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Developing a Predictive Model of Organizational Learning Based on Multiple Intelligences: A Case Study of Iranian Schools

ABSTRACT

This study aimed to develop and validate a predictive model of organizational learning based on Gardner's multiple intelligences theory in Iranian schools, emphasizing the roles of leadership, capacity building, and enabling learning environments in fostering sustainable educational development. The study employed a mixed-methods design with an exploratory–sequential approach. In the qualitative phase, 125 scholarly works were reviewed systematically through a meta-synthesis process, of which 20 met inclusion criteria after CASP quality screening. Thematic analysis of these sources and semi-structured interviews with educators led to the identification of 80 basic codes, 16 organizing themes, and 3 overarching dimensions—enabling learning environment, capacity building, and educational leadership based on multiple intelligences. In the quantitative phase, a researcher-made questionnaire was developed from the qualitative findings and distributed among 355 teachers selected through random sampling. Data were analyzed using Structural Equation Modeling (SEM) with SmartPLS version 3 to test measurement and structural models. Inferential analysis revealed strong relationships among the core constructs, with R^2 values between 0.868 and 0.944 and Q^2 indices ranging from 0.285 to 0.387, confirming the model's high explanatory and predictive power. The Fornell–Larcker criterion validated discriminant reliability among dimensions. Results showed that educational leadership based on multiple intelligences significantly predicted organizational learning, while capacity building and an enabling learning environment mediated this effect. Emotional intelligence, reflective learning, and participatory culture were identified as key mechanisms linking leadership to sustainable organizational learning. The study confirmed that integrating multiple intelligences into educational leadership and institutional processes enhances organizational learning, adaptability, and innovation. The validated model provides a theoretical and practical framework for promoting sustainable learning organizations in schools.

Keywords: Organizational learning; multiple intelligences; educational leadership; reflective learning; teacher development; structural equation modeling; Iranian schools.

Introduction

Organizational learning has increasingly become a strategic imperative for educational institutions seeking to adapt to complex, dynamic, and knowledge-based environments. Schools, as learning organizations, must continuously develop internal capabilities to absorb, create, and disseminate knowledge to enhance both teacher and student performance. One of the most promising frameworks for fostering such a culture of learning is Gardner's theory of multiple intelligences, which conceptualizes intelligence as a multifaceted construct encompassing linguistic, logical–mathematical, spatial, musical, bodily–kinesthetic, interpersonal, intrapersonal, and naturalistic capacities [1]. In recent years, this theory has extended beyond individual pedagogy to inform institutional development models, suggesting that diverse intellectual strengths can collectively contribute to adaptive and sustainable learning organizations [2]. The present study aims to develop a predictive

model of organizational learning based on multiple intelligences in Iranian schools, integrating cognitive, emotional, and structural components that enable sustainable learning environments.

The increasing complexity of educational systems requires schools to shift from static institutions toward adaptive, self-renewing organizations capable of managing change through collective intelligence [3]. The concept of a learning organization emphasizes the continuous transformation of both individual and organizational behaviors through reflection, collaboration, and innovation. Within this framework, multiple intelligences function as a foundation for understanding how individuals contribute to collective learning processes, providing diverse cognitive pathways through which teachers and administrators engage in problem-solving, decision-making, and creative knowledge sharing [4]. Accordingly, integrating multiple intelligences into school management models can enhance organizational adaptability, encourage participatory decision-making, and strengthen communication across hierarchical boundaries [5].

At the heart of organizational learning lies the interaction between human capital and institutional culture. The development of a learning culture within schools requires the creation of enabling environments that promote open communication, reflective practice, and innovation [6]. Empirical studies indicate that such environments encourage teachers to experiment with new teaching methods, engage in professional dialogue, and share experiential knowledge [7]. Furthermore, educational leaders play a crucial role in shaping these environments by leveraging diverse forms of intelligence—linguistic for communication, logical–mathematical for decision-making, and interpersonal for relationship management [8]. Thus, leadership grounded in multiple intelligences becomes the pivotal mechanism through which schools evolve into dynamic and self-sustaining learning organizations.

Recent evidence underscores the role of multiple intelligences in enhancing cognitive diversity and learning outcomes across educational levels. Studies in primary and higher education contexts confirm that applying Gardner's framework in instruction promotes creativity, motivation, and holistic development [1, 9]. This pedagogical adaptability not only improves academic performance but also strengthens social and emotional competencies among students [10]. Moreover, research on emotional and interpersonal intelligences highlights their influence on teachers' professional growth and organizational commitment, as emotional regulation and empathy facilitate collaboration and conflict resolution within schools [11]. Hence, multiple intelligences can be seen as an integrative model that connects cognitive, affective, and organizational domains, fostering sustainable learning ecosystems.

In the organizational context, the notion of "intelligence" extends beyond individual cognition to encompass collective capabilities such as knowledge management, strategic foresight, and adaptive problem-solving [12]. This broader understanding aligns with the concept of organizational intelligence, which refers to an institution's ability to process information, learn from experience, and apply insights to improve performance. The synergy between individual multiple intelligences and organizational intelligence thus becomes a key determinant of institutional success [13]. When teachers and leaders collectively apply their diverse cognitive strengths to address complex educational challenges, they create a system of distributed intelligence that enhances institutional adaptability and innovation.

Empirical research in various organizational settings supports the mediating role of psychological and emotional factors in linking intelligence with adaptive performance. For instance, psychological capital—including self-efficacy, resilience, and optimism—acts as a bridge between individual adaptability and career success among educators [14]. Similarly, career adaptability has been shown to mediate the relationship between self-esteem, meaning in life, and proactive behavior [15,

16]. These findings suggest that emotional and motivational resources, intertwined with cognitive intelligence, enhance individuals' capacity to cope with change and contribute constructively to organizational learning. Extending this logic to educational institutions implies that the emotional and psychological well-being of teachers forms a critical dimension of schools' collective learning capacity.

The relationship between multiple intelligences and learning organization development is also closely tied to organizational culture. A culture that values collaboration, dialogue, and continuous improvement enables the expression of diverse intelligences within teams [5]. Organizational culture serves as both a context and a catalyst for learning, shaping attitudes toward innovation and knowledge sharing [17]. In schools, this translates into creating environments where teachers can reflect, experiment, and integrate new pedagogical practices without fear of failure. The presence of supportive leadership further reinforces these cultural norms, fostering a psychologically safe climate conducive to creative risk-taking and collective problem-solving [6].

Integrating multiple intelligences into organizational learning models also aligns with global movements toward sustainable education. The Sustainable Development Goals (SDGs), particularly SDG 4 on quality education, emphasize the need for inclusive and lifelong learning opportunities [2]. Educational systems that nurture diverse intelligences prepare students not only for academic achievement but also for responsible citizenship and environmental awareness. From this perspective, schools become microcosms of sustainability, where cognitive diversity, ethical reasoning, and social responsibility converge [10]. By grounding organizational learning in multiple intelligences, schools can cultivate holistic growth that integrates intellectual, emotional, and moral dimensions—an approach that mirrors the broader goals of sustainable human development.

In the Iranian educational context, fostering organizational learning has been recognized as a key strategy for improving teacher effectiveness and institutional innovation. Studies highlight that school leaders often face challenges in developing structures that facilitate collaborative learning and knowledge sharing [3]. The lack of systemic mechanisms for experiential reflection, feedback utilization, and professional dialogue often hinders the establishment of a learning-oriented culture. However, initiatives emphasizing the role of psychological ownership and emotional intelligence in improving workplace behavior show promise [18]. These efforts suggest that enhancing teachers' self-awareness and emotional regulation could contribute to reducing counterproductive behaviors and promoting collective learning.

Moreover, educational leadership models in Iran are evolving toward more participatory and intelligence-based frameworks. Research has demonstrated that leaders who utilize diverse forms of intelligence—particularly linguistic, interpersonal, and intrapersonal—are more effective in motivating staff, managing conflict, and promoting innovation [6, 19]. This aligns with international findings showing that emotional and spiritual intelligences support moral decision-making and organizational agility [13]. When educational leaders apply multiple intelligences in their management practices, they not only enhance communication and empathy but also strengthen teachers' professional identity and engagement.

Another crucial aspect of the proposed model is the role of experiential and reflective learning as mechanisms for organizational knowledge creation. Schools function as learning laboratories where teachers continuously refine their pedagogical strategies based on classroom experiences. Reflective dialogue, documentation of lessons learned, and data-informed decision-making contribute to the development of organizational memory [3]. These processes enable the institutionalization of best practices and the preservation of organizational wisdom, which are essential for long-term

adaptability. As educational organizations increasingly rely on technology and data analytics to monitor performance, integrating feedback loops into decision-making processes becomes vital for sustainable learning [2].

The multidimensionality of intelligence also invites reconsideration of the teacher's role in organizational learning. Teachers are not merely transmitters of knowledge but active participants in knowledge construction and transformation. Their diverse cognitive styles and emotional competencies influence the collective capacity of the school to innovate and respond to challenges [9]. In this regard, fostering multiple intelligences among educators enhances both individual and institutional learning. When teachers recognize and cultivate their own intelligences—be they logical–mathematical, linguistic, or interpersonal—they become more adept at supporting students' varied learning needs while contributing to the school's overall development [4].

Furthermore, the convergence of multiple intelligences and organizational learning provides a framework for understanding leadership as a distributed process rather than a hierarchical function. Leadership based on multiple intelligences values emotional insight, empathy, and moral reasoning as much as analytical thinking and technical skill [15]. Such leadership fosters empowerment, shared responsibility, and collective vision among teachers. The result is a resilient organizational culture that continuously evolves through shared reflection and co-created knowledge [17]. This approach mirrors the principles of systemic thinking, emphasizing interdependence, feedback, and adaptation—core elements of both Gardner's theory and learning organization theory.

Ultimately, the integration of multiple intelligences into organizational learning models holds transformative potential for educational reform. It provides a comprehensive lens for understanding how cognitive diversity, emotional competence, and organizational structure interact to sustain innovation and growth. As schools face increasing pressures from globalization, digital transformation, and social change, the ability to learn collectively becomes a critical survival strategy [7]. The proposed predictive model seeks to capture this dynamic by linking individual intelligences to institutional learning outcomes, thereby offering a scientifically grounded and contextually relevant framework for educational improvement in Iran.

In summary, this study responds to the pressing need for theoretically and empirically grounded models that explain how multiple intelligences contribute to organizational learning in schools. Drawing upon interdisciplinary research in education, psychology, and management, the study integrates emotional intelligence, career adaptability, and organizational culture into a unified conceptual framework [12, 14, 16]. By examining the interplay between individual capabilities and institutional structures, the research aims to identify the mechanisms through which diverse intelligences enhance collective learning, adaptability, and innovation. The ultimate goal is to propose a predictive model that can guide educational policymakers and school leaders in fostering sustainable organizational learning environments that support both teacher development and student achievement in the evolving landscape of Iranian education.

Methodology

This study employed a mixed-methods design using an exploratory–sequential approach, integrating qualitative and quantitative phases to develop and validate a predictive model of organizational learning grounded in the theory of multiple intelligences. The qualitative phase served as the foundation for model construction, while the quantitative phase tested the model's empirical validity. In the first stage, a qualitative meta-synthesis combined with thematic analysis was conducted to identify the conceptual dimensions, components, and theoretical underpinnings of organizational learning based on multiple

intelligences. Data were gathered from a systematic review of previous qualitative studies related to organizational learning and multiple intelligences in educational contexts. A total of 125 studies were initially reviewed, of which 20 met inclusion criteria following quality screening based on the Critical Appraisal Skills Programme (CASP) checklist. Subsequently, semi-structured interviews were conducted with teachers, school administrators, and educational experts to contextualize and enrich the theoretical findings within the realities of Iranian schools. Through purposive sampling, participants were selected to ensure diversity in school type, geographic region, and educational level. The integration of document analysis and field data yielded a theoretically grounded yet contextually sensitive conceptual framework.

In the quantitative phase, the developed conceptual model was empirically tested among teachers working in Iranian schools. The target population consisted of all full-time teachers across elementary and secondary education levels in various provinces of Iran. Using a random sampling technique, 355 teachers were selected as the study sample. The quantitative data collection aimed to verify the structural relationships proposed in the qualitative phase and evaluate the predictive capability of the model.

Two main sources of data were used across the two phases of research. In the qualitative phase, data were collected through systematic document analysis and semi-structured interviews. The document analysis focused on extracting theoretical concepts, operational definitions, and relevant models from the selected 20 studies that had been screened for methodological rigor using the CASP checklist. The textual data obtained were then coded and analyzed thematically, leading to the identification of 80 initial codes, 16 organizing themes, and three overarching dimensions that shaped the theoretical structure of the model. These three dimensions were identified as (1) the enabling learning environment within schools, (2) capacity building for sustainable organizational learning, and (3) educational leadership based on multiple intelligences.

In the quantitative phase, data were gathered using a researcher-made questionnaire designed based on the findings of the qualitative phase. The questionnaire items reflected the extracted components and subdimensions of the conceptual model. To ensure instrument validity, a panel of academic experts in educational management and psychology reviewed the content to confirm the relevance and clarity of items. Construct validity was further examined through exploratory and confirmatory factor analyses. The reliability of the questionnaire was established using Cronbach's alpha coefficients for each subscale, confirming internal consistency across all constructs.

Data analysis was performed in two main stages corresponding to the study's qualitative and quantitative components. In the qualitative phase, the meta-synthesis followed a systematic review protocol to integrate and interpret the findings from prior studies. The thematic analysis procedure included coding, categorization, and theme abstraction using an inductive–deductive strategy. Data from the semi-structured interviews were transcribed and analyzed in parallel to triangulate and enrich the meta-synthesis results. This process produced a comprehensive conceptual framework for organizational learning based on multiple intelligences, combining cognitive, social, and organizational dimensions observed in school settings.

In the quantitative phase, data analysis was conducted using Structural Equation Modeling (SEM) with SmartPLS version 3. The model estimation involved both measurement and structural model evaluations. Measurement model assessment included factor loadings, composite reliability, and average variance extracted (AVE) to confirm the validity and reliability of constructs. Structural model assessment examined the path coefficients, coefficient of determination (R^2), and predictive relevance (Q^2) to evaluate the explanatory power and predictive accuracy of the proposed model. Additionally, bootstrapping with 5,000 resamples was used to test the significance of hypothesized relationships among constructs. The final model

demonstrated satisfactory fit indices, indicating that the theoretical relationships derived from the qualitative phase were empirically supported.

Findings and Results

The qualitative phase of this research aimed to uncover the underlying dimensions, organizing themes, and foundational codes that constitute the predictive model of organizational learning based on multiple intelligences in Iranian schools. Through systematic meta-synthesis and thematic analysis, a rich and multilayered conceptual structure emerged, integrating the cognitive, behavioral, and organizational aspects of learning in educational institutions. The analysis of the final 20 selected studies and semi-structured interviews yielded 80 basic codes, 16 organizing themes, and 3 overarching themes that form the structural backbone of the model. These three overarching themes—"Enabling Learning Environment in Schools," "Capacity Building for Sustainable Organizational Learning," and "Educational Leadership Based on Multiple Intelligences"—collectively illustrate how diverse forms of intelligence contribute to organizational learning processes in schools.

Table 1

Overarching, Organizing, and Basic Themes Related to the Predictive Model of Organizational Learning Based on Multiple Intelligences

Overarching Themes	Organizing Themes	Basic Themes
Enabling Learning Environment in School	Collaborative Learning Culture	Professional interaction among teachers; Peer learning in group sessions; Support for teachers' innovation; Respect for diverse perspectives; Encouragement of open dialogue
	Psychologically Safe and Open Environment	Acceptance of mistakes in school; Mutual trust among educational teams; Psychological and job security for teachers; Freedom to express ideas; Acceptance of individual differences
	Organizational Learning Structures	Decentralized and flexible structure; Collective decision-making; Support for experiential learning; Transparency in processes; Designing growth opportunities
	Utilization of Technology and Educational Innovation	Use of digital platforms; Blended and flipped learning; Creativity in instructional design; Participation in professional online networks; Learning from technological sources
Capacity Building for Sustainable Organizational Learning	Experiential and Reflective Learning	Learning from past mistakes; Documentation of educational experiences; Reviewing past actions; Reflective dialogue with colleagues; Analysis of real-life situations
	Continuous and Lifelong Learning	Professional development plans; Pursuit of new training; Intrinsic motivation for advancement; Commitment to self-development; Connection with scientific resources
	Use of Feedback and Data	Performance result analysis; Multi-source feedback; Continuous teaching evaluation; Aligning performance with objectives; Data-informed decision-making
	Organizational Memory and Collective Knowledge	Archiving successful and unsuccessful experiences; Knowledge transfer across generations; Internal knowledge repository; Experience sharing in meetings; Structuring experiential knowledge
Educational Leadership Based on Multiple Intelligences	Linguistic Intelligence in Educational Leadership	Verbal persuasion; Inspirational storytelling; Conveying complex concepts; Use of metaphors in teaching; Effective public speaking
	Logical–Mathematical Intelligence in Educational Leadership	Systematic problem-solving; Data-based decision-making; Result analysis; Logical planning; Identifying logical patterns
	Visual–Spatial Intelligence in Educational Leadership	Use of diagrams; Emphasis on visual space; Imaginative thinking; Use of visual elements; Application of digital tools
	Bodily–Kinesthetic Intelligence in Educational Leadership	Support for practical learning; Participation in hands-on events; Promotion of physical activities; Emphasis on wellness; Maintaining an active and dynamic environment
	Musical Intelligence in Educational Leadership	Use of music; Support for artistic activities; Sense of rhythm; Creating enthusiasm; The role of music in learning
	Interpersonal Intelligence in Relationship Management	Effective teacher interaction; Recognition of behavioral differences; Supportive environment creation; Staff motivation through human relations; Active face-to-face communication
	Intrapersonal Intelligence in Educational Leadership	Awareness of personal strengths and weaknesses; Setting personal learning goals; Individual reflection on performance; Commitment to self-learning; Time management skills
	Naturalistic Intelligence in Educational Leadership	Nature-based learning; Respect for natural resources; Environmental sustainability; Promotion of biodiversity; Encouragement of environmental research

The first overarching theme, *Enabling Learning Environment in School*, emphasizes the foundational conditions necessary for fostering organizational learning in educational contexts. This dimension highlights the significance of psychological safety, open communication, and collective engagement among educators. When teachers operate in an atmosphere of trust, respect, and freedom to express ideas, learning becomes a collaborative and continuous process. The existence of flexible

and decentralized structures, coupled with the integration of digital and innovative technologies, enables schools to transition from static institutions to dynamic learning organizations. The subthemes under this category—collaborative learning culture, psychological safety, organizational learning structures, and technological innovation—reflect a holistic view of how school environments can empower continuous learning and creativity.

The second overarching theme, *Capacity Building for Sustainable Organizational Learning*, captures the ongoing development and reinforcement of learning behaviors that ensure long-term adaptability and growth. This dimension stresses the importance of experiential learning, reflective dialogue, and the institutionalization of feedback mechanisms. Teachers who document experiences, analyze outcomes, and apply data-informed strategies contribute to the collective intelligence of their organizations. The inclusion of lifelong learning, professional development programs, and systematic knowledge sharing ensures that schools preserve and build upon accumulated expertise. The establishment of organizational memory and collective knowledge repositories allows institutions to internalize lessons learned, supporting sustained organizational evolution.

The third overarching theme, *Educational Leadership Based on Multiple Intelligences*, positions leadership as the key driver in transforming individual intelligence into collective learning capacity. Effective educational leaders leverage various forms of intelligence—linguistic, logical–mathematical, visual–spatial, kinesthetic, musical, interpersonal, intrapersonal, and naturalistic—to foster diverse learning experiences and support adaptive decision-making within schools. For example, linguistic intelligence enhances communication and persuasion; logical intelligence strengthens problem-solving and data-driven decisions; and interpersonal and intrapersonal intelligences cultivate empathy, self-awareness, and motivation within teams. This integrative leadership model acknowledges that no single intelligence is sufficient for educational success; rather, it is the synergy of multiple intelligences that enables schools to thrive as learning organizations.

Collectively, these findings demonstrate that organizational learning in schools is a multifaceted and dynamic phenomenon grounded in both individual and collective intelligences. The interaction between the enabling environment, capacity-building mechanisms, and leadership grounded in multiple intelligences creates a self-reinforcing cycle of learning, innovation, and improvement within the educational system. This model not only explains the current state of learning in Iranian schools but also provides a framework for predicting and enhancing future learning outcomes at both the teacher and organizational levels.

Table 2

Fornell–Larcker Criterion

Variable	Educational Leadership Based on Multiple Intelligences	Capacity Building for Sustainable Organizational Learning	Enabling Learning Environment in School	Predictive Organizational Learning
Predictive Organizational Learning	0.799			
Enabling Learning Environment in School	0.762	0.864		
Capacity Building for Sustainable Organizational Learning	0.679	0.571	0.842	
Educational Leadership Based on Multiple Intelligences	0.729	0.775	0.573	0.789

The Fornell–Larcker criterion was used to assess discriminant validity among the latent constructs of the proposed model. As shown in Table 2, the square roots of the Average Variance Extracted (AVE) values, located on the diagonal, are higher than the inter-construct correlations in the corresponding rows and columns. This indicates that each latent variable shares more variance with its associated indicators than with any other construct. Specifically, the discriminant validity of “Capacity

Building for Sustainable Organizational Learning" (√AVE = 0.842) and "Educational Leadership Based on Multiple Intelligences" (√AVE = 0.789) demonstrates that these constructs are conceptually distinct yet moderately correlated. The results confirm that the three main dimensions—leadership, capacity building, and enabling environment—are related but not redundant, ensuring the structural soundness of the predictive organizational learning model.

Table 3

R Square Values (Source: Present Study Results)

Variable	R Square	Result
Enabling Learning Environment in School	0.868	Strong
Capacity Building for Sustainable Organizational Learning	0.944	Strong
Educational Leadership Based on Multiple Intelligences	0.889	Strong

The R Square coefficients, presented in Table 3, indicate the explanatory power of the structural model. All three key variables demonstrate strong coefficients of determination, suggesting a high degree of model fit and predictive accuracy. The variable "Capacity Building for Sustainable Organizational Learning" exhibits the highest R^2 value (0.944), meaning that approximately 94% of its variance can be explained by the predictors included in the model. Similarly, "Educational Leadership Based on Multiple Intelligences" (R^2 = 0.889) and "Enabling Learning Environment in School" (R^2 = 0.868) also demonstrate strong explanatory power. These results confirm that the proposed model successfully captures the dynamic interactions among the constructs and effectively predicts organizational learning outcomes in the educational setting.

Table 4

Q^2 Index (Source: Present Study Results)

Variable	Q^2	Result
Enabling Learning Environment in School	0.285	Strong
Capacity Building for Sustainable Organizational Learning	0.387	Strong
Educational Leadership Based on Multiple Intelligences	0.316	Moderately Strong

The Q^2 (Stone–Geisser's) predictive relevance values, displayed in Table 4, assess the model's ability to predict the endogenous variables beyond the sample data. The obtained Q^2 values are all positive and above the conventional threshold of 0.25, confirming that the model has acceptable predictive relevance. The highest Q^2 belongs to "Capacity Building for Sustainable Organizational Learning" (0.387), indicating that this construct contributes most significantly to enhancing the predictive validity of the model. "Educational Leadership Based on Multiple Intelligences" and "Enabling Learning Environment in School" also show strong and moderately strong Q^2 values (0.316 and 0.285, respectively), demonstrating the robustness of the model's structural pathways. Together, these results reinforce that the developed predictive model has both high explanatory power and reliable predictive capacity for understanding organizational learning processes in Iranian schools.

Figure 1

Model with Beta Values

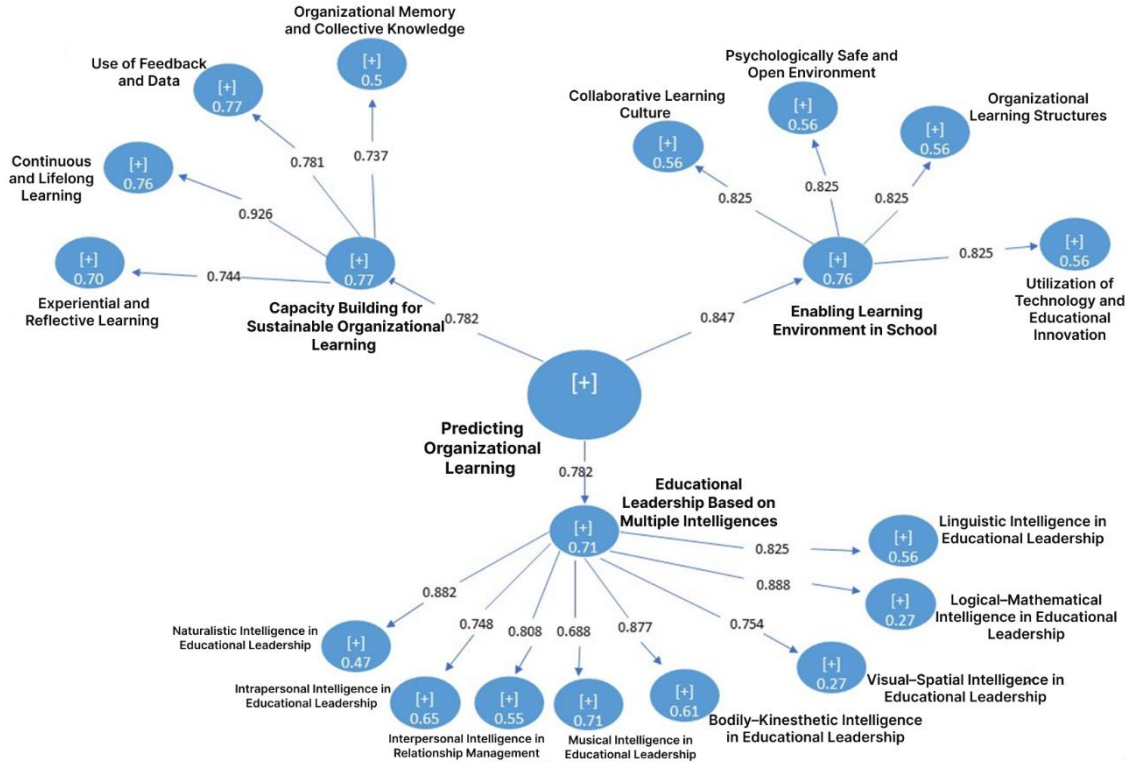
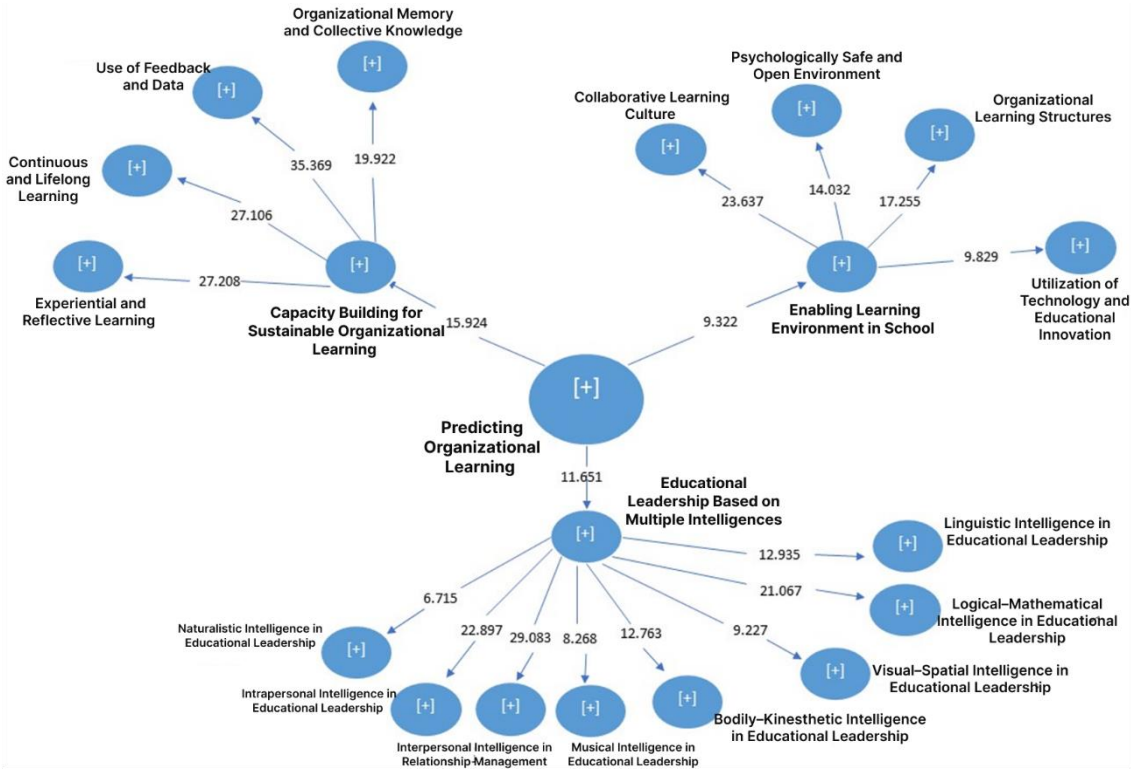


Figure 2

Model with T-Values



Discussion and Conclusion

The findings of this study yielded a comprehensive predictive model of organizational learning based on multiple intelligences within Iranian schools. The model integrated three overarching dimensions—an *enabling learning environment in school*, *capacity building for sustainable organizational learning*, and *educational leadership based on multiple intelligences*—each supported by specific organizing and basic themes that collectively explain the mechanisms of institutional learning and adaptability. The results of the structural equation modeling revealed strong relationships among these core constructs, with the Fornell–Larcker criterion, R^2, and Q^2 indices confirming the model's high discriminant validity, explanatory power, and predictive relevance. These results suggest that the interplay between teachers' cognitive diversity, emotional competencies, and the leadership's intelligence-based practices fosters sustainable organizational learning.

The first major finding—highlighting the significance of an *enabling learning environment in schools*—demonstrated that psychological safety, collaborative culture, and participatory structures form the foundation of effective organizational learning. Teachers' willingness to share experiences, engage in reflective dialogue, and embrace innovation was closely associated with the presence of trust, respect, and open communication. This outcome aligns with the findings of [3], who emphasized that a learning-supportive organizational structure enhances adaptability and knowledge management within educational systems. Similarly, [5] found that participatory culture and organizational commitment positively influence knowledge-sharing behaviors, which in turn strengthen the organizational learning climate. The presence of decentralized structures and transparent decision-making processes in the current model also supports earlier research demonstrating that empowerment and autonomy are critical enablers of teacher learning and innovation [6].

Another key component identified in this study was *capacity building for sustainable organizational learning*, encompassing experiential and reflective learning, continuous professional development, data-driven feedback, and collective knowledge management. These mechanisms enable schools to evolve from traditional bureaucratic systems into self-renewing, adaptive organizations. The importance of experiential learning and reflective dialogue resonates with [9], who established that learning styles based on active reflection and experience significantly enhance academic performance and consistency among education students. Similarly, [10] emphasized that emotional intelligence and reading-related reflective engagement promote sustainable education outcomes, illustrating that reflection and emotion-based cognition serve as central elements of adaptive learning. The emphasis on lifelong learning and professional growth found in this study mirrors the observations of [1], who underscored the role of multiple intelligences in promoting differentiated and continuous learning in primary education contexts.

Furthermore, the role of *educational leadership based on multiple intelligences* emerged as a decisive factor in predicting organizational learning. Leaders who applied diverse intelligences—linguistic, logical–mathematical, interpersonal, and intrapersonal—were found to be more effective in motivating teachers, resolving conflicts, and fostering a culture of collaboration and innovation. These results are consistent with the conclusions of [8, 19], who demonstrated that Gardner's multiple intelligences significantly influence the development of entrepreneurial and adaptive profiles through leadership. The finding also supports [6], who found a direct relationship between school managers' multiple intelligences and their managerial effectiveness. Likewise, [13] noted that organizational intelligence and spiritual well-being enhance agility and adaptability in multireligious business environments, suggesting that intelligence-based leadership frameworks are universally applicable across both educational and organizational settings.

The structural coefficients obtained in this study confirmed that leadership grounded in multiple intelligences has both a direct and indirect impact on organizational learning. The strong R^2 and Q^2 values demonstrated that this leadership approach predicts and sustains learning processes by integrating rational decision-making with emotional insight and moral reasoning. These findings corroborate [15], who identified career adaptability as a mediating variable between self-esteem, meaning in life, and proactive behavior. Leaders who possess high levels of self-awareness (intrapersonal intelligence) and empathy (interpersonal intelligence) tend to foster an environment of psychological safety and engagement, which facilitates collective learning. Similarly, [14] highlighted the mediating role of psychological capital—comprising optimism, resilience, and self-efficacy—in linking adaptability to career success among teachers. These studies, taken together, reinforce the argument that the integration of emotional and cognitive intelligences within leadership structures enhances organizational resilience and learning sustainability.

In addition, the integration of technology and innovative pedagogical approaches within the model—such as the use of digital platforms, blended learning, and flipped classrooms—reflects an evolving educational paradigm. The results indicate that technological literacy and creativity in teaching design are critical enablers of organizational learning. This outcome corresponds with the research of [2], who emphasized the importance of multiple intelligence–informed resources in promoting sustainable development goals within management education. Similarly, [7] found that students who developed a balance of cognitive intelligences, including spatial and logical reasoning, achieved better academic outcomes, demonstrating that technological and analytical competencies are essential for educational effectiveness. Within this framework, schools act as micro-systems of innovation where teachers apply their multiple intelligences to adapt technology to pedagogical objectives.

The results of the Fornell–Larcker analysis also confirmed that each construct within the model—enabling learning environment, capacity building, and leadership based on multiple intelligences—was empirically distinct yet strongly interrelated. This pattern suggests that organizational learning in schools is not the outcome of isolated factors but the result of an integrated system of human and structural intelligences. This observation resonates with [12], who proposed that organizational intelligence, intellectual capital, and innovation collectively enhance business intelligence within corporate contexts. The present study extends this logic to education, demonstrating that similar synergistic interactions operate among cognitive, emotional, and structural dimensions in schools. In parallel, [17] showed that emotional intelligence and situational leadership jointly influence organizational commitment, highlighting that the emotional dimension of leadership is as critical as strategic management in fostering organizational learning.

Moreover, the model's high explanatory and predictive power (R^2 = 0.868–0.944; Q^2 = 0.285–0.387) confirms that the interplay of individual and collective intelligences accounts for a substantial proportion of variance in organizational learning outcomes. These values exceed the thresholds generally accepted for strong predictive models in social sciences, demonstrating that the conceptual framework is statistically robust. The results reinforce the argument advanced by [16], who found that proactive adaptability significantly improves sustainable employment and long-term performance. In educational contexts, adaptability—enhanced through the application of multiple intelligences—acts as a protective factor that helps teachers navigate environmental changes, implement new curricula, and manage student diversity. Therefore, the combination of cognitive flexibility, emotional regulation, and technological adaptability appears to be central to sustaining organizational learning in schools.

An equally important contribution of this study is the empirical validation of reflective and experiential learning as dynamic processes through which organizational knowledge evolves. Teachers' ability to document experiences, analyze data, and apply lessons learned was found to significantly predict the development of collective organizational memory. This finding aligns with [3], who emphasized the role of knowledge management and learning-supportive structures in educational organizations. The documentation of successful and unsuccessful experiences facilitates intergenerational knowledge transfer, echoing [18], who revealed that psychological ownership and emotional intelligence contribute to reducing counterproductive behaviors and strengthening engagement among employees. In schools, this translates to a greater sense of professional identity and collective responsibility among teachers, enhancing their motivation to participate in organizational learning initiatives.

Finally, the integration of spiritual and moral dimensions—particularly evident in the inclusion of naturalistic and intrapersonal intelligences—highlights a holistic understanding of organizational learning that goes beyond cognitive skill-building. This interpretation aligns with [13], who linked spiritual well-being and organizational intelligence to enhanced adaptability and moral decision-making. Similarly, [15] emphasized that the search for meaning and purpose enhances psychological adaptability, suggesting that organizations promoting ethical awareness and personal reflection sustain more meaningful forms of learning. Therefore, the model proposed in this study represents not merely an operational framework but a holistic paradigm encompassing emotional, cognitive, moral, and environmental dimensions of learning.

Collectively, these findings advance the theoretical understanding of how multiple intelligences contribute to the development of learning organizations. The study confirms that cognitive diversity among teachers, supported by emotionally intelligent leadership and participatory culture, creates a dynamic system of continuous learning and innovation. By validating the mediating mechanisms—such as psychological capital, reflective learning, and technological engagement—the research provides a comprehensive framework applicable to both educational policy and school management. The alignment of these findings with the existing literature indicates a convergence toward integrative and human-centered approaches to organizational learning, where intelligence in all its forms—cognitive, emotional, and moral—constitutes the foundation of sustainable educational transformation.

Despite its valuable contributions, this study has certain limitations that should be acknowledged. First, the cross-sectional design restricts causal inferences regarding the relationships among multiple intelligences, leadership practices, and organizational learning. Longitudinal data would provide a stronger basis for understanding the dynamic evolution of these constructs over time. Second, the reliance on self-report instruments may introduce response bias, particularly in measuring subjective constructs such as emotional and spiritual intelligences. Future studies employing mixed methods, including observational and qualitative approaches, could enhance data validity. Third, although the study sampled teachers across various Iranian schools, the findings may not be generalizable to other cultural or educational contexts, where organizational norms and leadership practices differ. Finally, while the study examined major dimensions of multiple intelligences, future models could incorporate additional variables such as digital literacy, team learning, and cross-institutional collaboration to further enrich the understanding of organizational learning mechanisms.

Future research should explore longitudinal and multi-level models to examine the reciprocal effects of leadership intelligence and organizational learning over time. Integrating neuroscience-based methods—such as neuroimaging or cognitive performance analysis—could provide deeper insights into the neurological correlates of multiple intelligences

within professional learning environments. Comparative cross-cultural studies may also reveal how different educational systems operationalize intelligence-based learning frameworks and whether similar predictive patterns emerge across diverse contexts. Moreover, future investigations should focus on the mediating roles of psychological safety, innovation climate, and teacher identity in linking intelligence-based leadership to organizational adaptability. Experimental interventions, such as professional development programs rooted in Gardner's intelligences, could test the causal impact of such frameworks on teachers' performance, satisfaction, and school innovation outcomes.

From a practical standpoint, school administrators and policymakers should cultivate leadership development programs that integrate multiple intelligences into managerial training, emphasizing self-awareness, empathy, and analytical reasoning. Educational institutions should establish collaborative learning structures—such as professional learning communities and reflective dialogue circles—to promote shared knowledge creation. Incorporating technology-driven tools, such as digital learning platforms and data analytics systems, can facilitate experiential learning and continuous improvement. Additionally, curriculum designers and policymakers should align teacher training with emotional and interpersonal skill development to strengthen professional adaptability. Ultimately, fostering a learning culture grounded in cognitive diversity and psychological safety can transform schools into adaptive, resilient organizations capable of sustaining innovation and growth in the face of ongoing educational challenges.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants. Written consent was obtained from all participants in the study.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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References

[1] C. Lumei and S. Turda, "The Role Of Theory Multiple Intelligences In Primary Education Process," *Conference: 9th International Conference Education, Reflection, Development*, 2022, doi: 10.15405/epes.22032.48.

[2] B. Etxebarria, F. Sánchez, N. Rojo, and A. Barona, "Multiple Intelligence Informed Resources for Addressing Sustainable Development Goals in Management Engineering," *Sustainability*, vol. 14, p. 8439, 2022, doi: 10.3390/su14148439.

[3] S. Naseri, H. Shahraki Pour, and F. Yadegari, "Presenting a Learning Organization Model from the Perspective of a Learning-Supportive Organizational Structure in Education with an Emphasis on Knowledge Management," *Educational Management Research*, no. 49, 2021.

[4] W. X. Chavarría-Garza, A. Santos-Guevara, J. R. Morones-Ibarra, and O. Aquines-Gutiérrez, "Assessment of Multiple Intelligences in First-Year Engineering Students in Northeast Mexico," *Sustainability*, vol. 14, p. 4631, 2022, doi: 10.3390/su14084631.

[5] H. Farati and A. Jannati, "Investigating the Relationship Between Organizational Culture, Commitment to Participation, Adjustment, and Adaptability with Knowledge Management (Case Study: SEmna Gas Company)," in *7th National Conference on Management Studies in Humanities*, Tehran, 2021.

[6] S. S. Hashemi, "Investigating the Relationship Between Multiple Intelligences and Managers' Skills in Schools," *Journal of Psychology and Educational Sciences Studies*, vol. 4, 2022.

[7] R. Lozano-Blasco, A. Quílez-Robres, P. Usán, C. Salavera, and R. Casanovas-López, "Types of Intelligence and Academic Performance: A Systematic Review and Meta-Analysis," *Journal of Intelligence*, vol. 10, p. 123, 2022, doi: 10.3390/jintelligence10040123.

[8] M. Gouran and F. Baharvand, "Structural Equation Modeling of the Impact of Intelligence on the Entrepreneurial Profile with Emphasis on Gardner's Multiple Intelligences Theory (Case Study: Students of the Faculty of Art, Sistan and Baluchestan University)," *Journal of Public Management Research*, vol. 14, no. 52, 2021.

[9] J. Maya, J. Luesia, and J. Pérez-Padilla, "The Relationship between Learning Styles and Academic Performance: Consistency among Multiple Assessment Methods in Psychology and Education Students," *Sustainability*, vol. 13, p. 3341, 2021, doi: 10.3390/su13063341.

[10] E. Jiménez-Pérez, M. I. d. V. Y. Jara, R. Gutiérrez-Fresneda, and P. García-Guirao, "Sustainable education, emotional intelligence and mother-child reading competencies within multiple mediation models," *Sustainability*, vol. 13, p. 1803, 2021, doi: 10.3390/su13041803.

[11] P. Usán Supervía and A. Quílez Robres, "Emotional Regulation and Academic Performance in the Academic Context: The Mediating Role of Self-Efficacy in Secondary Education Students," *International Journal of Environmental Research and Public Health*, vol. 18, p. 5715, 2021, doi: 10.3390/ijerph18115715.

[12] A. Taheri Hoshi and S. M. Aroni Tabatabaei, "Examining the Impact of Organizational Intelligence, Intellectual Capital, and Organizational Innovation on Business Intelligence in Pasargad Insurance Company," *Management and Industrial Engineering*, vol. 5, no. 17, pp. 61-80, 2024.

[13] M. Quraisy and A. P. Nugroho, "Examining the Relationship Between Organizational Intelligence, Religious Commitment, Spiritual Well-Being, and Organizational Agility among Multireligious Creative Economy Businessmen in Yogyakarta," *Journal of Islamic Economics Lariba*, vol. 10, no. 2, 2024, doi: 10.20885/jielariba.vol10.iss2.art7.

[14] H. Abdolmohammadi, S. Hosseinian, and S. Manavar Yazdi, "Modeling the Relationship Between Career Success and Career Adaptability in Teachers: The Mediating Role of Psychological Capital," *Quarterly Journal of Organizational and Career Counseling*, vol. 14, no. 50, pp. 9-26, 2022.

[15] A. Gori, E. Topino, A. Svicher, and A. Di Fabio, "Towards Meaning in Life: A Path Analysis Exploring the Mediation of Career Adaptability in the Associations of Self-Esteem with Presence of Meaning and Search for Meaning," *Int. J. Environ. Res. Public Health*, vol. 19, p. 11901, 2022, doi: 10.3390/ijerph191911901.

[16] L. Zhao, W. Li, and H. Zhang, "Career Adaptability as a Strategy to Improve Sustainable Employment: A Proactive Personality Perspective," *Sustainability*, vol. 14, p. 12889, 2022, doi: 10.3390/su141912889.

[17] L. R. W. Winata, "The Influence of Organizational Culture, Situational Leadership and Emotional Intelligence on Organizational Commitment Through Job Satisfaction at PDAM Tirta Ardhia Rinjani, Central Lombok Regency," *Journal of Economics Finance and Management Studies*, vol. 07, no. 05, 2024, doi: 10.47191/jefms/v7-i5-17.

[18] M. Dehghanizadeh, M. Kheirandish, and H. Kheirandish, "Factors Affecting the Counterproductive Behaviors of Employees in the Organization; Emphasizing the Role of Organizational Embeddedness, Emotional Intelligence and Psychological Ownership," *The Journal of Productivity Management*, vol. 72, no. 19, pp. 245-273, 2025. [Online]. Available: https://sanad.iau.ir/Journal/jpm/Article/975824.

[19] M. Gouran and F. Baharvand, "Investigating the Impact of Intelligence on the Entrepreneurial Profile with Emphasis on Gardner's Multiple Intelligences Theory and Presenting a Theoretical Model," *Journal of Public Management Research*, vol. 14, no. 52, 2021.