Structural Equation Modeling of Digital Educational Leadership on Teachers' Organizational Commitment Mediated by Organizational Dynamics

Kobra Khabareh*[1]

Abstract

The present exploratory mixed-methods research, grounded in metaphorical realism, aimed to develop and validate a Cognitive Competency Model for School Principals. In the qualitative phase, 25 cognitive education specialists were selected through purposive sampling for semi-structured interviews. Data were analyzed using Glaser's grounded theory method, employing open, selective, and theoretical coding to extract key cognitive dimensions related to educational leadership. To ensure credibility, the researchers applied expert validation and iterative refinement of the categories and concepts. In the quantitative phase, a Delphi technique supported by a questionnaire was used to validate the identified categories and concepts. Out of 25 experts in the field of cognitive education, 23 participated in the survey. The collected data were analyzed using a one-sample t-test to determine the level of expert agreement. The analysis confirmed the significance of all dimensions ($p < 0.01$). The finalized Cognitive Competency Model for School Principals includes 13 components: Metacognition, Mental Representation, Self-awareness, Psychological Capital, Linguistic Abilities, Neuroscience of Emotions, Social Cognition, Comprehensive and Systematic Approach, Neuro Leadership, Neurocognitive Principles of Learning, Multiple Intelligences, Perceptual and Mental Ability, and Cognitive-Organizational Readiness. Developing these competencies can enhance school principals' cognitive efficiency and leadership performance.

[1] Assistant Professor, Department of Educational Sciences, Faculty of Humanities, Bu-Ali Sina University, Hamedan, Iran

*Corresponding Author   Email: k.khabareh@basu.ac.ir

Introduction

Commitment in the teaching profession is considered one of the main pillars of success in the educational system and plays a crucial role in enhancing the quality of learning and student growth. This commitment is a vital factor that teachers must adhere to in their work environment. Additionally, organizational commitment is one of the factors that can influence the quality of teachers' work and is particularly effective in establishing professional discipline among them. To elevate the status of schools in the eyes of the community, this commitment must be fully implemented by teachers with the support of school management (Ramli, Mandzir, and Fireman, 2024).

In other words, a teacher's commitment can be seen as a behavior that helps teachers achieve school goals; it involves efforts beyond regular duties and a willingness to continue working at the school. This commitment is rooted in the emotional bonds teachers have with their profession and their students (Firestone & Pennell, 1993). Furthermore, studies show that a positive relationship between teachers and the school brings positive outcomes for both parties (Liu, 2021). Committed teachers make greater efforts to achieve school objectives (McInerney et al., 2015).

Organizational commitment reflects the willingness to make serious efforts for the organization and to maintain membership within it. This commitment indicates the alignment of employees with the organization, its goals, and values, as well as the desire to remain with the organization. In other words, organizational commitment reflects the degree of loyalty, willingness to work for, and retention of employees within the organization (Fahmi, 2020). Additionally, organizational commitment has been proposed by Kaswan (2012) as a measure of employees' willingness to remain with the organization in the future. This concept illustrates the emotional and professional connection of employees with the organization.

According to Meyer and Allen, organizational commitment consists of three dimensions:

1. **Affective Commitment**: This reflects employees' deep emotional desire to align with the organization's values, ensuring that their goals and desires for staying are fulfilled. Affective commitment can arise from factors such as individual characteristics, organizational structure, task significance, various specialties, feedback from leaders, and participation in management. Age and tenure in the organization have a direct relationship with affective commitment. Employees with high affective commitment tend to stay due to their trust in the organization's mission.

2. **Continuance Commitment**: This commitment is based on an individual's concern about losing benefits such as salary and facilities that they have gained within the organization. Factors that contribute to continuance commitment include age, job position, and various benefits. If these facilities and amenities are reduced, this commitment also decreases.

3. **Normative Commitment**: This reflects employees' ethical responsibility to remain with the organization. This commitment arises from a social demand resulting from an individual's experience in interacting with others or adhering to organizational norms, social, cultural, or religious respect. Individuals with high normative commitment remain in the organization due to a sense of duty or ethical obligation (Meyer & Allen, Smith, 1993)

Organizational commitment is a key element in the development of organizations, including schools. Teachers' commitment is influenced by various factors, including the leadership style of the school principal (Leithwood, 2021). Generally, the principal's leadership is a determining factor in the level of teacher commitment. Teachers need encouragement, motivation, guidance, and direction from their leaders to perform their duties effectively (Zainuddin et al., 2022).

Principals exhibit various leadership styles, one of which is digital educational leadership. Digital educational leadership reflects the close relationship between the principal's role as an educational leader and the digital environment in which this leadership takes place (Berkovich & Hassan, 2022; Pollock, 2020). This concept encompasses educational leadership, which is the broadest concept of leadership in the literature, and considers the principal's role as a facilitator of student learning by influencing teachers' instructional practices. More specifically, this concept includes: a) defining and communicating educational goals; b) managing educational activities by monitoring the activities of teachers and students; and

c) creating a supportive school environment through professional development and rewards (Liu & Hallinger, 2018). In recent years, substantial empirical evidence has shown that the leadership of educational administrators plays a significant role in the success of schools (Bellibas et al., 2020; Gumus et al., 2021). The main and common conceptualization of educational leadership involves three sets of behavioral components: 1) defining the school's mission: which includes setting educational goals for the school and sharing them with staff and stakeholders; 2) managing the school's educational programs: which includes monitoring and evaluating teaching, tracking student progress, and coordinating the curriculum; and 3) developing the school climate: which includes supporting teachers' professional development, managing time, and creating motivation and rewards for teachers and students (Liu & Hallinger, 2018).

Digital educational leadership means using digital technologies to enhance educational and learning processes. This type of leadership helps administrators and teachers improve educational environments and enhance learning outcomes by utilizing digital tools and resources. Many countries have turned to distance education and online teaching to maintain the functionality of their educational systems, leading to an expansion of these methods (Weiner, 2021). This change has compelled school administrators to focus on virtual school leadership and online learning management (Pollock, 2020)

Digital educational leadership adds a digital layer to the core concept of leadership, bringing skills and attitudes that are not necessarily available to a "traditional" educational leader (Berkovich, 2023). Digital educational leadership requires the use of information technology and innovative practices, including the creation of professional growth opportunities to integrate technology (Jones, Dexter, 2018; Richardson et al, 2018). This concept includes the personal attitude of the school leader towards incorporating digital technology into school practices and strategies, as well as the ability to master digital technologies, which is reinforced through professional development. Digital educational leadership is defined as leadership through digital technologies, employed in alignment with a strategy that promotes teaching and learning in a blended or fully digital environment (Shepherd and Taylor, 2019).

Considering that school leadership in a digital context involves organizational change, the concept of digital educational leadership is also intertwined with transformational leadership, viewed as the school leader's approach to leading through digital transformation (Menon, 2023). Hamzah et al. (2021) found a positive relationship between the digital educational leadership of administrators and the digital teaching practices of teachers, meaning that the greater the inclination of school leaders towards digital leadership, the more likely it is for digital teaching practices to be adopted. These two are interconnected and should be considered jointly. Additionally, the shift towards a digital environment has created opportunities for educational leadership and is likely to have a significant impact on student achievements (Floyd et al., 2023). In fact, the impact of an effective school leader on student outcomes is nearly as significant as that of an effective teacher (Grissom et al., 2021). The role of teachers is also crucial, as the influence of educational leadership is primarily mediated through the instructional practices implemented in the classroom. Therefore, considering the perspectives of both school administrators and teachers is essential for a comprehensive understanding of the relationship between educational leadership in a digital environment and student outcomes.

Another factor examined in this research regarding teachers' organizational commitment is organizational dynamics. Organizational dynamics refers to an organization's ability to adapt and adjust to environmental changes, both internal and external. This concept is based on the organization's capacity for innovation, expansion, and research in various areas aimed at improving overall organizational performance. Organizational dynamics includes various processes such as learning, social interactions, and individual and group capabilities, ultimately leading to the improvement and enhancement of the organization.

Organizational dynamics in educational environments, especially in schools, is of particular importance. Schools, as educational institutions where learning and teaching occur, must have the ability to accept and adapt to various changes. Dynamics in schools contribute to enhancing learning, improving teaching methods, and creating a healthy and positive environment for students and teachers.

A dynamic school is a modern educational model characterized by specific features; this school is active, up-to-date, flexible, intelligent, and responsive, with

continuous improvement as its guiding principle. One of its prominent characteristics is extensive internal and external organizational relationships established through constructive interactions with internal components and external organizations. A dynamic school is equipped with a high capacity for personal and organizational growth and maturity, decentralization, networked relationships, continuous learning, adaptability, and being proactive (Jahed, 2016). This type of school provides a space where multi-directional movement occurs with the participation of students, teachers, coaches, and parents to achieve specific educational and cultural goals. In this context, all members of the school community are regarded as learning partners and strive to enhance the quality of education and the culture of learning through interaction and collaboration. This participation not only helps increase motivation and a sense of responsibility among students and teachers but also leads to the establishment of a sustainable and impactful learning environment.

The aspects of school dynamics can include the following, each playing a crucial role in shaping an active and effective educational environment: Relationships between Individuals: These relationships include interactions among students, between students and teachers, as well as relationships between teachers and school management. The school's connection with families and the community also falls under this category. The quality of these relationships can significantly impact the educational atmosphere, student motivation, and their academic success. School Culture: This factor encompasses the values, beliefs, norms, and practices prevailing in the school that influence individuals' behaviors and interactions. A positive and supportive school culture can help increase students' confidence and motivation, thereby aiding their academic success. Structure and Processes: The organization of the school, educational programs, teaching methods, and assessment systems influence the school's dynamics. A flexible structure and efficient processes can contribute to creating an effective and dynamic educational environment. Changes and Innovations: The school's ability to adapt to changes and embrace innovations to improve the quality of education and learning is of high importance. This includes the use of new technologies, innovative teaching methods, and new educational programs that can enhance learning quality. Interaction with the Environment: The school's relationships with the local community, access to resources and facilities, and the school's role in the socio-economic development of the area are other

aspects of school dynamics. Positive interaction with the community can help create local support and additional resources to improve the learning process (Rezaeyan et al, 2022).

Sucitra et al. (2024), in examining the relationship between educational leadership of principals and teacher commitment, concluded that there is a significant positive correlation between these two variables. In other words, principals who utilize effective educational leadership styles can increase teachers' commitment to the organization, thereby improving the overall performance of the school.

Seir et al. (2022) also demonstrated that digital educational leaders can positively influence educational missions and work ethic of teachers by creating favorable conditions for learning. Cansoy et al (2022), found in their research that the educational leadership of principals has a significant impact on teachers' organizational commitment. In other words, behaviors exhibited by school principals play an important role in strengthening teacher commitment and encouraging them to face challenges related to the school. In a study conducted by Nurabadi et al (2022), it was found that three key factors contribute to the success of educational leadership of digital principals in the post-COVID era: 1. supporting online learning; 2. actively working to address issues related to learning at home; and 3. leading and managing virtual schools efficiently. An educational leader in this era must possess the ability to adapt and be flexible in learning and development and be able to provide more efficient responses to overcome the challenges facing educational institutions. In other words, digital school principals after COVID need to support online education, solve distance learning problems, and manage virtual schools effectively to succeed in educational leadership. Furthermore, the ability to adapt to new conditions and provide innovative solutions to challenges is an essential characteristic of a successful educational leader. Sunarsi et al. (2020) also confirmed the positive and significant impact of organizational commitment on school performance. In the present era, with the expansion of digital technologies, electronic leadership has also emerged as an important factor in the dynamism of schools.

Hamzah et al. (2021) found a positive correlation between digital educational leadership of principals and digital teaching methods of teachers in their research. This finding indicates that the more school principals tend to use digital technologies in school leadership and management, the more teachers tend to use digital teaching methods. Additionally, Klein et al.

(2021) in a study pointed to the importance of digital educational leadership in creating positive changes in educational systems and concluded that students in digitally led environments are more involved in the learning process. Chil et al. (2020) also showed that digital leadership can lead to improved learning outcomes and increased satisfaction of teachers and students.

Mokhtari Hizaji et al. (2023), in a comprehensive study, identified a set of factors as effective on school dynamism. These factors include appropriate and efficient infrastructure, continuous creation and evaluation of a dynamic and constructive organizational culture, encouragement and support of creativity and innovation among teachers and students, promotion of the level and quality of education through the use of modern methods and educational technologies, optimal allocation of budget and financial resources, careful and systematic planning, and strengthening cooperation and interaction between different parts of the school. The findings of this study indicate that attention to these factors can lead to increased vitality and vibrancy in the school environment, reduced violent behaviors, and improved mental and social health of students and staff.

Rezaeian et al. (2023) also examined the factors affecting school dynamics in a similar study, categorizing them into five main groups: human factors (such as motivation, commitment, and job satisfaction of staff), structural factors (such as managers' leadership styles and the school's organizational structure), environmental factors (such as the use of new technologies and virtual spaces in the educational process), cultural factors (such as participation, interaction, and positive relationships within the school), and dynamic factors (such as the school's ability to adapt to changes, continuous growth and development, responsiveness to stakeholder needs, flexibility in varying conditions,

agility in decision-making and action, competitiveness, managing complexities, and ongoing improvement and development). The results of this research indicate that attention to these various dimensions can significantly enhance the dynamism of schools.

It seems that so far, the relationship between digital educational leadership, teachers' organizational commitment, and organizational dynamics has not been simultaneously examined, especially in the educational system, indicating a research gap in this area. Considering the aforementioned points, the aim of the present study is to model the structural equations of digital educational leadership on teachers' organizational commitment with the mediation of organizational dynamics.

Q1: What is the status of principals' digital educational leadership, teachers' organizational commitment, and organizational dynamism in primary schools in Kermanshah city?

H 1: Digital educational leadership has a positive and direct impact on teachers' organizational commitment.

H 2: Digital educational leadership has a positive and direct impact on organizational dynamism.

H 3: Organizational dynamism has a positive impact on teachers' organizational commitment.

H 4: Digital educational leadership indirectly affects teachers' organizational commitment through organizational dynamism.

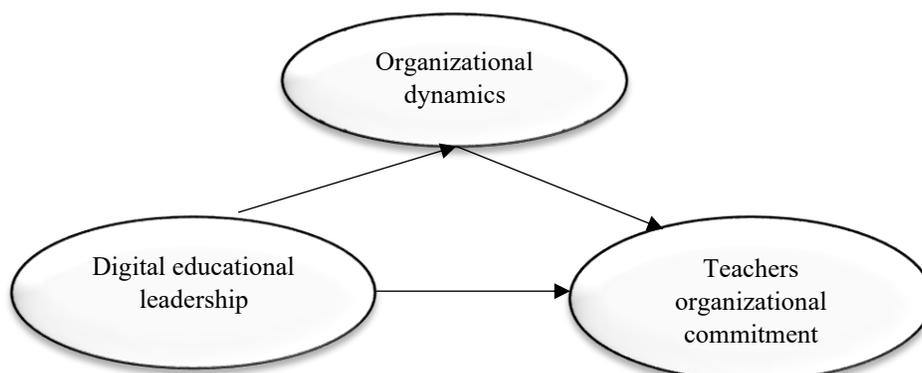The conceptual model of the research is illustrated in Figure (1)

Figure 1. Conceptual Model of the Research

Research methodology

This study was conducted with a quantitative approach and, in terms of data collection, falls under descriptive research using the correlation method. Employing a quantitative approach allows for precise measurement of constructs and the application of advanced statistical tools for hypothesis testing. Structural Equation Modeling (SEM) was utilized to analyze the data in this research. The selection of SEM was driven by the researcher's need to simultaneously examine the complex and multiple relationships among the study variables. Unlike traditional correlation methods that only assess dyadic relationships, Structural Equation Modeling facilitates the analysis of multivariate structures, latent variables, and direct and indirect effects.

Study Population, Sample Size, and Sampling Method: The research population comprised all primary school teachers employed in the educational districts supervised by the Department of Education in Kermanshah City during the academic year 2024-2025. Based on official statistics from the General Department of Education in Kermanshah, the total number of eligible individuals was estimated to be 906. To ensure adequate statistical power and the generalizability of the findings, the necessary sample size was calculated using Cochran's formula with a margin of error of 0.05, resulting in a final sample of 284 participants.

The sampling technique employed was Simple Random Sampling (SRS). In this method, a complete roster of all primary school teachers in Kermanshah was compiled, and 284 individuals were selected entirely at random using random number tables to guarantee fair representation and minimize potential selection bias.

Data Collection Instruments and Assessment of Validity and Reliability: Data were collected using three standard and reliable questionnaires, each measuring a variable within the research model. The specifications for each instrument, including the number of items, source, and validity/reliability indicators, are detailed below:

A) Digital Educational Leadership Questionnaire: The 11-item questionnaire by Berkovich & Hassan (2024) was used to measure digital educational leadership. The reliability of this instrument, calculated via Cronbach's Alpha in the study sample, yielded a value of 0.94, indicating very high internal consistency. The content validity was confirmed through the review of a panel of experts in educational management and educational technology, incorporating their suggested revisions.

B)Organizational Commitment Questionnaire: To assess teachers' organizational commitment, the 24-item questionnaire by Allen & Meyer (1993) was utilized. This instrument consists of three components: Affective Commitment (Items 1–8), Continuance Commitment (Items 9–16), and Normative Commitment (Items 17–24). The overall Cronbach's Alpha coefficient for the questionnaire was reported as 0.91, while the respective Alpha coefficients for the Affective, Normative, and Continuance commitment subscales were 0.70, 0.72, and 0.68. Content validity was established through expert review and alignment with relevant theoretical foundations.

C)Organizational Dynamism Questionnaire: To measure organizational dynamism, the 10-item questionnaire by Jalali et al. (1401 [2022/2023]) was employed. The Cronbach's Alpha coefficient for this questionnaire was found to be 0.85, indicating acceptable reliability. Its content validity was also confirmed by experts.

Data Analysis Procedure: The analysis of the collected data relied on the Structural Equation Modeling (SEM) approach and was executed in two distinct phases, aiming to prepare the data while simultaneously testing the conceptual model. In the first phase, descriptive statistics were generated using SPSS version 20 to calculate indices such as mean, standard deviation, and frequency for demographic characteristics. During this stage, the normality of the data distribution was examined using skewness and kurtosis tests, and a one-sample T-test was applied to determine the status of the research variables. In the second phase, SEM was used to investigate the relationships among the latent variables, namely Digital Educational Leadership and Organizational Commitment as predictor variables, and Organizational Dynamism as the outcome variable, by estimating the Path Coefficients. A set of standard fit indices was employed to evaluate the degree to which the theoretical model conformed to the observed data. The estimation of model parameters and the assessment of fit indices were performed using LISREL version 8.8.

Findings

In this study, the frequency distribution of the respondents' gender was as follows: the number of men was 34 (12%), and the number of women was 250 (88%). Regarding education, 7 individuals (2.5%) held an associate degree, 157 individuals (55.3%) held a bachelor's degree, 99 individuals (34.9%) held a master's degree, and 7 individuals (2.5%) held a doctoral degree. These data indicate gender and educational diversity among the respondents, which may have a direct impact on the results and analyses of the research.

Table 1 shows the descriptive statistics of the research variables. Given that the skewness and kurtosis values of the examined variables fall within the range of (2 and -2), the assumption of normality for the variables is satisfied for causal modeling.

Table 1. Skewness and Kurtosis Indices of the Research Variables

Variable	Mean	Standard Deviation	Skewness	Kurtosis
Digital Educational Leadership	3.16	0.927	-0.284	-0.588
Organizational Commitment	3.12	0.554	1.148	1.870
Organizational Dynamics	3.527	0.843	-0.068	-0.392

Answer to the Research Questi:

To examine the status of digital educational leadership, teachers' organizational commitment, and organizational dynamics, a one-sample t-test was conducted with a test value of 3. Since the scores range from 1 to 5, the value of 3 was considered as the mean (50% of the scores) to determine the status of the variables. The results indicate that digital educational leadership, with an observed mean of 3.50, organizational commitment with a mean of 3.11, and organizational dynamics with a mean of 3.52, were all significantly higher than the average (3).

Table 2. One-Sample t-Test for the Status of Research Variables

Variable	Observed Mean	Standard Deviation	Statistical Mean	t-value	Degrees of Freedom	Significance Level
Digital Educational Leadership	3.50	0.97	3	8.67	283	0.000
Organizational Commitment	3.11	0.55	3	3.41	283	0.001
Organizational Dynamics	3.52	0.843	3	9.16	283	0.000

The structural model of digital educational leadership on organizational commitment, with the mediation of organizational dynamics, is presented in Figures (1) and (2)
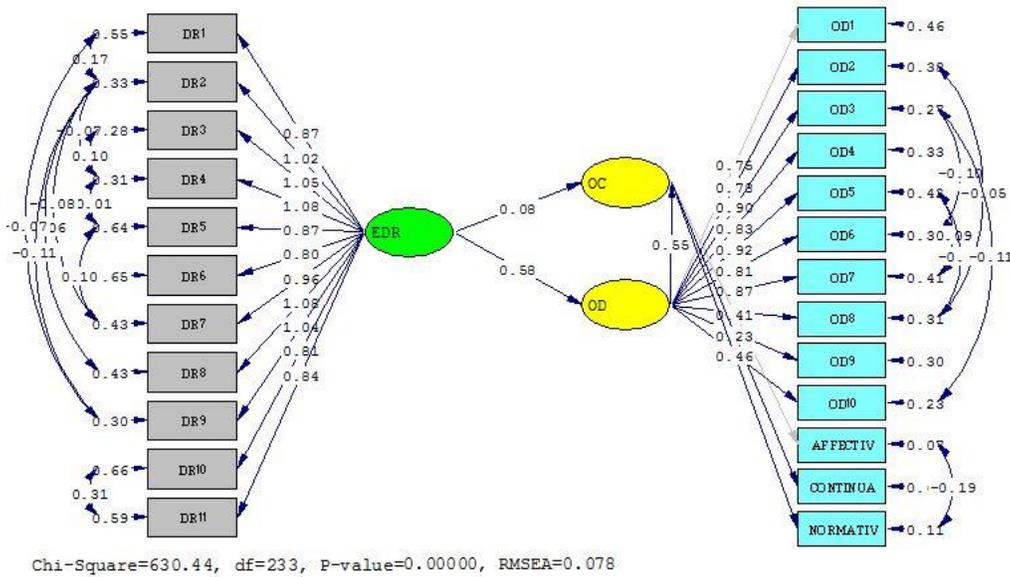
Chi-Square=630.44, df=233, P-value=0.00000, RMSEA=0.078

Figure 2. Experimental pattern with standardized coefficients

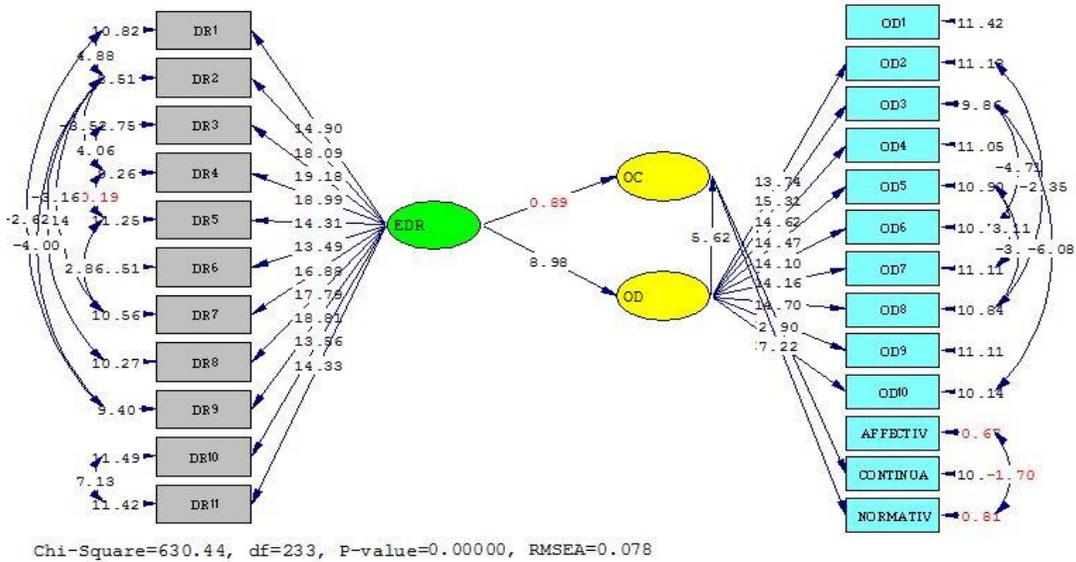Chi-Square=630.44, df=233, P-value=0.00000, RMSEA=0.078

Figure 3. Experimental pattern with T values

After removing covariance errors, the goodness-of-fit indices were examined, including the ratio of the squared chi to degrees of freedom (2.70), the root mean square error of approximation (0.78), the goodness-of-fit index (0.84), the normed fit index (0.70), the comparative fit index (0.98), the incremental fit index (0.98), the adjusted normed fit index (0.98), and the adjusted goodness-of-fit index

(0.80). These indices indicate that the model has a good fit and reflects the degree of alignment between the theoretical model and the empirical model. In other words, we can trust the results obtained from the model (Table 3 and Figure 1).

To examine the significance of the relationships between variables, the t-value was used. Since significance was tested at a 0.05 error level, if the calculated t-values are less than ±1.96, the relationship is not significant; if they are greater than ±1.96, the relationship is significant (Figure 3)

Table 3. Model Fit Indices of the Study

Fit Index	Acceptance Range	Observed Value
χ^2		630.44
Degrees of Freedom (Df)		233
χ^2/df	Less than 3	2.70
Root Mean Square Error of Approximation (RMSEA)	0.08 and lower	0.78
Goodness of Fit Index (GFI)		0.84
Normed Fit Index (NFI)		0.97
Comparative Fit Index (CFI)	Greater than 0.90	0.98
Incremental Fit Index (IFI)		0.98
Adjusted Normed Fit Index (NNFI)		0.98
Adjusted Goodness of Fit Index (AGFI)	0.80 and higher	0.80

Response to the First Hypothesis: Digital Educational Leadership has a Positive and Direct Effect on Teachers' Organizational Commitment

The results presented in Table (4) indicated that Digital Educational Leadership did not have a direct and significant effect on teachers' organizational commitment, with a path coefficient of 0.08 and a t-value of 0.89. Since the t-value was less than 1.96, and the significance level was set at 0.05, the conclusion was drawn that the direct effect of Digital Educational Leadership on teachers' organizational commitment was not statistically significant. Consequently, the research hypothesis was rejected, and the null hypothesis, stating that there is no direct effect of Digital Educational Leadership on teachers' organizational commitment, was confirmed.

Response to the Second Hypothesis: Organizational Dynamism has a Positive Effect on Teacher Organizational Commitment.

The results indicated that Organizational Dynamism exerts a direct, positive, and statistically significant effect on teacher organizational commitment. This effect is supported by a path coefficient of **0.55** and a t-statistic value equal to **5.62**. Since the t-value (5.62) is greater than the critical value of **1.96** and the significance level has been met ($p<0.05$p < 0.05p<0.05), the null hypothesis is rejected, and the research hypothesis is confirmed.

Response to the Third Hypothesis: Digital Educational Leadership has a Positive and Direct Effect on Organizational Dynamism.

The results of the analysis indicated that Digital Educational Leadership has a direct, positive, and statistically significant effect on Organizational Dynamism. This influence was specified with a path coefficient of 0.58 and a t-statistic value equal to 8.98. Given that the t-statistic value (8.98) is greater than the critical value of 1.96 and the significance level is 0.05, the null hypothesis is rejected, thereby confirming the research hypothesis in this relationship.

Response to the Fourth Hypothesis: Digital Educational Leadership indirectly affects Teacher

Organizational Commitment through Organizational Dynamism.

The analysis demonstrates that Digital Educational Leadership exerts an indirect, positive, and statistically significant effect on teacher organizational commitment via the mediating role of Organizational Dynamism. The indirect path of this relationship is characterized by a path coefficient of 0.84 and a t-statistic value equal to 11.87. Given that the t-value (11.87) exceeds the critical value of 1.96 and the significance level is met at 0.05, the research hypothesis is confirmed, and the null hypothesis is rejected.

Table 4. Direct and Indirect Paths in the Structural Equation Model

Direct Paths	Standard Coefficient	t-value	Significance (0.05)
Digital Educational Leadership ⟶ Organizational Commitment	0.08	0.89	Not Significance
Digital Educational Leadership ⟶ Organizational Dynamism	0.58	8.98	Significance
Organizational Dynamism ⟶ Organizational Commitment	0.55	5.62	Significance
Indirect Paths	**Standard Coefficient**	**t-value**	**Significance (0.05)**
Digital Educational Leadership ⟶ Organizational Commitment ⟶ Organizational Dynamism	0.84	11.87	Significance

Discussion

The present study aimed to model the structural equations of digital educational leadership on teachers' organizational commitment, mediated by organizational dynamism. The results indicate that while the status of digital educational leadership, organizational commitment, and organizational dynamism are at a desirable level and above average, other findings suggest that there is no direct effect of digital educational leadership on teachers' organizational commitment. This finding is not consistent with the results of Hamzah et al. (2021), Klein et al. (2021), and Chil et al. (2020). However, the results show that digital educational leadership has a significant indirect effect on teachers' organizational commitment through the mediation of organizational dynamism. This finding aligns with the results of Mokhtari Hizaji et al. (2023), Rezaeian et al. (2023), Sucitra et al. (2024), and Seir et al. (2022).

Digital educational leadership has a direct, positive, and significant effect on organizational dynamism. This means that digital educational leadership can directly enhance organizational dynamism. However, since digital educational leadership does not have a significant direct effect on organizational commitment, but does have a significant indirect effect through organizational dynamism, it can be concluded that organizational dynamism plays an important mediating role in this relationship. In other words, by increasing organizational dynamism, digital educational leadership ultimately leads to an increase in teachers' organizational commitment.

These findings suggest that to enhance teachers' organizational commitment, special attention should be paid to organizational dynamism. Digital educational leadership can indirectly increase teachers' organizational commitment by enhancing organizational dynamism. As stated by Cansoy et al (2022), the educational leadership of managers has a significant impact on teachers' organizational commitment. In other words, the behaviors exhibited by school administrators play a crucial role in strengthening teachers' commitment and encouraging them to face school-related challenges.

Digital educational leadership refers to the use of digital technologies to improve educational and learning processes. This type of leadership helps

managers and teachers enhance educational environments and improve learning outcomes by utilizing digital tools and resources. Digital educational leadership can contribute to creating a dynamic and active organizational environment. Digital educational leaders can promote organizational dynamism by encouraging innovation, facilitating communication, and providing learning opportunities. Additionally, organizational dynamism can lead to increased teachers' organizational commitment. When teachers work in a dynamic and active environment, they feel more valued and connected, resulting in increased organizational commitment.

Ultimately, the results of this research can assist educational managers and policymakers in designing more effective strategies to improve teachers' organizational commitment by better understanding the relationships between variables. It is recommended that training programs be designed for digital educational leaders to familiarize them with innovative leadership methods and the creation of organizational dynamism. Furthermore, there is a need for more research on the direct and indirect effects of digital educational leadership on other organizational and educational variables.

Conclusion

This study analyzed the effects of Digital Instructional Leadership (DIL) on teachers' Organizational Commitment (OC), focusing specifically on the mediating role of Organizational Dynamism (OD). The results provide a crucial emphasis on the mechanism through which this impact is realized.

Although DIL is an essential factor in contemporary digital educational organizations, its direct effect on teachers' organizational commitment was found to be not statistically significant. This finding suggests that the mere implementation of technology-based leadership (DIL) does not, in itself, directly increase teachers' sense of belonging and attachment to the organization.

The key achievement of this research is the strong confirmation of Organizational Dynamism as the primary and vital pathway through which DIL can ultimately influence OC. In other words, Digital Instructional Leadership only succeeds in fostering organizational commitment when it successfully transforms the organization into an active, innovative, flexible, and knowledge-driven (dynamic) environment. It is within this dynamic context that

teachers better perceive the value and effectiveness of their work, leading to increased commitment.

Practical Recommendations: Based on this mechanism (DIL→OD→OC) recommendations must be centered on strengthening organizational dynamism:

- These programs must prioritize the principles of empowering leadership and fostering a culture of organizational flexibility and risk tolerance, rather than focusing solely on software training.
- Establish formal platforms (such as knowledge management systems or joint working groups) to facilitate collective innovation and ensure teachers' voices are heard, which directly contributes to increasing Organizational Dynamism.
- Managers must welcome teachers' new ideas and provide the necessary resources (both technical and temporal) to implement them, thereby strengthening the sense of agency and participation in organizational transformation.
- Alongside hardware, the supporting software and infrastructure that facilitate collaborative learning and teamwork processes must be continuously developed.
- Programs must be continuously assessed to ensure that investment in DIL effectively and measurably leads to an increase in dynamism, and subsequently, to higher organizational commitment.

In conclusion, Digital Instructional Leadership is a necessary approach, but it can only achieve macro-educational goals, including high teacher commitment, when it is employed as a catalyst for establishing a learning and dynamic organization.

Avenues for Future Research: To deepen our understanding of this field, future research can be directed along the following axes:

- Investigating the Impact on Other Organizational Components: Conducting research to examine the effect of digital educational leadership on other organizational dimensions such as organizational culture, job satisfaction, burnout, and overall teacher performance.
- Comparative Inter-School Studies: Designing comprehensive comparative studies between schools that benefit from strong digital educational leadership and those with weaker

leadership. This approach can provide deeper insights into the varying impacts and differences of this type of leadership on teachers' organizational commitment.

- Analysis of Factors Influencing Organizational Dynamism: A more detailed examination of factors influencing organizational dynamism, including the prevailing school culture, different leadership styles, and broader educational policies. Such studies can enrich the existing academic literature in this field.

- Qualitative Research with an Experiential Approach: Conducting qualitative research with the aim of deeply understanding the lived experiences of teachers and administrators concerning digital educational leadership and its impact on organizational commitment. This type of study can shed light on more intangible aspects and nuances.

References

Bellibaş MŞ , Polatcan M and Kılınç AC .(2020). Linking instructional leadership to teacher practices: The mediating effect of shared practice and agency in learning effectiveness. *Educational Management Administration and Leadership. Epub ahead of print*. http://10.1177/1741143220945706

Berkovich, I .(2023). The great resignation: exploring the effect of regular and digital instructional leadership on teachers' intention to leave. Management in Education: 1–9. https://doi.org/10.1177/08920206231163984

Berkovich, I. & Hassan, T. (2022). Principals' digital instructional leadership during the pandemic: Impact on teachers' intrinsic motivation and students' learning. *Educational Management Administration and Leadership*. http://10.1177/1741143222111341

Cansoy, R. Parlar, H & Polatcan M. (2022). Collective teacher efficacy as a mediator in the relationship between instructional leadership and teacher commitment. *International Journal of Leadership in Education*, vol. 25, no. 6, pp. 900–918, Nov. https://doi.org/10.1080/13603124.2019.170847·

Chil, D., et al. (2020). Digital Leadership in Education: Improving Learning Outcomes. *Journal of Educational Leadership*, 45(3), 215-230. https://doi.org/10.1234/jel.2020.101

Fahmi, K., Kurniawan. T., Cahyono. Y., Sena. A., Suhadarliyah., Suryani. P., Sugianto. A., Amelia. D., Musnaini., Amin. S., Hasbullah. H., Jihadi. M., Wijoyo. H. & Purwanto. A. (2020) Did Servant, Digital and Green Leadership Influence Market Performance? Evidence from Indonesian Pharmaceutical Industry. *Systematic Reviews in Pharmacy, 11 (9)*, 642-653.http://10.31838/srp.2020.9.9°

Firestone, W. & Pennell, J. (1993). Teacher commitment, working conditions, and differential incentive policies", Review of Educational Research,Vol.63No.4,pp.489-525. http://10.2307/117049^

Floyd A, Baxter J, Morales A, et al. (2023). Leading online learning during a pandemic and beyond: challenges and opportunities for school leaders in England. *Educational Management Administration & Leadership*. http://10.1741143223119117¹

Grissom J, Egalite A and Lindsay. C .(2021). How Principals Affect Students and Schools: A Systematic Synthesis of Two Decades of Research. New York: The Wallace Foundation.

Gumuş S, Hallinger P, Cansoy R& Bellibaş M.S. (2021). Instructional leadership in a centralized and competitive educational system: A qualitative meta-synthesis of research from Turkey. *Journal of Educational Administration* Vol. 59 No. 6, pp. 702-720. https://doi.org/10.1108/JEA-04-2021-0073

Hamzah, N. Nasir, M. & Wahab, J.(2021) The effects of Principals' digital leadership on Teachers' digital teaching during the COVID-19 pandemic in Malaysia. *Journal of Education and e-Learning Research 8(2)*: 216–221. http://10.20448/journal.509.2021.82.216.221

Jahed, H. A. (2016). The booklet of the workshop on the need-based teaching plan, the educational

deputy of the Representation of the Supreme Leader in universities, has not been published. (In Persian).

Jones, M. & Dexter, S.(2018). Teacher perspectives on technology integration professional development: Formal, informal, and independent learning activities. *Journal of Educational Multimedia and Hypermedia* 27(1): 83–102.

Kaswan. (2012). Manajemen Sumber Daya Manusia untuk Keunggulan Bersaing Organisasi.Yogyakarta: Graha Ilmu.

Klein, T., et al. (2021). The Impact of Digital Educational Leadership on Teacher and Student Engagement. *International Journal of Educational Technology*, 30(2), 145-159. https://doi.org/10.5678/ijet.2021.30٤

Leithwood, K. Jantzi, D & Steinbach, R. (2021). Leadership and other Conditions which Foster Organizational Learning in Schools. *Organizational Learning in Schools*, pp. 67–90, 2021. http://10.1201/9781003077459-٥

Liu, P. (2021). Understanding the relationship between teacher leadership and collective teacher efficacy in Chinese urban primary schools. *International Journal of Leadership in Education*, pp. 1-14. http://10.1080/13603124.2021.188474٨

Liu, S. & Hallinger, P. (2018). Principal instructional leadership, teacher self-efficacy, and teacher professional learning in China: Testing a mediated-effects model. *Educational Administration Quarterly* 54(4): 501–528. https://doi.org/10.1177/0013161X1876904٨

Mokhtari Hizaji, Farideh, Alidoust Ghahfarrokhi, Ebrahim, Dorudian, Ali Asghar, & Bagheri, Sara. (2023). Identifying Factors Affecting the Implementation of Dynamic School Plan: A Grounded Theory Study. *Journal of Health Promotion Management*, *12*(2), 1-16.

McInerney, D., Ganotice, F., King, R., Marsh, H.W. and Morin, A.J. (2015). Exploring commitment and turnover intentions among teachers: what we can learn from Hong Kong teachers, Teaching
and Teacher Education, Vol. 52, pp. 11-23. http://10.1016/j.tate.2015.08.004

Meyer, J., Allen, N. & Smith, C. (1993). Commitment to organizations and occupations: extension

and test of a three-component conceptualization. *Journal of Applied Psychology,* Vol. 78 No. 4, pp. 538-551. http://10.1037/0021-9010.78.4.53٨

Menon, M. (2023). Transformational school leadership and the COVID-19 pandemic: perceptions of teachers in Cyprus. *Educational Management Administration & Leadership*. http://10.1741143223116651٥

Nurabadi, A, .Fendy S, Antun M, Teguh T, Maulana A,.(2022). Digital principal instructional leadership in new normal era. International Journal of Evaluation and Research in Education (IJERE) Vol. 11, No. 3, pp. 1090~1098. https://doi.org/10.11591/ijere.v11i3.2248٣

Pollock, K. (2020). School Leaders' work during the COVID-19 pandemic: a two-pronged approach. *International Studies in Educational Administration* 48(3): 38–44.

Rezaeian, Touba; Jahed, Hossein Ali; Nourian, Mohammad; Shah Mohammadi, Nayereh (2023). Designing a Model of Elementary Schools Dynamic. *Bimonthly Journal of New Approach in Educational Management*, *14*(3): 128-145.

Richardson, J. Watts, J. & Sterrett, W. (2021). Challenges of being a digitally savvy principal. *Journal of Educational Administration* 59(3): 318–334. http://10.1108/JEA-10-2020-021٥

Ramli, A, Mundzir, G. S. & Firman A. (2024). Opan ArifudinAnalysis of the Influence of Organizational Commitment on Work Discipline of Public High School Teachers. *Journal on Education*.V 06, No. 02, pp. 12927-12934. http://jonedu.org/index.php/joe

Seir, J., et al. (2022). Digital Leadership and Its Effects on Educational Outcomes. *Educational Research Review*, 12(7), 233-250. https://doi.org/10.1016/j.edurev.2022.1004٥

Shepherd, A.C. & Taylor, R.T. (2019). An analysis of factors which infl uence high school administrators' readiness and confidence to provide digital instructional leadership. *International Journal of Educational Leadership Preparation* 14(1): 52–76.

Sucitra, D. A, Hariri, H.& Riswandi, R .(2024). Effect of principal instructional leadership on teacher Commitment. *Journal of Education and Learning* (EduLearn)Vol. 18, No. 2, May 2024, pp. 279~285. http://10.11591/edulearn.v18i2.20980

Sunarsi, D. Rohaeni, N., Wulansari, R., Andriani, J .(2020). Effect of e-Leadership Style, Organizational Commitment and Service Quality towards Indonesian School Performance. *Systematic Reviews in Pharmacy*.2020;11(10):472-481. http://10.31838/srp.2020.10.71

Weiner, J, Francois, C. Stone-Johnson, C& Childs, J .(2021). Keep safe, keep learning: Principals' role in creating psychological safety and organizational learning during the COVID-19 pandemic. *Frontiers in Education* 5: 618483. https://doi.org/10.3389/feduc.2020.618483

Zainuddin, N. Y. Palinggi, and I. B. Made Agung Dwijatenaya. (2022). The role of leadership principles in increasing teacher performance At Tsanawiyah Negeri 1 Madrasah, Kutai Kartanegara Regency," *Journal of World Science*, vol. 1, no. 9, pp. 791–808. http://10.58344/jws.v1i9.100

Name: Kobra Khabareh

Email: k.khabareh@basu.ac.ir
Assistant Professor, Department of Educational Sciences, Faculty of Humanities, Bu-Ali Sina University, Hamedan, Iran