

**THE INFLUENCE OF INSTRUCTIONAL
LEADERSHIP AND WORKPLACE
SPIRITUALITY ON TEACHERS' CRITICAL
THINKING WITH KNOWLEDGE
MANAGEMENT AS A MEDIATOR IN
PAKISTANI SECONDARY SCHOOLS**

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UNIVERSITI SAINS MALAYSIA

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by

SOBIA BHUTTO

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TABLE OF CONTENTS

ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iv
LIST OF TABLES	xi
LIST OF ABBREVIATIONS	xiv
LIST OF APPENDICES	xv
ABSTRAK	xvi
ABSTRACT	xviii
CHAPTER 1 INTRODUCTION OF THE STUDY	1
1.1 Introduction.....	1
1.2 Background of Study	4
1.3 Problem Statement	10
1.4 Research Objectives (RO).....	14
1.5 Research Questions (RQ).....	15
1.6 Hypothesis.....	16
1.7 Significance of the study	16
1.8 Limitations of the Study.....	18
1.9 Operational Definitions.....	19
1.9.1 Instructional Leadership.....	19
1.9.2 Workplace Spirituality	19
1.9.3 Meaningful Work.....	20
1.9.4 Sense of Community	20
1.9.5 Organizational Values.....	20
1.9.6 Critical Thinking	20
1.9.7 Knowledge Management	21
1.9.8 Knowledge Acquisition in School	21

1.9.9	Knowledge Refining at School	21
1.9.10	Knowledge Storage in School.....	21
1.9.11	Knowledge Distribution across School.....	22
1.9.12	Knowledge Presentation in School	22
1.10	Summary	22
CHAPTER 2 LITERATURE REVIEW		23
2.1	Introduction.....	23
2.2	Demographic Profile of Pakistan	23
2.3	Education System in Pakistan	24
2.4	Instructional Leadership.....	26
2.4	Definition of Instructional Leadership.....	30
2.5	Instructional Leadership Practices in Pakistan	32
2.5.1	Understanding Instructional Leadership in Pakistan	33
2.5.2	Impact on Teacher Professional Development	33
2.5.3	Challenges in Implementation	34
2.5.4	Regional Disparities	34
2.6	Recommendations for Improvement.....	34
2.7	Past Studies: Instructional leadership	35
2.8	Workplace Spirituality	38
2.9	Workplace Spirituality and Teaching Effectiveness.....	43
2.10	Dimensions of Workplace Spirituality.....	44
2.10.1	Defining Meaningful Work in Workplace Spirituality	44
2.10.2	Dimensions of Meaningful Work	45
2.10.3	Impact on Organizational Outcomes	45
2.10.4	Theoretical Perspectives	46
2.10.5	Implications for Practice	46
2.11	Sense of Community as Dimension of Workplace Spirituality	47

2.11.1	The Concept of Sense of Community in the Workplace	47
2.11.2	Importance of Sense of Community	48
2.11.3	Impact on Teacher Morale and Collaboration	48
2.11.4	Enhancing Organizational Commitment and Job Involvement	48
2.11.5	Positive Learning Environment for Students	49
2.11.6	Strategies to Foster a Sense of Community in Schools	49
2.12	Alignment with Organizational Values as Dimension of Workplace Spirituality.....	50
2.12.1	Impact on Job Satisfaction	51
2.12.2	Reduction in Turnover Intentions	51
2.12.3	Role of Workplace Spirituality	51
2.12.4	Implications for School Leadership	52
2.13	Impact on Job Satisfaction and Performance	52
2.14	Implications for Educational Institutions	52
2.15	Impact of Workplace Spirituality on Teachers	53
2.16	Cultural Context of Sindh, Pakistan.....	54
2.17	Challenges in Implementing Workplace Spirituality	55
2.18	Strategies for Enhancing Workplace Spirituality	55
2.19	Past Studies: Workplace Spirituality	56
2.20	Teachers' Critical Thinking in Teaching	60
2.21	Empirical Research on Critical Thinking in Teachers	61
2.22	Critical Thinking in the Pakistani Educational Context.....	61
2.23	Definition of Critical Thinking	62
2.24	History of Critical Thinking.....	64
2.25	Teaching for Thinking	66
2.26	Teaching for Critical Thinking Learning	69
2.27	Past Studies: Critical Thinking	70
2.28	Knowledge Management	74

2.29	Definitions of Knowledge Management	75
2.30	History of Knowledge Management	77
2.31	Knowledge Management in School Context	80
2.32	Meyer and Zack Knowledge Management Cycle.....	81
	2.32.1 Knowledge Acquisition	82
	2.32.2 Knowledge Refinement:	83
	2.32.3 Knowledge Storage:.....	84
	2.32.4 Impact on Productivity and Redundancy.....	85
	2.32.5 Knowledge Distribution:.....	85
	2.32.6 Presentation of Knowledge	86
2.33	Past Studies: Knowledge Management.....	88
2.34	Hypothesis Development	91
	2.34.1 Instructional Leadership and Knowledge Management	91
	2.34.2 Workplace Spirituality and Knowledge Management.....	93
	2.34.3 Instructional Leadership and Teachers' Critical Thinking	96
	2.34.4 Workplace Spirituality and Teachers' Critical Thinking.....	99
	2.34.5 Knowledge Management and Teachers' Critical Thinking	101
	2.34.6 Instructional Leadership, Knowledge Management, and Teachers' Critical Thinking	104
	2.34.7 Workplace Spirituality, Knowledge Management, and Teachers' Critical Thinking (H7).....	107
2.35	Theoretical Framework	110
	2.35.1 Hallinger and Murphy's Model of Instructional Leadership.....	110
2.36	Leader-Member Exchange (LMX) Theory	112
2.37	Significance of Both Models in This Study.....	117
2.38	Conceptual Framework of the Study	118
2.39	Clarification of the Model of Spirituality in the Workplace.....	118
2.40	Linking Aspects of the Model.....	119

2.40.1	Instructional Leadership and Workplace Spirituality:	119
2.40.2	Workplace Spirituality and Knowledge Management:	119
2.40.3	Knowledge Management and Teachers' Critical Thinking:.....	119
2.40.4	Instructional Leadership, Knowledge Management, and Teachers' Critical Thinking:.....	120
2.40.5	Workplace Spirituality, Knowledge Management, and Teachers' Critical Thinking:.....	120
2.41	Summary	121
CHAPTER 3 RESEARCH METHODOLOGY		122
3.1	Introduction	122
3.2	Research Design.....	122
3.3	Study Population	123
3.4	Sampling	125
3.5	Research Instruments	127
3.5.1	Principal Instructional Management Rating Scale (PIMRS) by Hallinger	127
3.5.2	Spirituality in Workplace Scale (SWS)	128
3.5.3	Critical Thinking Questionnaire by Peter Honey.....	129
3.5.4	Knowledge Management Cycle (1996) by Meyer and Zack	130
3.6	Data Collection Procedure	131
3.7	Data Analysis	133
3.7.1	Quantitative Data Analysis	134
3.8	Methods of Analysis	134
3.9	Pilot Study.....	137
3.9.1	Results from the Pilot Study	138
3.10	Pretesting Procedure and Results.....	139
3.10.1	Content Validity of the Questionnaires.....	140
3.10.2	Reliability of the Questionnaires	141
3.11	Ethical Considerations	142

3.12	Summary	142
CHAPTER 4 DATA ANALYSIS & RESULTS.....		143
4.1	Introduction.....	143
4.2	Response Rate	143
4.3	Participants Demographic Information.....	144
4.4	Preliminary Data Screening	145
4.4.1	Missing Values Analysis.....	145
4.4.2	Aberrant Values	146
4.4.3	Multivariate Outliers	146
4.5	Common Method Bias (CMB).....	147
4.5.1	Procedural Remedies	147
4.5.1(a)	Confidentiality	148
4.5.1(b)	Statistical Remedies	148
4.5.1(c)	Herman Single Factor Test	148
4.6	Normality Test	149
4.7	Linearity	150
4.8	Homoscedasticity	151
4.9	Multicollinearity	152
4.10	Structural Equation Modeling (SEM).....	153
4.11	Confirmatory Factor Analysis (CFA)	154
4.12	Model Fit.....	156
4.13	Reliability and Validity	159
4.13.1	Reliability Assessment.....	159
4.13.2	Discriminant Validity.....	161
4.14	Correlation Values Among Variables	161
4.15	Descriptive Statistics, Research Questions & Hypothesis Testing	163
4.15.1	Research Question 1 (RQ1)	163

4.15.2	Research Question 2 (RQ2)	165
4.15.3	Research Question 3 (RQ3)	165
4.15.4	Research Question 4 (RQ4)	168
4.15.5	Research Question 5 (RQ5)	168
4.16	Chapter Summary	169
CHAPTER 5 DISCUSSION AND CONCLUSION		170
5.1	Introduction	170
5.2	Recapitulations of Research Findings	170
5.3	Discussion	173
5.3.1	Discussion on descriptive statistics	173
5.3.2	Analysis of Research Question 1 (RQ1)	175
5.3.3	Analysis of Research Question 2 (RQ2)	178
5.3.4	Analysis of Research Question 3 (RQ3)	180
5.3.5	Analysis of Research Question 4 (RQ4)	182
5.3.6	Analysis of Research Question 5 (RQ5)	184
5.4	Contributions of the Study	186
5.4.1	Theoretical Contribution	186
5.4.2	Methodological Contribution	188
5.4.3	Practical Contribution	189
5.5	Limitations and Future Research Directions	190
5.6	Conclusion	192
REFERENCES		193
APPENDICES		

LIST OF TABLES

		Page
Table 2.1	Dimensions of Spirituality in the Workplace	60
Table 2.2	Main Contributor in the Knowledge Management.....	79
Table 3.1	Population.....	124
Table 3.2	Sample Size	126
Table 3.3	Distribution of Items in the PMIRS.....	127
Table 3.4	Distribution of Items in the SWS	128
Table 3.5	Distribution of Items in Honey’s Critical Thinking Questionnaire.....	130
Table 3.6	Distribution of Items in Knowledge Management Cycle.....	131
Table 3.7	Data Analysis.....	136
Table 3.8	Reliability test of Scales (Cronbach Alpha)	139
Table 3.9	Reliability Analysis (Cronbach's α).....	142
Table 4.1	Distribution and Retention of Questionnaires	144
Table 4.2	Participants’ Demographic Information (N = 295)	145
Table 4.3	Values of Skewness and Kurtosis of Measured Variables	149
Table 4.4	Test for Multicollinearity.....	153
Table 4.5	Measures with their Threshold	157
Table 4.6	Fit Indices of CFA for the Full Measurement Model of the Study.....	158
Table 4.7	Reliability and Validity of the Full Measurement Model.....	159
Table 4.8	Loading Factors	160
Table 4.9	HTMT Criteria.....	161
Table 4.10	Correlations Summary	162
Table 4.11	Means Standard Deviations and Cronbach Alpha for variables.....	163

Table 4.12	Multiple Regression.....	164
Table 4.13	Fit Indices of SR Models	166
Table 4.14	SR Model Results for Mediation Analysis (with 5000 Bootstrap Sample)	169

LIST OF FIGURES

	Page
Figure 2.1	Pakistan Map 24
Figure 2.2	Conceptual Framework..... 121
Figure 3.1	Cross-sectional Study 123
Figure 3.2	Data Collection Procedure 133
Figure 3.3	Research Flow Chart 136
Figure 4.1	Histogram 150
Figure 4.2	Normal P-P Plot of regression Standardized Residual 151
Figure 4.3	Scatter Plot..... 152
Figure 4.4	Measurement Model 1 158
Figure 4.5	Structural Regression Model 167

LIST OF ABBREVIATIONS

IL	Instructional Leadership
IQ	Intelligent Quotient
KM	Knowledge Management
KMC	Knowledge Management Cycle
PIMR	Principal Instructional Management Rating Scale
SWS	Spirituality in Workplace Scale
TCT	Teachers' Critical Thinking
WPS	Workplace Spirituality

LIST OF APPENDICES

Appendix A	Questionnaire
Appendix B	Part C: Spirituality in the Workplace Scale
Appendix C	Part D: Knowledge Management Scale
Appendix D	Part E: Peter Honey's Critical Thinking Questionnaire
Appendix E	Principal Instructional Management Rating Scale (Sindhi Version)
Appendix F	Spirituality in the Workplace Scale (Sindhi Version)
Appendix G	Knowledge Management Scale (Sindhi Version)
Appendix H	Peter Honey's Critical Thinking Questionnaire (Sindhi Version)
Appendix I	Cover Letter for Data Collection
Appendix J	Informed Consent Form
Appendix K	Appointment as a Professional Expert for Instrument Validation
Appendix L	Expert Comments

**PENGARUH KEPIMPINAN INSTRUKSIONAL DAN SPIRITUALITI DI
TEMPAT KERJA TERHADAP PEMIKIRAN KRITIS GURU DENGAN
PENGURUSAN PENGETAHUAN SEBAGAI MEDIATOR DI SEKOLAH
MENENGAH PAKISTAN**

ABSTRAK

Dalam konteks pendidikan masa kini, memahami interaksi antara Kepimpinan Instruksional, Spiritualitas Tempat Kerja, dan Pemikiran Kritis Guru adalah penting. Kajian ini meneliti hubungan tersebut, dengan fokus kepada bagaimana Pengurusan Pengetahuan memediasikannya. Kepimpinan Instruksional diiktiraf sebagai komponen penting dalam pentadbiran sekolah, mempengaruhi kaedah pengajaran dan menyokong perkembangan profesional guru. Spiritualitas Tempat Kerja melibatkan penerapan nilai-nilai spiritual dalam sekolah, membantu guru mencari makna, bekerjasama, dan merasakan tujuan dalam pekerjaan mereka. Pemikiran Kritis dikenal pasti sebagai kemahiran penting bagi guru. Penyelidikan ini menyiasat bagaimana Kepimpinan Instruksional dan Spiritualitas Tempat Kerja mempengaruhi Pemikiran Kritis, terutamanya dengan mempertimbangkan peranan Pengurusan Pengetahuan. Data dikumpulkan daripada 563 guru sekolah menengah di daerah Sukkur menggunakan persampelan rawak. Untuk mengukur pemboleh ubah, kajian ini menggunakan Principal Instructional Management Rating Scale (PIMRS) untuk kepimpinan instruksional, Spirituality in Workplace Scale (SWS) untuk spiritualitas tempat kerja, soal selidik Pemikiran Kritis Peter Honey, dan skala Pengurusan Pengetahuan Meyer dan Zack. Data dianalisis menggunakan Pemodelan Persamaan Struktur (SEM) dan Analisis Faktor Pengesahan (CFA) untuk mengesahkan konstruk. Dapatan menunjukkan bahawa guru mencatat skor lebih tinggi dalam Pemikiran Kritis

($M = 3.8920$) berbanding Pengurusan Pengetahuan ($M = 3.7005$) dan Kepimpinan Instruksional ($M = 2.6988$). Kedua-dua Kepimpinan Instruksional dan Spiritualitas Tempat Kerja mempengaruhi secara positif Pemikiran Kritis, dengan pekali ($\beta = 0.537$ dan $\beta = 0.230$) masing-masing. Pengurusan Pengetahuan memediasi sebahagian hubungan ini. Kesan langsung Kepimpinan Instruksional ($\beta = 0.505$) dan Spiritualitas Tempat Kerja ($\beta = 0.087$) terhadap Pemikiran Kritis adalah signifikan, dan Pengurusan Pengetahuan mempunyai kesan mediasi yang signifikan untuk kedua-dua Kepimpinan Instruksional ($\beta = 0.069$) dan Spiritualitas Tempat Kerja ($\beta = 0.027$). Hasil ini menekankan peranan penting Pengurusan Pengetahuan dalam memperkukuh kesan Kepimpinan Instruksional dan Spiritualitas Tempat Kerja terhadap Pemikiran Kritis Guru. Kajian ini memberikan pandangan untuk meningkatkan Pemikiran Kritis Guru melalui kepimpinan yang berkesan dan memupuk persekitaran kerja yang menyokong secara spiritual. Ia juga menangani kekurangan dalam penyelidikan sedia ada dengan meneroka faktor-faktor ini di sekolah menengah Pakistan dan menawarkan bukti empirikal untuk membangunkan strategi pendidikan yang komprehensif.

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ABSTRACT

In today's educational setting, understanding how Instructional Leadership, Workplace Spirituality, and Teachers' Critical Thinking interact is essential. This study examines these relationships, focusing on how Knowledge Management mediates them. Instructional Leadership is recognized as a vital part of school administration, influencing teaching methods and supporting teachers' professional growth. Workplace Spirituality involves incorporating spiritual values into schools, helping teachers find meaning, work together, and feel purposeful. Critical Thinking is identified as an essential skill for teachers. This research investigates how Instructional Leadership and Workplace Spirituality affect critical thinking, particularly considering the role of Knowledge Management. The study collected data from 563 secondary public-school teachers in the Sukkur district using random sampling. To measure the variables, it used the Principal Instructional Management Rating Scale (PIMRS) for instructional leadership, the Spirituality in Workplace Scale (SWS) for Workplace Spirituality, the Peter Honey Critical Thinking questionnaire, and Meyer and Zack's Knowledge Management scale. The data were analyzed using Structural Equation Modeling (SEM) and Confirmatory Factor Analysis (CFA) to validate the constructs. The findings show that teachers scored higher in Critical Thinking ($M = 3.8920$) compared to Knowledge Management ($M = 3.7005$) and Instructional Leadership ($M = 2.6988$). Both Instructional Leadership and Workplace Spirituality positively

influenced Critical Thinking, with coefficients of ($\beta = 0.537$ and $\beta = 0.230$) respectively. Knowledge Management partially mediated these relationships. The direct effects of Instructional Leadership ($\beta = 0.505$) and Workplace Spirituality ($\beta = 0.087$) on Critical Thinking were significant, and Knowledge Management had significant mediating effects for both Instructional Leadership ($\beta = 0.069$) and Workplace Spirituality ($\beta = 0.027$). These results highlight the important role of Knowledge Management in strengthening the effects of Instructional Leadership and Workplace Spirituality on Teachers' Critical Thinking. The study provides insights into improving Teachers' Critical Thinking through effective leadership and fostering a spiritually supportive work environment. It also addresses a gap in existing research by exploring these factors in Pakistani secondary schools and offers empirical evidence for developing comprehensive educational strategies.

CHAPTER 1

INTRODUCTION OF THE STUDY

1.1 Introduction

Education is the fundamental difference between developed and developing countries in today's technologically modern and industrialized world. Pakistan is a developing country and is struggling to improve its education system. For the robust education system, many educators, business leaders, and politicians are united around the idea that the education system needs "twenty-first-century skills, quality teaching, and curriculum to succeed in today's world" (NEP, 2021; Urbani et al., 2017).

To improve the country's economic conditions and education system, leaders are vital figures who significantly influence a country's success. A good organization will result from a responsible and professional leader. Similarly, in education, the principal is the leader of the school organization. The principal is the leader who will lead an excellent school to produce graduates ready to work in the community. Principals are uniquely positioned among educational leaders to improve teaching, which has more impact on students' learning (Stronge & Xu, 2021).

The principal position is significant in school development, both in the supervision and direction of teachers in their profession and staff, who help develop the school so students can provide a robust learning environment. There are different leadership styles; however, this study focuses on Instructional leadership. Hallinger (2011) says the principal's job is to be an instructional leader. It means that the principal gives directions, trains teachers on teaching and curriculum, and makes the school work in general. According to Rahayu and Usman (2022), instructional leadership is centered on the leader's (principal's) influence on student achievement,

favourably affecting teachers and teaching outcomes and increasing learner performance.

The role of principals as instructional leaders in Pakistan is pivotal in shaping the quality of education and fostering critical thinking skills among students (Saad & Sankaran, 2021). While challenges persist, their evolving responsibilities and proactive strategies demonstrate a commitment to enhancing the teaching and learning experience. This research underscores the need for continued support and recognition of principals' instructional leadership roles to ensure high-quality education in Pakistan (Fazil & Ahmad, 2023).

In this context, the present study also investigates the role of workplace spirituality in influencing teachers' critical thinking in teaching. Academic definitions of workplace spirituality include a sense of completeness, connectedness at work, and higher values (Tony, 2023). Finding one's life's purpose, forming strong relationships with coworkers and other professional associates, and maintaining harmony between one's values and those of one's employer all constitute examples of Spirituality in the workplace (Pereis & Ulluwishewa, 2023). Pakistan's educational sector faces many challenges, ranging from resource constraints to pedagogical reforms (Anjum et al., 2021). Amidst these challenges, the notion of workplace spirituality offers a lens through which to examine the role of educational institutions in fostering a sense of purpose, meaning, and fulfilment among teachers and students (Saeed et al., 2023).

Furthermore, the current study examines the mediating influence of knowledge management (KM) on the critical thinking abilities of teachers in their teaching practices. Knowledge is at the recenter of the modern economy, making knowledge management increasingly crucial for any successful organization (Tajpour et al.,

2022). Knowledge is power, but with effective management and resources. Knowledge management (KM) is a new and emerging discipline in Pakistan. It has attracted the interest of researchers and has strengthened in recent years (Asad et al., 2022). Secondary school teachers need knowledge management skills to build and construct instructional approaches that foster critical thinking in students and contribute to overall school performance and success.

Despite the positive developments, the Pakistani education sector faces various challenges in effectively implementing knowledge management practices (Iqbal, 2021). **Limited Resource:** Resource constraints, including budget limitations and outdated technology infrastructure, hinder the establishment of comprehensive KM systems (Soja & Soja, 2020). Many institutions struggle to invest in the necessary technology and human resources. **Data security and privacy concerns** are significant barriers to digitizing and sharing educational resources. **Safeguarding sensitive educational data** remains a priority (Gkrimpizi et al., 2023). **Cultural and Behavioral Barriers:** Encouraging a culture of knowledge sharing and collaboration among educators is a substantial challenge. Traditional hierarchies and reluctance to share knowledge can impede KM initiatives. **Faculty Training:** Providing adequate training and support to educators for effectively using KM tools and platforms remains a priority. Therefore, faculty members need to be equipped with the skills to leverage KM for enhanced pedagogy (Nair & Munusami, 2020).

Critical thinking is a necessary life skill. Researchers generally agreed on the significance of critical thinking in both personal and academic life (Ennis, 2018). In education, cognitive proficiencies are broadly acknowledged as essential attributes for an individual's achievement in an evolving world, where the capacity for analytical and evaluative reasoning is deemed indispensable for exercising sound judgment.

First, educators need to comprehend and the value of critical thinking and prepare to encourage it in the classroom. Teachers must "incorporate higher-level cognitive thinking in their instructional practices" to prepare students to develop higher-order thinking skills (Ball & Garton, 2005, p. 59). Teachers are widely assumed to be familiar with critical thinking and its incorporation into their teaching practices. However, this may not be an actual case (Goodsett & Schmillen, 2022) unless teachers can integrate critical thinking into their teaching methods during pre-service or in-service training (Straková & Cimermanová, 2018). This case is especially fit for Pakistan, where education is mainly aimed at rote learning and memorization of facts rather than developing critical thinking skills in students. Moreover, teachers are considered knowledge providers rather than facilitators of the knowledge development of students (Bhattacharya, 2022; Gul et al., 2010; Siddiqui, 2007). In the above scenario, the significance of the principal's job as an instructional leader is vital to motivate and encourage secondary school teachers to incorporate critical thinking in their instructional strategies. In addition, workplace spirituality can also be a factor in realizing the importance of critical thinking among secondary school teachers.

1.2 Background of Study

Among many other stakeholders, the role of the principal in school performance is crucial to improving education quality. According to Niqab et al. (2014), in the context of educational institutions, a correlation exists between a school's quality and its principal's competency. When closely examined, high-performing schools tend to be led by effective principals, while struggling schools often exhibit signs of weak leadership. The most significant flaw in the education systems of emerging nations such as Pakistan is that teachers are promoted to

leadership positions without having leadership expertise or experience (Maqbool et al., 2023). This statement demonstrates that, among other reasons, leadership is critical in strengthening the educational system.

There are different leadership styles; however, this study focuses on instructional leadership. In this context, the researchers such as Leithwood et al. (2004), Daing and Mustapha (2023) explain that instructional leadership is the principal's liability as an instructional leader to establish guidelines, educate teachers on instruction topics, design curriculum, and make the school function. At the school level, leadership is required to execute various responsibilities, and a leader must be equipped with the necessary abilities and skills to accomplish the desired goals (Lopez & Ensari, 2014). Hallinger and Murphy (1985) identified three critical obligations of instructional leadership: defining a mission, managing instructional programmes, and promoting a positive school climate.

Defining the school mission: Formulating school goals and effective communication of these objectives to both the staff and the community. *Managing the Instructional Program:* Principals exercised oversight over the instructional program by evaluating teaching methods, curriculum management, and monitoring student advancement. *Positive School Learning:* was achieved through the preservation of instructional time, the facilitation of professional development, the sustenance of a robust administrative presence, the provision of incentives to educators, the adherence to academic standards, and the provision of academic incentives to students

In the Pakistani context, Branson et al. (2015) discovered that the instructional leadership style of school principals is the most influential factor in students' academic achievement. Strategies taken into account by instructional leadership styles include

keeping close checks on lessons, keeping detailed classroom diaries, and analyzing student feedback on assignments and teachers.

Instructional leaders know the importance of teaching approaches; they will lead and motivate teachers to practice instructions that help students grow and foster critical thinking (Kilag & Sasan, 2023). Teachers must incorporate higher-level cognitive thinking in their instructional practices to prepare students to develop higher-order thinking skills (Feronica et al., 2021). Critical thinking is a crucial element in intellectual growth, knowledge attainment, and knowledge by individuals in decision-making (Rahman, 2019).

The present study also investigates workplace spirituality's influence on teachers' critical thinking in teaching. Apart from religious doctrine, spirituality in the workplace can contribute to the prosperity of employees, organizations, and societies. It connects the spirit of employees with their actions and tasks, resulting in a more substantial commitment to the organization and more job satisfaction (Bhaskar & Mishra, 2019), that strengthens the organization and improves performance (Belwalkar et al., 2018). In the present study, workplace spirituality will function as a catalyst, inspiring secondary school teachers to adopt teaching strategies that encourage critical thinking in their students by fostering a spirited and engaging educational environment.

Organizational values, Meaningful work, and Sense of community are the three pillars around which Ashmos and Duchon (2000) establish their workplace spirituality theory. Organizational values are the degree to which employees believe their company is serving society and its employees. Work that has meaning to one's life tends to provide that person joy and contentment. The soul-work link lies at the heart

of all meaningful work. A sense of pride develops when one's efforts are beneficial to others which further develop a sense of community is defined as a necessary component of life to be connected to other people.

The educational sector in Pakistan must also strive to foster workplace spirituality and meaningful work by aligning its values with those of the individual and increasing its community responsibility (Saeed et al., 2022). It will establish a trustworthy atmosphere where people can rely on one another and their organization. In the modern era, critical thinking is considered the cornerstone skill. It is a commonly accepted notion that education in cultivating students' aptitude for critical thinking and empowering them to make ethical, well-reasoned judgments and assessments (Durnali, 2022). Students' critical thinking can be enhanced by teachers innovating instructional methods that help them think critically (Okolie et al., 2022).

Bhutto et al. (2023) claim that Pakistani teachers at the school are primarily focused on imparting factual knowledge rather than fostering and assessing critical thinking abilities. Moreover, Mahmood et al. (2009) mention that Pakistan's education's main focus is on teaching and learning, which is textbooks. However, Sellars et al. (2018) found that proper schooling, including its instructive approaches, appears non-conducive to endorsing critical thinking in Pakistan and other Asian countries.

Similarly, Hoodbhoy (2011) consistently expresses his apprehension regarding the lamentable condition of critical thinking, inquiry, and rational thinking within the educational framework of Pakistan. The education system in Pakistan tends to discourage the practice of questioning and places significant emphasis on obedience, a trend attributed to the nation's conservative cultural and societal values. Further,

Hoodbhoy (2011) claimed that closed minds cannot invent, produce literature and art, or conduct scientific research.

Contemporary education concerns personal freedom, a readiness to embrace change, intellectual integrity, and purposeful dissent. In addition, Critical thinking empowers individuals to effect revolutionary change and shape the future (Durnali, 2022). Failing to do so would result in the repetition of past dysfunctions. In their studies, Suryanti and Nurhuda (2021) and Ro (2010) recommended that teachers need to be educated to improve their critical thinking abilities before teaching critical thinking to their students. However, teacher-centered instructional practices are predominant in public secondary schools (Abdi & Kenea, 2023).

Consequently, students have little opportunity to develop their critical thinking skills. Additionally, the Internet enables students to collect and exchange information swiftly (Baguma et al., 2019). Therefore, students are increasingly inclined to scan and skim material. As a result, many students found themselves unable to analyze or integrate information effectively, thereby exerting a detrimental influence on their higher-level thinking abilities, creativity, and critical thinking skills (Koether, 2022).

The current research also explores the influence of knowledge management as an intermediary factor on teachers' critical thinking abilities within the classroom setting. It's worth noting that knowledge management is a relatively novel concept in Pakistan, with limited research papers addressing it. This research primarily exists within Pakistan's education domain (Bhutto et al., 2023). Higher education was the primary focus of most knowledge management studies in education (Quarchioni et al., 2022). According to knowledge management, information acquisition, improvement, storage, dissemination, and presentation have recently emerged as crucial research

areas (Abbas & Sasan, 2019). The primary emphasis of knowledge management revolves around generating and governing knowledge within an organizational context.

The Meyer and Zack knowledge management cycle holds paramount significance within the domain of knowledge management. It is a means by which an organization can transform information into knowledge. It demonstrates how a company gathers, organizes, and disseminates knowledge (Anshari & Hamdan, 2022). Below are the steps in knowledge management:

Knowledge Acquisition: is the procedure an organization and its people use to obtain the information required to promptly, effectively, and affordably do their work (Dias et al., 2023). *Knowledge Refinement:* is the process of evaluating, assessing, and upgrading knowledge to save it in a repository. *Knowledge Storage:* This entails systematically acquiring and retaining individual and institutional knowledge in either a digital or physical format, facilitating efficient retrieval (Manesh et al., 2020). This practice saves time and other organizational resources, ultimately enhancing overall performance. *Knowledge distribution* is the dissemination and sharing of information at various organizational levels using a wide range of interconnected techniques, resources, and tools (Al-Janabi et al., 2023). *Knowledge Presentation:* Knowledge must be made intelligibly available to all organization members who require it, wherever they are and whenever they need it. For instance, new information shared by a principal or teacher should be understandable and evident that others can comprehend and apply it correctly.

In the modern world, many experts, practitioners, and researchers worldwide are interested in knowledge management (Ode & Ayavoo, 2020). Organizations have realized the importance of putting data, insights, experience, expertise, and wisdom into databases that employees can access and share. Therefore, knowledge management might be an alternate way to equip teachers with the necessary abilities to address challenges and boost school and commercial sector performance (Halberstadt et al., 2019). Similarly, knowledge management in secondary schools in Pakistan brings a positive change in the teaching and knowledge of teachers and students.

1.3 Problem Statement

Education is a fundamental right for individuals of all ages, and everyone should have access to it. It is a crucial factor in both personal development and societal progress, ultimately contributing to a thriving and productive economy (UNESCO, 2019). The Pakistani government has pledged to achieve universal education and a 100 per cent literacy rate by ensuring free and compulsory education for all children (Ahmed & Khan, 2020), aiming to foster national growth and prosperity. Since 2010, following the 18th constitutional amendment, the country's education system has been decentralized, with provincial governments taking responsibility for managing education at the intermediate level. Nevertheless, the Ministry of Federal Education and Professional Training continues to link educational institutions with industry (GOP Finance Division, 2017).

Despite these efforts to enhance Pakistan's education system, the country remains one of the most underdeveloped in education and skills development. According to the World Economic Forum's Global Human Capital Report 2017,

Pakistan ranks 125th out of 130 countries in education, skills development, and infrastructure (Ikram & Kenayathulla, 2023). Additionally, Pakistan placed 138th in the education attainment category in 2023. The literacy rate ranks 137th, while secondary and tertiary education enrollment ranks 132nd and 104th, respectively (Kalhor, 2024). Alarmingly, more than 90 per cent of primary students in Pakistan are considered weak in science subjects (Economic Times, 2023).

The research shows that one of the major contributing factors is the absence of twenty-first-century skills, quality teaching, and a curriculum to succeed in today's world" (Urbani et al., 2017). Regrettably, in Pakistan, teachers often prioritize teaching the course material and promoting the memorization of information rather than stimulating meaningful learning and urging students to think critically by asking questions and exploring alternative options (Menashy et al., 2014). Consequently, this approach often results in rote memorization, which hinders the development of critical thinking skills in Pakistani students (Liu et al., 2021). The same findings were also in line with earlier research of Manan (2015), who indicated that most teaching and learning approaches are teacher-centered, with little capacity for critical thinking in classrooms. In addition, Hoodbhoy (2009) further added that the learning culture in Pakistan is deficient and flawed, where students are compelled mainly to memorize an arbitrary set of rules and an endless number of facts. Furthermore, Mazhar and Akhtar (2018) study also claims that elementary school curricula and examinations do not address the development of critical thinking ability among students.

In Pakistan, the research shows that educators typically prioritize the delivery of subject matter and encourage students to commit facts to memory rather than fostering an educational environment that promotes meaningful learning and challenges students to think critically, question, and explore alternative perspectives

(NEP, 2021; World Bank, 2018). Consequently, this approach has given rise to rote memorization, which is a significant hurdle in the growth of critical thinking skills among students in Pakistan (Jamil & Muhammad, 2021). This phenomenon is underscored also by reports from the Government of Pakistan in 2009 and the World Bank in 2006. Additionally, they underlined that education in Pakistan primarily promotes rote memorization without comprehension and discourages critical inquiry and productive reasoning. Furthermore, Jamil et al. (2020) and Din (2020) study also claim that secondary school curriculum and examinations do not address the development of critical thinking ability among students. Further, this statement was also endorsed by the official document of the Ministry of Education of Pakistan, i.e., National Education Policy (2018), that Pakistan has not succeeded in attaining its educational objectives, as elucidated in prior education policies that aimed to foster critical thinking.

The higher education system in Sindh, Pakistan, faces numerous challenges that hinder its effectiveness and development. Key issues include inadequate infrastructure, outdated curricula, lack of qualified faculty, and insufficient funding, all of which contribute to suboptimal educational outcomes and limited research opportunities (Ali & Parveen, 2021; Khan et al., 2020). In the context of Pakistani secondary schools in Sindh, the role of teachers in fostering these skills is particularly crucial. However, various challenges impede the effective promotion of critical thinking in this region. These challenges include a traditional rote learning approach, insufficient teacher training, and a lack of resources and support for innovative teaching methods (Ahmed & Siddiqui, 2020; Baloch & Ali, 2019). In addition, Teachers in Sindh's secondary schools often rely on memorization-based instruction, which stifles students' ability to think critically and creatively. This approach is

perpetuated by an examination system emphasizing rote learning and factual recall over analytical and problem-solving skills (Chandio et al., 2021). Moreover, many teachers lack the training and professional development opportunities necessary to integrate critical thinking into their pedagogy effectively (Raza & Sial, 2021). This deficiency is further compounded by large class sizes and inadequate classroom resources, which limit the ability of teachers to engage students in critical thinking activities (Shah & Shah, 2020).

In Pakistani secondary schools, particularly in Sindh, instructional leadership is pivotal in addressing the challenges associated with fostering these skills. Noor and Nawab (2022) explored that Instructional leadership believes in the guidance and support of teachers to improve teaching practices, which could be a crucial factor in enhancing critical thinking in the classroom. This approach can help overcome issues such as rote learning, insufficient teacher training, and a lack of resources and support for innovative teaching methods (Darling-Hammond et al., 2020; Leithwood & Sun, 2018). Relation with workplace spirituality (WPS), which involves creating a sense of purpose, interconnectedness, and well-being within the workplace, can significantly influence teachers' ability to cultivate critical thinking skills in themselves and students. This approach can address underlying issues such as lack of motivation, teacher burnout, and rigid adherence to traditional teaching methods (Aboobaker et al., 2019; Garg et al., 2022). Knowledge management mediates instructional leadership, workplace spirituality, and critical thinking skills among teachers. Schools can cultivate an environment conducive to knowledge sharing and creation by promoting workplace spirituality and effective instructional leadership, ultimately enhancing teachers' critical thinking abilities (Bhutto, 2024). As knowledge managers, principals play a crucial role in facilitating teacher collaboration, professional growth, and the

dissemination of spiritual knowledge that positively impacts teacher well-being and job satisfaction (Abbas, 2023).

Considering the challenges above, this study aims to investigate the direct impact of Instructional Leadership (IL) and Workplace Spirituality (WPS) on the critical thinking abilities of secondary school teachers in Pakistan. Additionally, it examines the indirect influence mediated by knowledge management (KM) in this context. It intends to measure how far behind secondary school teachers are in the ideal situation of practicing critical thinking in teaching. In education, the integration of knowledge management as a mediator in the present study holds significant promise for fostering critical thinking skills among teachers (Galgotia & Lakshmi, 2022). As teachers strive to nurture analytical and problem-solving abilities in their students, they require a framework that facilitates continuous learning, informed decision-making, and the effective dissemination of insights (Choy & Cheah, 2009). Knowledge management serves as this vital intermediary, allowing teachers to access diverse educational resources, share experiences, and collaborate with peers (Elezi & Bamber, 2022). By leveraging knowledge management as a mediator, teachers can tap into a wealth of information, best practices, and innovative methodologies, ultimately enhancing their critical thinking abilities. This approach their students with well-rounded, well-informed perspectives that drive intellectual growth and curiosity.

1.4 Research Objectives (RO)

RO1. To identify the level of Instructional leadership, workplace spirituality, knowledge management, and teachers critical thinking in teaching.

RO2. To examine the influence of instructional leadership on teachers' critical thinking in teaching.

- RO3.** To examine the influence of workplace spirituality on teachers' critical thinking in teaching.
- RO4.** To examine the mediating effect of knowledge management on instructional leadership and teachers' critical thinking in teaching among secondary school teachers in Pakistan.
- RO5.** To examine the mediating effect of Knowledge management on workplace spirituality and teachers' critical thinking in teaching among secondary school teachers of Pakistan.

1.5 Research Questions (RQ)

- RQ1.** What is the level of instructional leadership, workplace spirituality, knowledge management, and teachers critical thinking in teaching?
- RQ2.** Does instructional leadership significantly influence teachers' critical thinking in teaching?
- RQ3.** Does workplace spirituality significantly influence teachers' critical thinking in teaching?
- RQ4.** Does knowledge management mediate the influence of instructional leadership on teachers' critical thinking in teaching?
- RQ5.** Does knowledge management mediate the influence of workplace spirituality on teachers' critical thinking in teaching?

1.6 Hypothesis

- H1:** Instructional Leadership has a significant positive influence on Knowledge Management.
- H2:** Workplace Spirituality has a significant positive influence on Knowledge Management.
- H3:** Instructional Leadership has a significant positive influence on Teachers' Critical Thinking.
- H4:** Workplace Spirituality has a significant positive influence on Teachers' Critical Thinking.
- H5:** Knowledge Management has a significant positive influence on Teachers' Critical Thinking.
- H6:** Knowledge Management mediates the relationships between Instructional Leadership and Teachers' Critical Thinking.
- H_a7:** Knowledge Management mediates the relationships between Workplace Spirituality and Teachers' Critical Thinking.

1.7 Significance of the study

Previous studies in education on critical thinking highlight the pivotal role of schools in fostering students' critical thinking abilities (Beyer, 1987; Swartz & Perkins, 2016; Haynes, 2002). These research endeavours argue that the cultivation of essential skills of thinking equips students with the capacity to become more proficient in the art of critical analysis, adept at discerning truths, and capable of making well-informed decisions. They explicitly point out that the classroom setting can serve as an effective avenue for students to acquire these vital critical thinking skills. Moreover, educators incorporate critical thinking strategies into their teaching methods, enabling their

students to excel as truth-seekers, nurture their creativity, and cultivate essential capacities of thinking (Swartz & Perkins, 2016; Haynes, 2002).

This study's primary focus is on assessing the critical thinking abilities of teachers in the context of their teaching roles and examining how instructional leadership and workplace spirituality influence the promotion and development of critical thinking among educators. The conceptual framework of this study delineates an association between the instructional leadership exercised by school principals, the existence of workplace spirituality, and the critical thinking abilities of teachers in the context of their instructional practices. Additionally, it acknowledges the role of knowledge management as an intermediary factor within this relationship. The research aims to furnish policymakers with concrete evidence and insights concerning instructional leadership, teachers' critical thinking skills, and the significance of workplace spirituality in motivating teachers to employ teaching strategies that foster critical thinking in students.

Moreover, the outcomes of the current study will furnish instructional leaders with a set of directives. By adhering to these guidelines, instructional leaders can cultivate workplace spirituality as a means to engage teachers in the adoption of teaching strategies that foster the development of critical thinking skills. Ultimately, the present study's findings are poised to offer valuable insights to policymakers, educational administrators, educators, and researchers in Pakistan. These insights hold the potential to contribute novel perspectives and enrich the existing body of knowledge.

This study is poised to make a noteworthy contribution to the existing knowledge base through its distinctive conceptual framework. This framework delves into the four most critical factors that impact the quality of education in alignment with Pakistan's education policies. Notably, it integrates instructional leadership, workplace spirituality, teachers' critical thinking in teaching, and knowledge management, a unique combination not explored in previous Pakistani research. This conceptual model elucidates how instructional leadership and workplace spirituality motivate teachers to employ teaching strategies that foster students' critical thinking abilities. As this study addresses its research questions, it provides answers and paves the way for further inquiries.

1.8 Limitations of the Study

The present study has some limitations worth noting. Firstly, it is confined to high school teachers within a specific district of the Sindh province in Pakistan. Consequently, the findings may not fully represent all high/secondary school teachers across different provinces in Pakistan. Additionally, this research exclusively focuses on public secondary schools, making it challenging to generalize the results to teachers in private secondary schools.

Another constraint pertains to the research methodology. This study assesses the influence of instructional leadership and workplace spirituality on the critical thinking abilities of teachers in the context of their teaching practices, exclusively employing a questionnaire comprising predetermined variables. However, it is essential to acknowledge that various other factors might influence instructional leadership and workplace spirituality's impact on teachers' critical thinking in teaching. Relying solely on this quantitative method is thus a limitation.

Lastly, this study primarily centers on teachers and their perspectives on instructional leadership and workplace spirituality. It does not encompass an evaluation of the extent to which instructional leadership and workplace spirituality affect students' academic performance. Therefore, this aspect remains unaddressed within the scope of the present study.

1.9 Operational Definitions

This section contains the operational definitions of the variables.

1.9.1 Instructional Leadership

As defined by Hallinger, instructional leadership encompasses the strategic actions taken by school administrators to enhance educational institutions' teaching and learning processes. It involves activities to improve teaching practices, manage curriculum and instruction, foster a conducive learning environment, and promote overall school development. Three core dimensions are mentioned below: (i) School mission, (ii) Instructional program, (iii) Positive school learning climate.

1.9.2 Workplace Spirituality

Ashmos and Duchon's (2000) conceptualization of spirituality in the workplace underscores the importance of recognizing employees' inner lives and the value of meaningful work in cultivating a sense of community and personal well-being. This variable is based on three different dimensions, including (1) meaningful work (2) a sense of community (3) organizational values.

1.9.3 Meaningful Work

It emphasizes the pursuit of purpose and fulfillment within professional settings, reflecting employees' desires to engage in work that resonates with their inner values and contributes to a greater good.

1.9.4 Sense of Community

Sense of community refers to the feeling of belonging, connectedness, and shared purpose among teachers in the school.

1.9.5 Organizational Values

Alignment between teachers' personal values and their school's mission is crucial in fostering job satisfaction and reducing turnover intentions (Fei & Tien, 2024). This alignment ensures that educators feel integral to their institution's success, enhancing engagement and commitment.

1.9.6 Critical Thinking

Peter Honey (2004), defined critical thinking as being purposeful, self-regulatory judgment, logical thinking, objective information analysis, and making evidence-based decisions. Honey's framework emphasizes the importance of cognitive skills for evaluating arguments, problem-solving, and making informed choices (Abrami et al., 2008). CT has three dimensions, including (i) Comprehension, (ii) Analysis (iii) Evaluation.

1.9.7 Knowledge Management

A systematic process of capturing, sharing, and effectively utilizing teachers' knowledge and expertise to enhance organizational and individual performance. It encompasses knowledge creation, storage, sharing, and application aimed at fostering an environment where instructional leadership and workplace spirituality synergize to promote teachers' critical thinking. KM consists of five dimensions such as (i) Knowledge Acquisition or Creation, (ii) Knowledge Refinement, (iii) Knowledge storage, (iv) Knowledge distribution, and (v) Knowledge presentation.

1.9.8 Knowledge Acquisition in School

This would involve seeking information about new educational research, innovative teaching practices, and student performance. Knowledge could be obtained from internal sources such as teachers, staff, and students or external sources such as academic research or education conferences.

1.9.9 Knowledge Refining at School

In the context of schools, frequently upgrading curriculum materials, restructuring the methodology to be followed by teachers, and properly incorporating feedback from assessments and evaluations for its effectiveness and updating.

1.9.10 Knowledge Storage in School

These schools implemented digital tools and content management systems to store lesson plans, student records, and educational resources to preserve knowledge effectively and make it easily accessible.

1.9.11 Knowledge Distribution across School

This occurs through in-service training, cluster meetings, or even virtual communities where teachers and students can share resources and best practices.

1.9.12 Knowledge Presentation in School

The strategies used to present knowledge include interactive whiteboards, educational software, visual aids, and reports that make the individuals understand and use the information.

1.10 Summary

This chapter has provided a comprehensive overview of the subject of investigation in the present study. Furthermore, it has scrutinized the research question and objectives that originated from the research problem statement. Additionally, it has emphasized the study's significant relevance. The subsequent chapter will delve into the literature review and elucidate this study's theoretical and conceptual framework.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The literature review compiles the results or conclusions of various research studies that have been developed on the current problem. The literature review firmly endorsed the key theme, research goals, and research concerns. In addition, the literature review helped explain and offered a clear theoretical foundation for the strengths and limitations of this research. As mentioned in the literature review, identifying such problems connects the existing hypothesis or creates a new theory to combine it with the results (Karunaratna et al., 2024).

The literature review for the current study is divided into five parts. The initial section delves into the subject of leadership, particularly instructional leadership, both in a general context and within the specific framework of Pakistan. It also examines previous research about instructional leadership. The second part explores workplace spirituality; the third part highlights knowledge management. The fourth and final part presents a review of teachers' critical thinking in teaching; the fifth part of the chapter discusses the study's theoretical framework and conceptual framework.

2.2 Demographic Profile of Pakistan

Pakistan, with a population of approximately 240.47 million people as of 2023, according to the Pakistan Bureau of Statistics, ranks as the world's sixth-largest country. It shares its borders with India to the east, Afghanistan to the west, Iran to the southeast, and China to the northeast. The government is administratively divided into four provinces: Khyber Pakhtunkhwa (KP), Punjab, Sindh, and Baluchistan. The

research conducted for this study will be situated in the Sindh province, which is the second most populous province in Pakistan. The literacy rate of Sindh province is 63%. According to the data, urban areas have a literacy rate of 76%, which is greater than rural areas' rate of 51%. The current study is carried out in the secondary schools of district Sukkur, which is also considered a rural area that lies north of Sindh province.



Figure 2.1 Pakistan Map

2.3 Education System in Pakistan

Pakistan's education system is divided into different levels, including primary, secondary, and tertiary education. Primary education is typically from grades 1 to 5, followed by secondary education from grades 6 to 10. Higher secondary education comprises grades 11 and 12; tertiary education includes colleges and universities (Maqsood et al., 2021). The present study focuses on secondary education, which