procedures should be based on direct measures of relational and team development skills, not dominated by technical or administrative ones.

Education Policy

Punjab and Khyber Pakhtunkhwa provincial school education departments should think of incorporating middle leadership capacity within school quality assurance measures, in addition to the already used indicators of principal leadership quality. The process of inspection and accreditation that only identifies quality leadership only at the principal level overlooks the layer of leadership by which the quality of curriculum is most directly influenced.

Cluster-based middle leadership development networks - linking department heads in local schools in shared professional learning communities - provide an economical approach to developing middle leadership capacity at scale, by leveraging the collaborative professional learning systems that mediation findings in the current study have found to be at the heart of curriculum quality improvement.

For Future Research

The type of causal evidence that a cross-sectional design cannot offer would be longitudinal studies that would follow middle leadership capacity development and curriculum quality over time. The association of departmental MLC scores with student assessment data would enable the researchers to follow the entire chain of leadership capacity to the learning outcomes.

Quantitative moderation research findings reported here could be enhanced with qualitative research into the ways gender influences middle leadership practice in a particular cultural setting, Pakistani secondary schools, which would help to inform more culturally sensitive methods of middle leadership development.

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