



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

OCTOBER 2023, VOLUME 11, ISSUE 4, 1 - 15
E-ISSN NO: 2289 – 4489

THE IMPACT OF WORKPLACE SPIRITUALITY ON TEACHERS' CRITICAL THINKING: MEDIATING ROLE OF INSTRUCTIONAL LEADERSHIP AND KNOWLEDGE MANAGEMENT

Sobia Bhutto^{1*}, Al-Amin Mydin¹, Kamran Hyder Malik², Gul
Muhammad Rind² & Veenus Tiwari³

[1]
School of Educational Studies,
Universiti Sains Malaysia,
Penang, Malaysia

[2]
Department of Education,
Sukkur IBA University,
Sukkur, Sindh,
Pakistan

[3]
School of Management,
Universiti Sains Malaysia,
Penang, Malaysia

Corresponding Author:
School of Educational Studies,
Universiti Sains Malaysia,
Penang, Malaysia

E-mail:

sobia.bhutto2018@gmail.com

ABSTRACT

The present research aims to analyze the effect of workplace spirituality on teachers' critical thinking with the mediation of instructional leadership and knowledge management. The survey instrument was used to collect the data from the secondary school teachers of district Sukkur, Sindh, Pakistan by using a random sampling technique. Structural equation modeling (SEM) with maximum likelihood estimation was used to analyze the proposed hypothesis of the study. The study is based on the constructivism theory. The study has tremendous implications for theory, policy, practice, and educational institutions. Results showed that workplace spirituality has a positive relationship with instructional leadership and knowledge management. Results demonstrated that instructional leadership and knowledge management mediate the relationship between workplace spirituality and teachers' critical thinking. This study's findings will inform policymakers, legislative bodies, education ministries, curriculum developers, and other stakeholders who can utilize this knowledge to better support educators in their efforts to foster critical thinking skills.

Keywords: Workplace Spirituality, Instructional leadership, Knowledge management, Critical thinking, In-service teachers



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

INTRODUCTION

Critical thinking is a necessary life skill. Globally, researchers agreed on the significance of critical thinking in both personal and academic life (Ennis, 2018). In education, it is acknowledged that necessary thinking skills are vital for an individual's success in an ever-changing world where analytical and evaluative skills are regarded as crucial for sound judgment. Educators need to understand and recognize the importance of critical thinking and prepare themselves to encourage it in the classroom (Gorski & Dalton, 2020; Halpern, 2013). Teachers need to "incorporate higher-level cognitive thinking in their instructional practices" to prepare students for developing higher-order thinking skills (Ball & Garton, 2005). It is widely believed that teachers are familiar with critical thinking and its incorporation into their teaching practices (Tathahira, 2020). However, this may not be applicable in genuine cases (Choy & Cheah, 2009) unless teachers can integrate critical thinking into their teaching methods during their 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 (Din, 2020). Moreover, teachers are considered knowledge providers rather than facilitators of the knowledge development of students (Gul et al., 2010; Siddiqui, 2007). Furthermore, Warsi (2004) endorsed this statement by arguing that Pakistani teachers are mainly concerned with transferring factual knowledge instead of developing critical thinking abilities among students. According to the author, there are limited studies to measure critical thinking on the basis of workplace spirituality, especially in Pakistan. Also, limited studies are available to represent the relationship between instructional leadership and knowledge management with critical thinking (Bhutto et al., 2023). This study analyzes the effect of workplace spirituality on critical thinking through the mediation effect of instructional leadership and knowledge management to fill the knowledge gap.

In any organization, workplace spirituality provides higher work efficiency and learning importance (Milliman et al., 2017; Karakas & Sarigollu, 2019). Teachers' sense of active participation in their teaching and learning can be enhanced by instructional leadership (Liu et al., 2016). Effective knowledge management is of great importance to educators because educators are responsible for growing the next generation of productive knowledge workers (Hannay et al., 2013).

LITERATURE REVIEW

Workplace Spirituality

Researchers have become more interested in determining the significance and function of spirituality in the workplace during the past decade (You et al., 2021). Numerous research studies have presented various definitions of workplace spirituality by examining it from an organizational and an individual viewpoint (Saxena et al., 2020; Aboobaker et al., 2020). Spirituality in the workplace involves developing a spiritual self that is represented in qualities such as compassion, caring, belonging, acceptance, honesty, kindness, and completeness (Aboobaker et al., 2019). Spirituality in the workplace is defined from an organizational viewpoint as the personal experiences and expressions of one's passion in the context of one's employment and workplace. The ties between employees, coworkers, and the organization are workplace spirituality. It aims to aid employees in discovering job pleasure, inner awareness, and a sense of accomplishment while working within an organizational structure (Anderson & Burchell, 2021; Lata & Chaudhary, 2020). According to Milliman et al. (2003), the most frequently accepted definition of workplace spirituality is a three-dimensional concept that incorporates meaningful work, a sense of community, and alignment with organizational values. At the organizational level, workplace spirituality achieves more effectiveness, meaning, and value (Milliman et al., 2017; Karakas & Sarigollu, 2019; Mayer & Walach, 2018). According to the study, employees' spiritual experiences influence their devotion to their jobs and loyalty to the institution (De Carlo et al., 2020). Workplace spirituality has three dimensions such as organizational values, meaningful work, and sense of community. Organizational values show the extent to which employees perceive that their organization is having a positive purpose with regards to society and employees (Ashmos & Duchon, 2000). A sense of community is members' sense of belonging, the belief that their commitment to being together will meet



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

their needs, and shared faith that their needs will be addressed (Ashmos & Duchon, 2000). Satisfaction and contentment are correlated with meaningful employment. It is more about appreciating our work. In other words, a sense of pride comes when an individual's effort fulfills a certain purpose (Ashmos & Duchon, 2000). The current study aims to analyze workplace spirituality's impact on the critical thinking of in-service teachers at public secondary schools.

Instructional Leadership

Since the late 1970s, research on effective schools has provided the conceptual foundation for the emergence of instructional leadership (Hallinger & Kovaevi, 2021; Marks & Printy, 2003). Effective school research has long examined the features of high-performing schools with mostly low socioeconomic status student populations (Bellibas & Liu, 2017). One clear conclusion of this type of empirical research was that school principals play a significant role in enhancing teaching and learning, a function that was later defined as Principal Instructional leadership (Gu'mu's & Bellibas, 2016). Instructional leadership focuses on developing a school atmosphere in which the principal, teachers, students, and parents collaborate to carry out educational activities successfully and efficiently (Bellibaş et al., 2022). By focusing on students' interests, needs, and expectations, this philosophy requires principals to improve instruction by developing and implementing curricula, tracking student achievement, and overseeing and supporting good teaching practices (Marks & Printy, 2003). In addition, it entails managing instruction, collaborating with teachers on the curriculum and instructional plan, addressing instructional issues jointly, supplying teachers with the required materials, and providing opportunities for teacher professional development (Coldren and Spillane, 2007).

Burch and Spillane (2003) found that teachers are more likely to improve classroom practices when school principals demonstrate knowledgeable instructional leadership behaviours. Parise and Spillane (2010) found in their study that school principals affect changes in teachers' classroom practices via mediating teacher-peer influence. This empirical link between instructional leaders' behaviours and teachers' engagement in improving instruction has been validated by more recent studies (Miller et al., 2010; Ozdemir, 2020; Sebastian & Allensworth, 2012). The research provides credible proof that instructional leadership affects instructors' emotions, beliefs, and attitudes (Bellibas & Liu, 2017; Duyar et al., 2013). As an instructional leader, a principal is supposed to provide teachers with chances for ongoing professional development (Hallinger and Murphy, 1985). When school leaders prioritize teaching and learning, teachers are more likely to engage in professional development activities in the workplace (Hallinger et al., 2020; Piyaman et al., 2017). Such leadership can increase teachers' sense of agency and engagement in the learning process (Liu et al., 2016). According to Park and Ham (2016), effective instructional principals help develop a conducive learning environment by providing instructors with useful feedback or inquiring about their classroom practices.

To better incorporate strategies that promote critical thinking among secondary school teachers, this research focuses on what is known as "instructional leadership." This term refers to the methods used by school heads/principals to improve classroom instruction through observation and data collection, modeling instructional practices, presenting professional workshops, and other supports for instructional improvements.

Critical Thinking

Critical thinking is the essential skill of the 21st century. Defining critical thinking and reaching a collective consensus were monumental challenges (Miller, et al., 2011). There are many traditional definitions of critical thinking. Critical thinking can be defined in several different ways depending upon the context of the term. The English word for critical comes from the Greek word for Critic, *Kritikos*, defined as "to question, to make sense of, to be able to analyze" (Chafee, 2009, p. 54). The Greek definition of critic compares with contemporary definitions of critical thinkers rather than the common English definition, which describes a person as "given to harsh or captious judgment" (Merriam-Webster, 2002, p. 413). Socrates defined critical thought for the Greek culture; Plato found new ways to Socratic thought through stories and allegory. Both the Socratic Method and the concept of critical



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

thoughts communicated through stories have been basic to current critical thinking theories (Cookson, 2009; Schwarze & Lape, 2001).

There is broad consensus, though not unanimity, that education should not focus solely on delivering knowledge to students. Increasingly, it is acknowledged that education also has a role to play in fostering in teachers and students the ability to make educated, ethical decisions and well-reasoned judgments (Dewey, 1909; Marin & Halpern, 2011; Moore, 2011a). To equip children to be better thinkers, teachers must combine instructional practices that foster critical thinking.

Many educators agree that teachers need to improve what and how they teach, and as Halpern (2013) said, teaching critical thinking skills should be a classroom priority. Rotherham and Willingham (2009) supported the need for more intentional instruction in critical thinking, cooperation, and problem solving in the classroom.

Schreck (2011) stated the call is out and getting louder for more emphasis on creative growth for all of us to be innovative teachers so that we can transform the classroom we currently occupy. Teaching critical thinking skills is not new; it has not resurfaced under a different name; it remains in some schools, whether kindergarten or post-secondary institutions, one of the key contributors to student learning and understanding. "Critical thinking and problem-solving have been components of human progress throughout history; such skills as information literacy and global awareness are not new" (Rotherham & Willingham, 2009, p. 16).

Knowledge Management

Knowledge is an organization's most valuable intangible asset; therefore, leaders must manage knowledge effectively (Bratianu et al., 2021; Hovland, 2020). Siegrist et al. (2013) proposed that educational leaders must be system thinkers and continuously grow a knowledge base. Similarly, DuFour and Marzano (2011) described that the necessary knowledge base for school improvement existed. Educators must persist in transferring and applying said knowledge base to improve teacher instruction and student learning. Leaders must mobilize knowledge to create organizational value (Mosconi & Roy, 2013). To mobilize knowledge, school leaders must give time and frameworks for knowledge influencers to collaborate and share knowledge (Reid, 2014). Educators must be able to properly manage knowledge since they are responsible for cultivating the next generation of "productive knowledge workers" (Hannay et al., 2013, p. 64). Moreover, Hannay et al. (2013) recommended including knowledge management in future educational leadership discussions.

RESEARCH QUESTIONS AND HYPOTHESES

Workplace Spirituality and Instructional Leadership

In their empirical analysis of the research on individual Spirituality, Goertzen and Barbuto (2001) believe that spirituality is addressed through numerous new paradigms, including spirituality and leadership. New perspectives include seeing leadership as the outward expression of a leader's inner spirituality (Fairholm, 1998). Leadership is a group phenomenon (Drath & Plus, 1994), and leadership as being more concerned with how an individual thinks, inquires, perceives, values, and acts in the context of their community than their own (Eggert, 1998). Along these lines of inquiry, it is proposed that the spiritual domain be an intrinsic part of leadership. Spirituality is presented as one variable in an integrated leadership development model (Cook-Greuter, 2002). That spirituality may contribute to the effectiveness of leaders in gaining credibility. For instance, Bennis (1999) challenged leaders to follow their spirit and create meaningful work and a feeling of community at work for others. Pfeffer (2003) urges organizational leaders to use management techniques that improve the human spirit by helping people develop their values. Bolman and Deal (2003) make this connection between the system and the person even clearer by emphasizing the importance of spiritual leaders who find meaning in their work and can help their subordinates do the same. Because leadership is a crucial component of "the system" that collaborates with the person to establish inner life worth and



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

meaningful work. In this study, we consider leadership in the domain of instructional leadership, and based on the discussion, we propose the hypothesis:

Q1. Does workplace spirituality have a positive impact on instructional leadership?

H1: Workplace spirituality is positively related to instructional leadership.

Workplace Spirituality and Knowledge Management

A genuine organizational spirituality requires a sense of belonging, a shared mission, and the desire for personal development (Rocha and Pinheiro 2020; Ashmos and Duchon 2000; Gotsis & Kortezi 2008). Members will be more inclined to share their information, teach newcomers, learn from one another, and create a more pleasant workplace (Fry, 2003). Furthermore, conditions conducive to knowledge management will become even more crucial. Organizational spirituality improves member connection and awareness (Zaidman & Goldstein-Gidoni 2011). Bierly et al. (2000) assert that one of the pillars for establishing organizational spirituality is the connection between experience and a desire to learn. Spirituality links knowledge and learning because it stimulates introspection, the formation of objectives, and a profound sense of purpose. Spirituality also supports the zeal for acquiring information, which is the belief in the significance of one's effort and achievement (Bierly et al., 2000).

Despite the growing interest in workplace spirituality and its impact on innovation, knowledge sharing, and management, there is still a dearth of empirical research on the topic, and little attention is paid to employees' inner consciousness as a potential precursor (Hafni & Chandra, 2020). Posner (2006) has researched the positive relationship between spirituality among employees and information-sharing and managing behaviour. A previous study indicated a correlation between spirituality and the willingness to share and manage knowledge in an organization. Consistently spending a significant amount of time with coworkers, employees find purpose in their lives, significance in their professional positions, and enjoyment in their work through exchanging Knowledge (Osman et al., 2013). As discussed above, there is a significant relationship between workplace spirituality and knowledge management but not much studied in academic organizations; based on the supporting literature, we generated the following hypothesis:

Q2. Does workplace spirituality have a positive impact on knowledge management?

H2: Workplace spirituality is positively related to the Knowledge management.

Instructional Leadership and Critical Thinking

Numerous scholars have claimed, to date, that leadership is an essential component of teacher education and plays a crucial role in fostering critical thinking. Consequently, self-leadership skills and practices enable instructors to enhance critical thinking effortlessly. For instance, Neck and Manz (2004) noted that instructors might create attainable objectives, participate in pragmatic thought processes, and be self-critical if they often demonstrate good leadership abilities and behaviours. There were somewhat favourable and substantial connections between pre-service teachers' critical thinking dispositions and leadership orientations (Lee & Oh, 2022) and between critical thinking and self-leadership (Lee & Oh, 2022). Ay et al., (2015); Kim, and Hwang, (2016) and Dykhne et al. (2021) discovered that the greater a student's leadership involvement, the greater their critical thinking skills. Similarly, self-leadership theorists noted that pre-service teachers who cultivate their self-leadership abilities might have opportunity-oriented thought patterns.

Q3. Does instructional leadership have a positive impact on critical thinking?

H3: Instructional leadership is positively related to critical thinking.

Knowledge Management and Critical Thinking

Knowledge is crucial for critical thinking since it provides the basis for thinking. A person's critical thinking is grounded in tangible substance and not in the abstract. (Indraien et al., 2021) Critical thinking is always manifested in a recognizable action or topic and never in isolation. As a kind of accumulated capital, however, knowledge is



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

relatively worthless. It is not possessing and amassing information that is crucial, but rather understanding what to do with it and how to use it. Therefore, it is commonly stated that, within the framework of critical thinking, knowledge management serves as the foundation for reasoning and other intellectual activities (Sadauskas & Valaviciene, 2021). It must be digested, studied, questioned, understood, reconstructed, synthesized, pondered, assessed, and implemented. Knowledge management can have varying weights and connotations in different circumstances (Hendriks, 1999). Critical thinking might be compared to a filter in judging the relevance, dependability, and utility of knowledge.

Several researchers have highlighted argumentation as a vital step in critical thinking that must be carried out through peer cooperation, including information sharing and knowledge management, to improve instructors' critical thinking ability (Norris & Ennis, 1989). Also, by interacting socially, each student gives other participants chances and resources to discuss and build knowledge together. This can lead to disequilibrium, inconsistent knowledge, opposable perceptions and ideas, and insufficient logical reasoning and strategies for the individual. This suggests that knowledge management will facilitate higher-order thinking skills, such as critical thinking skills. Critical thinking and knowledge management are similar in that they both involve processing and managing information systematically, sequentially, and completely (Holsapple & Singh, 2001). By sharing information, people can better understand complicated processes and learn how to find solutions to problems. People must learn how to deal with information to solve problems and gain useful information (Wang et al., 2009). In conclusion, knowledge management is an essential part of being able to think critically.

Q4. Does knowledge management have a positive impact on critical thinking?

H4: Knowledge management is positively related to critical thinking.

Theoretical Framework

Constructivism theory as a viable theoretical paradigm for teachers' critical thinking in teaching is the core focus of the present study. Constructivism is the appropriate theory of learning in light of the high demand for education in today's global societies (Boyraz & Ocak, 2021). Constructivism has prompted many countries worldwide to reform educational curricula and teaching methods to prepare students to graduate with 21st-century skills. The transition from a transmission curriculum to a transactional curriculum is one component of the current new development of all subject area curricula. Constructivist theory can be used to examine teachers' critical thinking abilities in the classroom (Mashaza, 2017). The theoretical foundations, educational applications, and pedagogical implications of constructivism are worth discussing (Brandon & All, 2010). This study will add to the literature on in-service teachers' research studies, especially those related to critical thinking and workplace spirituality in academic institutions. The study provides educators with a lens for enhancing critical thinking within and outside the classroom.

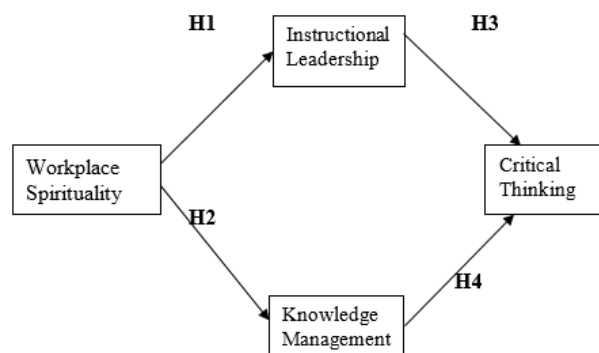


Figure 1. *Research Framework*



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

METHODOLOGY

Site of Study and Data Collection

In the present research, secondary school in-service teachers of district Sukkur, Sindh province of Pakistan, were the population of the study. There were certain reasons to select the Sukkur district for the present study. First, in many past studies data were collected from in-service teachers in urban areas. Therefore, research results cannot be generalized to rural areas teachers. Second, the Sukkur district is composed of both urban and rural areas. Therefore, conducting research in Sukkur would represent both urban and rural in-service teachers.

The present study followed a quantitative cross-sectional research design. A total of 490 in-service secondary school teachers (male, $n = 311$, 63.5%; female, $n = 179$, 36.5%) were randomly selected from a total number of 1411 teachers working in the Sukkur district. Random sampling paves the way for researchers to ensure that "all population members have an equal and independent chance of being included in the random sample" (Creswell, 2012, p.150). Simple random sampling is often used in research because it is a straightforward and unbiased method of selecting a sample from a population. Before data collection, the researcher sought consent from the head of the schools. Teachers were given information about the study's goals, informed that participation was voluntary, and promised that their identities would not be shared with anyone. All the participants responded to the questionnaire and handed it over to the researcher. The characteristic demographic profile of respondents is shown in Table 1.

Table 1: *The characteristic demographic profile of respondents (N=490)*

Variable		n	%
Gender	Male	311	(63.5%)
	Female	179	(36.5%)
Age	≤ 25	70	14%
	26-35	158	32%
	36-45	190	39%
	≥ 46	72	15%
Teaching Experience	≤ 5	49	10%
	6-15	123	25%
	16-25	152	31%
	26-35	103	21%
	≥ 36	63	13%

Measurement

Based on previous research, questionnaires were adapted and modified in the context of this study. The survey instrument was based on a 5-point Likert scale ranging from 1 for strongly disagree to 5 for strongly agree. This study adapted the spirituality in workplace scale developed by Ashmos & Duchon (2000). Instructional Leadership items adapted from the Principal Instructional Management Rating Scale (PIMRS) developed by Hallinger (2013). The survey instrument of Peter Honey's critical thinking questionnaire (2004) was adapted to measure the critical thinking of secondary school teachers. The knowledge management construct was measured using a knowledge management scale given by Meyer and Zack (1996).

In the present study first, researcher acquired help from the language expert to translate the English version of survey instrument to local Sindhi language. In the next step researcher approached the two experts to assess the forward and back-ward translated versions of the questionnaires at the Shaikh Ayaz University and Sukkur IBA University Sindh. A preliminary test with 25 respondents checked the questionnaire's clarity before the major data



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

gathering. Confirmatory factor analysis, Mean, Standard deviation, Skewness, and Kurtosis of all variables ($p < .001$) are represented in Table 2.

DATA ANALYSIS AND RESULTS

Table 2: Results of Confirmatory Factor Analysis ($p < 0.01$)

Constructs, (CR)	M	SD	SFL	Kurtosis	Skewness	t-stat	VIF
Workplace Spirituality (WPS) (.957)							
Organizational Values (OV) (.782)							
OV1	3.94	.62	.745	-.961	-.152	27.31	3.123
OV2	3.91	.87	.726	-.639	-.251	29.92	2.961
OV3	3.65	.73	.729	-.642	-.247	28.22	2.941
OV4	3.59	.78	.741	-.634	-.163	36.66	2.993
Meaningful Work (MW) (.921)							
MW1	4.11	.723	.771	-.836	-.245	42.58	2.742
MW2	3.68	.712	.764	-.835	-.172	48.77	2.937
MW3	3.45	.653	.849	-1.16	-.072	43.51	3.011
MW4	3.75	.53	.874	-1.01	-.076	61.47	2.482
Sense of Community (SC) (.789)							
SC1	3.63	.634	.851	-1.14	-0.049	37.21	2.245
SC2	3.83	.74	.864	-1.05	-.092	62.82	2.341
SC3	3.53	.81	.823	-1.06	-.088	81.34	2.217
SC4	3.71	.83	.831	-1.07	-.095	77.87	2.465
Instructional Leadership (IL) (.867)							
IL1	3.95	.866	.769	-.682	-.194	36.82	2.951
IL2	3.89	.863	.789	-.729	-.186	36.92	2.997
IL3	4.13	.79	.711	-.542	-.431	32.29	2.261
IL4	4.07	.817	.652	-.944	-.277	31.71	2.621
Critical Thinking (CT) (.866)							
CT1	4.19	.852	.869	-1.04	-.097	63.75	2.281
CT2	3.74	.724	.882	-1.04	-.083	80.49	2.535
CT3	3.97	.873	.865	-1.07	-.094	78.96	2.351
CT4	4.05	.814	.642	-.934	-.267	32.71	2.521
Knowledge Management (KM) (.853)							
KM1	4.17	.852	.867	-1.02	-.095	62.75	2.521
KM2	4.11	.863	.845	-1.27	-.091	77.56	2.341
KM3	3.51	.84	.853	-1.26	-.082	83.34	2.517
KM4	4.53	.87	.863	-1.11	-.089	81.54	2.417

Note: SFL = standardized factor loading; M = mean; SD = standard deviation; CR = composite reliability



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

Table 2: Construct Reliability and Validity, ($p < 0.01$)

	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
WPS	.945	.969	.771
IL	.844	.845	.731
KM	.787	.800	.754
CT	.913	.902	.766

Table 3: Correlation of Constructs

	Workplace Spirituality	Instructional Leadership	Knowledge Management	Critical Think
Workplace Spirituality	.831			
Instructional Leadership	.449	.721		
Knowledge Management	.556	.607	.684	
Critical Thinking	.779	.534	.558	.864

Structure Equation Modeling

Next, the structural model was developed and assessed using maximum likelihood (ML). The model's performance was satisfactory ($p < 0.001$, NFI = 0.91, and RMSEA = 0.036) (Hair et al., 2017). The conclusion of the structural model confirms all predicted correlations with standardized coefficients. The findings demonstrated that workplace spirituality has positive relationship with instructional leadership ($\beta = 0.347$, $p < 0.001$), indicating that H1 was supported. Workplace spirituality has positive relationship with Knowledge management ($\beta = 0.332$, $p < 0.001$), indicating that H2 was significant. Instructional leadership has positive relationship with Critical thinking ($\beta = 0.251$, $p < 0.001$), indicating that H3 was significant. Knowledge management has positive relationship with Critical thinking ($\beta = 0.228$, $p < 0.001$), indicating that H4 was significant. These approaches demonstrated that Workplace spirituality is vital in developing strong critical thinking with the mediation effect of Instructional leadership and Knowledge management.

DISCUSSION AND IMPLICATIONS

The current study makes its contribution through empirically examining the impact of workplace spirituality on teacher's critical thinking by testing the mediating effect of instructional leadership and knowledge management. The findings revealed that workplace spirituality has positive relationship with instructional leadership and knowledge management. The results further demonstrated that Workplace spirituality is vital in developing strong critical thinking skills with the mediation effect of Instructional leadership and Knowledge management.

This study contributes to the literature in enhancing the critical thinking of the teachers, there must be workplace spirituality in teachers and the school organization. Schools that have high workplace spirituality are developing high



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

critical thinking in secondary school teachers and students. Our results are also in line with previous findings that established the relationships of workplace spirituality and critical thinking skills. The result of the current study is in line with Abdullah et al., (2009) which indicate that workplace spirituality has an important role to play as an aide to leadership development, as well as instructional leadership and leadership effectiveness and workplace spirituality has significant relationship with instructional leadership.

The current study is also in line with the results of Bhutto et al., (2023) who established the relationship between instructional leadership and teachers' critical thinking. The results of present study are congruent with those of a previous study by Lakshmi and Das (2021) and Khan et al., (2022) which also indicated a relationship between workplace spirituality and improved knowledge management.

This study's findings on workplace spirituality, instructional leadership, knowledge management and teacher critical thinking will inform policymakers who can then utilize this knowledge to better support educators in their efforts to foster critical thinking skills in the classroom.

The research results will also guide educational administrators in making strategic decisions. The realization of spirituality in the workplace will encourage instructional leaders (principals) to arrange professional development training for teachers as they incorporate strategies that promote critical thinking. The results of present research will help legislative bodies, education ministry, curriculum developers and other stake holders in Pakistan, to create a theory that will lead to new discoveries in the field.

This study contributes to literature from a theoretical perspective. Firstly, it provides evidence that workplace spirituality has a positive relationship with instructional leadership and knowledge management. Secondly, instructional leadership and knowledge management mediating the effect between workplace spirituality and critical thinking. Thirdly, the overall framework of the study will add unique insights into the constructivism theory literature. Finally, very few studies analyzed this relationship especially in the academic organizations in Pakistan. This is the main contribution of the study. In conclusion, to improve the critical thinking of secondary school teachers all three factors workplace spirituality, instructional leadership and knowledge management are important in the academic environment.

The implications for the present research study necessitate that workplace spirituality can positively influence teachers' critical thinking abilities. Implementing strategies that foster spirituality in the workplace can create an environment that stimulates critical thinking among teachers. This can lead to better problem-solving skills, creativity, and analytical thinking in educational settings. The study highlights the mediating role of instructional leadership. It implies that effective leadership practices, particularly those that incorporate spirituality, can enhance critical thinking among teachers. School administrators and leaders should focus on nurturing a culture of instructional leadership that promotes spiritual values, such as trust, collaboration, and shared vision, to support teachers' critical thinking development. The research also indicates that knowledge management plays a mediating role in the relationship between workplace spirituality and teachers' critical thinking. Implementing knowledge-sharing platforms, encouraging collaborative learning, and providing professional development opportunities can facilitate the exchange of ideas and knowledge among teachers. This, in turn, can enhance critical thinking abilities by exposing teachers to diverse perspectives and experiences. The findings suggest the importance of incorporating spirituality-related components into teachers' professional development programs. Training sessions, workshops, and courses that address the integration of spirituality in education can promote critical thinking skills among teachers. Providing opportunities for reflection, self-awareness, and personal growth can contribute to their overall professional development. Creating a positive and inclusive organizational culture that values spirituality can have a significant impact on teachers' critical thinking. Schools and educational institutions should foster an environment that encourages open communication, respect for diverse beliefs, and a sense of purpose. This can contribute to teachers' well-being, job satisfaction, and ultimately enhance their critical thinking abilities.



MALAYSIAN ONLINE JOURNAL OF EDUCATIONAL MANAGEMENT (MOJEM)

These implications highlight the potential benefits of incorporating workplace spirituality, instructional leadership, and knowledge management practices in educational settings. By recognizing the influence of spirituality and implementing strategies that support critical thinking, schools can create an environment conducive to the professional growth and development of teachers.

Limitations and Future Scope

This study is limited to high school teachers in one district of Pakistan's Sindh province; hence, the results may not be representative of all Pakistani high/secondary school teachers in other provinces. Another limitation is that only public secondary schools will be included in the present investigation. Consequently, the results cannot be extrapolated to private secondary school educators. Another disadvantage is that the present study examines the impact of IL and workplace spirituality on teachers' critical thinking in the classroom using a questionnaire with predetermined criteria. However, several factors may influence instructional leadership and teachers' critical thinking in the classroom. Consequently, the shortcoming of the present investigation is its reliance on a single quantitative technique. The only participants in the present study are teachers and teachers with thoughts on instructional leadership and knowledge management. However, the extent to which Instructional leadership affects student performance will not be determined by the present investigation.

This study measured teachers' critical thinking using a cross-sectional approach; for a more in-depth understanding, a longitudinal study could provide a clearer picture of the impact of instructional leadership and knowledge management on teachers' critical thinking in future research. In addition, mixed-methods research that combines qualitative and quantitative analysis could provide further insight into the study's findings.

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