

## The Role of Artificial Intelligence Anxiety in the Relationship Between Organizational Learning and Performance in Organizations<sup>1</sup>

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### Abstract

The purpose of this study is to investigate the mediating role of artificial intelligence (AI) anxiety in the relationship between organizational learning and performance. The study sample consists of employees from the healthcare sector, specifically those employed at a private hospital in Istanbul. Data were obtained from 177 healthcare employees through the survey method. Statistical analyses were performed using SPSS 27 software, ensuring a 95% confidence interval. Initially, a normality test was conducted to examine the data distribution. Subsequently, a reliability analysis was carried out to ensure the dataset's consistency, and an exploratory factor analysis (EFA) was applied to evaluate the factor structure. A correlation analysis was performed to determine the relationships between variables, followed by hierar-

chical regression analysis to assess the mediating role. The findings of the study demonstrate that AI anxiety does not have a significant mediating effect on the relationship between organizational learning and performance. These results suggest that the impact of AI anxiety on organizational dynamics requires further investigation. Given that AI anxiety can adversely influence organizational learning and reduce overall performance, organizations must take appropriate measures to mitigate concerns related to AI.

**Keywords:** Artificial Intelligence Anxiety, Performance, Organizational Learning, Sustainability.

**JEL Codes:** M10, M12

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## Introduction

Businesses need to have a strong propensity to learn in order to gain a competitive advantage in the current century. Learning is defined as a change in behavior through information obtained from the environment. Organizational learning (OL) is conceptualized as a process through which knowledge is developed as a result of the interactions between organizations and their environment (Calantone et al., 2002; Daft and Weick, 1984). OL is regarded as a fundamental requirement for survival. Especially in a business environment characterized by environmental uncertainty, businesses are compelled to obtain information from their surroundings to ensure their continuity (Kozcu & Özmen, 2023). OL is defined as the capacity to sustain and enhance organizational performance (OP) through accumulated experience (Dibella et al., 1996) and is viewed as an essential indicator of achieving organizational goals and objectives in both developed and developing economies (Rehman et al., 2019). OP, often represented as a multidimensional and complex concept, is influenced by numerous variables. Although productivity is frequently cited as one of its dimensions, it does not fully account for OP on its own (Cho, 2004).

In addition to productivity, OP considers factors such as efficient resource utilization, the level of customer satisfaction, and the speed with which businesses adapt to change. These are among the key criteria that must be taken into account when evaluating OP (Çalışkan & Kater, 2020). Onağ and Tepeci (2016) further emphasized that businesses must enhance their learning capacity to improve their performance in alignment with their strategic objectives. In today's competitive landscape, one of the most critical factors contributing to OP development is the effective use of information technologies. Extensive research findings underscore the positive impact of information technologies on organizational OP. For instance, Turunç (2016) reported significant outcomes between the use of technology and OP measures. Similarly, Alkatheri et al. (2023) found robust positive correlations between technology capacity and OP.

Particularly, the role of artificial intelligence (AI) in OP has gained increasing attention. AI's use and competencies have demonstrated notable impacts on OP, as highlighted in studies by Mikael et al. (2023).

In this study, the assumption that OL positively influences OP is empirically tested based on existing literature. Additionally, the mediating role of AI anxiety, which manifests as employees' concerns regarding AI-related technologies, is examined in the relationship between OL and OP. This study also addresses the interaction between OL and OP within the scope of AI anxiety. Notably, this study represents the first attempt to investigate the role of AI anxiety as a mediator between OL and OP in the literature. Accordingly, hypotheses were formulated following

a systematic literature review, and the findings obtained were analyzed and interpreted within the research framework.

## Conceptual Framework, Relationships between Research Variables and Hypotheses

### The Impact of Organizational Learning on Organizational Performance

In the dynamic and continuously evolving business world, organizations are in constant pursuit of effective strategies to enhance their performance. Among these strategies, organizational learning (OL) is recognized as a crucial factor (Huber, 1991). OL serves as the most significant tool for improving organizational performance (OP) and is a key driver in achieving long-term competitive advantage. Learning organizations possess a heightened ability to adapt to environmental changes, surpass competitors, and respond swiftly to emerging challenges (Sundusiah et al., 2022).

OL as a process involving the identification and correction of mistakes (Saadat et al., 2016). In another perspective, OL is described as the cumulative result of experiences gained by the organization (Argote & Spekter, 2011). OL represents a structured process where knowledge created by individuals is systematically increased, and the obtained knowledge becomes an integral component of the organization's knowledge system. The development of new capabilities, as well as the acquisition of innovative skills through organizational efforts, makes OL both feasible and essential. In today's business context, characterized by cognitive and behavioral transformations, OL is no longer an option but a critical necessity for all organizations (Garcia-Morales et al., 2012).

While OL often begins with individual learning, its ultimate purpose lies in transforming this knowledge into a collective understanding at the group level. OL transcends the mere aggregation of individual learning, creating synergies that provide added value for organizations. Businesses facilitate learning systems among their members, enabling the effective transfer of accumulated knowledge. In this context, OL plays a pivotal role in fostering organizational understanding, guiding organizations to interpret their environment and refine strategic implementations (Fiol & Lyles, 1985).

The OL process is typically classified into four main stages. The first stage involves the acquisition of knowledge, which refers to the mechanisms through which knowledge is obtained. In the second stage, the dissemination of knowledge occurs, wherein information from diverse sources is shared, leading to the development of new knowledge or insights. The third stage involves knowledge interpretation, in which distributed knowledge is analyzed and synt-

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hesized at one or more levels. Finally, the organizational memory stage refers to storing knowledge for potential future use, ensuring the preservation and accessibility of critical insights.

OL, defined as the acquisition, detection, and correction of knowledge and errors, also equips businesses with the capacity to integrate dynamic capabilities into their processes. This integration enables organizations to achieve sustainable competitiveness by enhancing both financial and non-financial performance outcomes (Ginuineen et al., 2015). OL further emphasizes the necessity of obtaining accurate and timely information and utilizing it to guide organizational decision-making. By facilitating the structured sharing of obtained information, OL contributes to informed decision processes and helps organizations develop robust models for future strategic planning (Yiyit & Çorbacioğlu, 2014).

There are different views on the definition of OP. According to Daft (2000), OP is the ability of an organization to achieve its goals by utilizing its resources efficiently and effectively. Although productivity and performance are often used interchangeably, Ricardo (2001) distinguished between the two concepts and emphasized that productivity refers to the amount of work produced within a given time period, whereas performance is a broader concept that encompasses productivity along with quality and consistency (Jarad et al., 2010).

There are also varying perspectives on the criteria by which OP should be measured. Ho (2008) focuses on two factors that he deems essential for evaluating OP: financial performance and marketing performance. Financial performance is defined as the relative profitability of the organization, return on investments, and growth in sales rates. Marketing performance, on the other hand, is associated with the organization's performance in terms of market share, profit rates, and customer satisfaction.

Several studies have examined the relationship between OL and OP. Akhtar et al. (2011) demonstrated that OL positively influences OP. Similarly, Liao et al. (2009) asserted that OL has a positive impact on OP. Başar (2022) found that OL has a statistically significant effect on OP. Furthermore, Soomro et al. (2021) concluded that OL exerts a positive and substantial influence on OP. Migdadi (2019), who conceptualizes OL as the capacity to achieve organizational goals through the efficient and effective use of resources, highlighted that OL enhances OP through innovation. Skarlavai et al. (2007) also argued that OL contributes positively to financial performance; however, this effect primarily arises from employees' non-financial performance evaluations.

Based on the aforementioned research findings, the following hypothesis was formulated:

**H1:** Organizational learning has a significant and positive effect on organizational performance.

### Organizational Learning and Artificial Intelligence Anxiety

Despite the transformative potential of artificial intelligence (AI) to enhance global economic productivity, it has significantly altered the way organizations operate and has increasingly become an essential factor for improving business efficiency and effectiveness (Suseno et al., 2022). The widespread adoption of AI technologies and applications in the workforce has led to growing concerns regarding its impact. Furthermore, the increasing integration of powerful and advanced technologies has created an obligation for employees to continually develop their skills and knowledge to adapt to emerging innovations. This situation contributes to the formation of artificial intelligence anxiety among employees, defined as an emotional state that causes individuals to feel uneasy about interacting with AI technologies (Wang & Wang, 2022).

Li and Huang (2020) focused on eight factors contributing to AI anxiety, identifying key concerns such as privacy violations, unethical behavior, role displacement, continuous learning pressure, existential risks, ethical dilemmas, artificial consciousness, and transparency issues. Li and Huang (2020) measured these eight factors to determine their influence on AI-related anxiety in organizational settings and concluded that there are four primary sources of AI anxiety. These sources include anxiety caused by trauma, anxiety arising from interaction with AI, anxiety resulting from others' traumatic experiences, and anxiety stemming from the uncertainty and unpredictability associated with AI. According to Wang and Wang (2022), the individual's need for career changes and skill development leads to elevated AI anxiety, which motivates employees to exhibit greater learning behaviors.

**H2:** Organizational learning has a positive and significant effect on AI anxiety.

### The Relationship between Artificial Intelligence Anxiety and Organizational Performance

Artificial intelligence refers to technology applied to accomplish tasks requiring a specific level of intelligence (Bhardwaj et al., 2020). Numerous studies have indicated that the utilization of artificial intelligence enhances business performance in both financial and non-financial domains. Wamba et al. (2020), one of these significant studies, reported that artificial intelligence improves organizational performance across administrative, marketing, and financial processes. Bhargava et al. (2021) further concluded that the implementation of automation and artificial intelligence technologies does not adversely affect employees' perceptions of job satisfaction, job security, or employability. Additionally, their study highlighted the ongoing importance of the human element in task execution.

According to the findings, the absence of artificial intelligence anxiety positively influences organizational performance. Similarly, Olan et al. (2022) noted that organizational performance improves sustainably when AI technologies are implemented as part of an integrated information-sharing system. Bosco (2020) stated that the application of artificial intelligence provides businesses with overarching benefits for both managerial and operational outcomes. However, the study also suggests that an increase in AI anxiety may negatively impact organizational performance, prompting the formulation of the following hypothesis:

**H3:** AI anxiety has a significant and negative effect on organizational performance. Based on these findings, the following hypothesis was constructed:

**H4:** Artificial intelligence anxiety mediates the relationship between organizational learning and organizational performance in organizations.

## Theoretical Framework

To effectively address environmental uncertainty, organizations must remain cognizant of all critical components of their operating environment. This awareness enhances an organization's ability to comprehend and respond to environmental dynamics, enabling the organization to gather essential information regarding external conditions (Duncan, 1972). Contingency theory underscores that environmental conditions are determinant in every issue related to the organization. Contingency theory is a theory that emerged through the work of Burns and Stalker (1961), Chandler (1962), and Lawrence and Lorsch (1967) and is frequently used to understand organizations. Contingency theory argues that the most suitable organizational structure will be determined by environmental conditions. The fundamental premise of contingency theory is that organizational goals should be determined by decision-makers in a manner that aligns with external environmental conditions (Banalieva & Sarathy, 2011). It is posited that the organization can only achieve strategic alignment between itself and the environment through this process. The necessity for organizations to adapt to their environment arises from the need to access critical information about it. Such access can only be achieved through learning (Duncan, 1972). Thus, learning is regarded as a crucial process for organizational success. According to Dodgson (1993), OL fosters a connection between the organization and its environment that promotes proactive behavior. This connection enables organizations to take preventive measures by anticipating potential changes in their environment. In organizations where OL is established, an increase in job satisfaction among employees has a direct impact on the financial and non-financial performance of the organization (Emhan et al., 2015). Similarly, Khandekar and Sharma

(2006) emphasized that organizational learning within human resources management is positively associated with organizational performance (OP). In another study, it was determined that an OL climate is effective in improving OP (Çalışkan & Kater, 2020). Consistent with contingency theory, it is essential to design organizational structures and processes that align with the current environment to ensure adaptability. This alignment facilitates the organization's ability to achieve the desired level of performance, which is attainable solely through OL.

## Method

### Research Model

The model established to determine the effects and relationships between the research variables is presented in Figure 4.1 below.

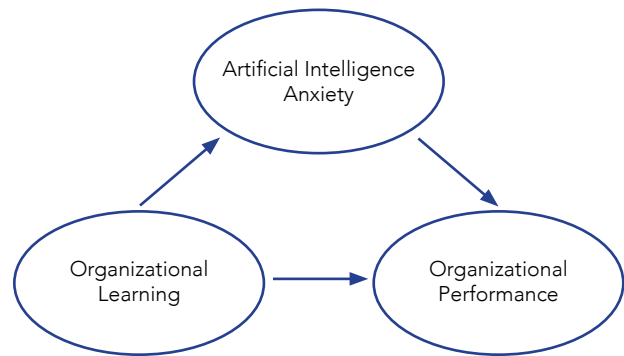


Figure 4.1: Research Model

Kaynak: Gürbüz, S., & Şahin, F. (2017).

### Population and Sample

The population of this study comprised healthcare professionals, while the sample of the study included healthcare professionals employed in a private hospital located in Istanbul. The study consisted of 177 employees.

### Data Collection Tools

The survey technique and convenience sampling method were employed to collect data for the study. All scales used in the study were organized using a 5-point Likert scale. The questionnaire consists of four distinct sections. The first part of the questionnaire captures demographic details about the participants, the second part includes statements regarding OP, the third part includes statements on OL, and the final part involves statements about artificial intelligence anxiety. For the OL variable, the scale developed by Calantone et al. (2002), which covers four dimensions and includes 17 statements, was adopted. The dimensions of the scale include commitment to learning, shared vision, open-mindedness, and organizational knowledge sharing. For the artificial intelligence anxiety scale, the scale

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introduced by Wang and Wang (2019) and adapted into Turkish by Akkaya et al. (2021) was utilized. The scale of Wang and Wang (2019) comprises 21 statements. However, Akkaya et al. (2021), in the process of adapting the scale to Turkish, determined that the AI anxiety scale consists of 16 statements distributed across four dimensions: learning, job change, socio-technical blindness, and AI configuration (Seker et al., 2024). For OP, Baker et al. (1999) was referenced as a basis. This scale, which has been widely cited in numerous doctoral dissertations, was adopted by Caloglu in his 2016 doctoral study. The Turkish version of the scale was obtained from the doctoral study prepared by Caloglu in 2016. This scale includes 7 items.

### Data Analysis

The data were analyzed using a statistical software package with a confidence level of 95%. For the analysis, the following tests were performed sequentially: normality testing, reliability testing, exploratory factor analysis, correlation analysis, and hierarchical regression analysis for mediation testing.

## Findings

### Demographic Statistics of the Sample

The study included 177 health workers. Table. 1 below provides demographic information about the sample.

Table 1. Demographic Statistics of the Sample

	n	%
<b>Gender</b>		
Woman	88	49,7
Male	89	50,3
<b>Total</b>	<b>177</b>	<b>100,0</b>
<b>Age</b>		
20 and below	34	19,2
21-30	67	37,9
31-40	44	24,9
41-50	30	16,9
51 and above	2	1,1
<b>Total</b>	<b>177</b>	<b>100,0</b>
<b>Marital status</b>		
Single	55	31,1
Married	122	68,9
<b>Total</b>	<b>177</b>	<b>100,0</b>

<b>Education status</b>		
Primary/Secondary School	6	3,4
High School	53	29,9
Associate degree	64	36,2
License	49	27,7
Master's degree	5	2,8
PhD	0	0
<b>Total</b>	<b>177</b>	<b>100,0</b>

<b>Length of service at the workplace</b>		
Less than 1 year	21	11,9
1-3 years	67	37,9
4-6 years	36	20,3
7-10 years	33	18,6
10-15 years	16	9,0
<b>Total</b>	<b>177</b>	<b>100,0</b>

<b>Task at the workplace</b>		
Senior manager	13	7,3
Middle manager	74	41,8
Lower level manager	62	35,0
Staff	28	15,8
<b>Total</b>	<b>177</b>	<b>100,0</b>

### Normality Tests for the Scales

Before the analysis, it should be determined whether the data exhibit a normal distribution. This is essential to decide between parametric and non-parametric tests. If the data follow a normal distribution, parametric tests can be employed (Gürbüz & Şahin, 2017). The most frequently utilized method for assessing normal distribution involves examining the skewness and kurtosis statistics. According to Tabachnick and Fidell (2013), the data are considered to exhibit a normal distribution if the skewness and kurtosis values remain within the range of -1.5 to +1.5.

Table 2. Normality Tests for Scales

Variables	Center	Standard Deviation	Skewness	Kurtosis (k)
<b>Organization Performance</b>	3,23	,871	-,214	-,293



<b>Organizational Learning</b>	3,53	,894	-1.273	,947
<b>Artificial Intelligence Anxiety</b>	2,71	1.022	,405	-,803

As demonstrated in Table 2, an evaluation of skewness and kurtosis coefficients indicates that the values fall within the acceptable range of (-1.5, +1.5). This finding confirms that the normality assumption is satisfied, thereby justifying the use of parametric methods in the analysis.

**Reliability Analysis Results and Comments on the Scales**

In social science research, it is crucial to establish whether scales yield consistent measurements and demonstrate internal coherence between scale items. One of the most widely utilized methods for reliability analysis in this context is Cronbach's alpha coefficient, which determines internal consistency.

Table 3. Reliability Analysis Results and Comments on the Scales

Scales	Number of Statements	Cronbach's Alpha (α)
<b>Organization Performance</b>	7	,961
<b>Organizational Learning</b>	17	,974
<b>Artificial Intelligence Anxiety</b>	16	,976

**Exploratory Factor Analysis Results and Interpretation**

Exploratory factor analysis techniques were employed to statistically assess the construct validity of the scale. Initially, the KMO test and Bartlett's test were conducted to evaluate the scale's suitability for factor analysis. The KMO coefficient, which measures sample adequacy, was calculated. According to Kaiser, values closer to 1 indicate excellent suitability, while values below 0.50 are considered unacceptable. Specifically, a KMO value of 0.90 is rated as excellent, 0.80 as very good, 0.70 and 0.60 as moderate, and 0.50 as poor (Tavşancıl, 2005).

Table 4. CFA Results of Organizational Performance Scale

Scale Items	1
OP1	,871
OP2	,892
OP3	,899

OP4	,921
OP5	,926
OP6	,921
OP7	,910
Total Explained Variance %	82,019
KMO	0,899
Barlett X2	1451,553
p	0,01

\*p<0,05

As shown in Table 4, the results of the KMO and Bartlett's tests indicate that the organizational performance scale is suitable for exploratory factor analysis. The KMO value is 0.899, exceeding the critical threshold of 0.500, and Bartlett's test is significant ( $X^2 = 1451.553$ ,  $p < 0.05$ ). The scale demonstrates a normal distribution and was validated as a single-dimensional construct. No items with low factor loadings were identified, so no items were removed. The scale consists of 7 items with factor loadings ranging from 0.871 to 0.926, and the total explained variance is 82.019%.

Table 5. Organizational Learning Scale CFA Results

Scale Items	1
OL1	,841
OL2	,875
OL3	,905
OL4	,903
OL5	,890
OL6	,935
OL7	,939
OL8	,930
OL9	,927
OL10	,871
OL11	,903
OL12	,953
OL13	,915
OL14	,892
OL15	,891
OL16	,916
Total Explained Variance %	77,326
KMO	,941
Barlett X2	4745,255
p	0,000

\*p<0,05

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As shown in Table 5, the KMO value for the OL scale (KMO = 0.941) is greater than 0.500, and Bartlett's test is significant ( $X^2 = 4745.255$ ,  $p < 0.05$ ). These findings demonstrate that the scale is appropriate for exploratory factor analysis and conforms to a normal distribution. The scale was validated as a single dimension. "Item 17," which exhibited a low factor loading relative to the other items (factor loading = 0.326), was excluded from the analysis. The OL scale now comprises 16 items with factor loadings ranging from 0.841 to 0.953, and the total explained variance is 77.3262%.

Table 6. CFA Results of Artificial Intelligence Anxiety Scale

Scale Items	1
AIA1	,815
AIA 2	,714
AIA3	,865
AIA 4	,719
AIA 5	,876
AIA6	,903
AIA 7	,918
AIA 8	,903
AIA9	,928
AIA 10	,922
AIA11	,914
AIA 12	,928
AIA 13	,905
AIA 14	,881
AIA 15	,751
AIA16	,755
Total Explained Variance %	73,839
KMO	,913
Barlett X2	4350,351
p	,000

\* $p < 0,05$

As shown in Table 6, the KMO value for the artificial intelligence anxiety scale (KMO = 0.913) is above the threshold of 0.500, and Bartlett's test of sphericity indicates statistical significance ( $X^2 = 4350.351$ ,  $p < 0.05$ ). These results confirm that the scale is appropriate for exploratory factor analysis and demonstrates a normal distribution. The scale was assessed as a single construct, and no items with low factor loadings were identified, thus no eliminations were necessary. The artificial intelligence anxiety scale comprises 16 items, with factor loadings ranging

from 0.714 to 0.928, and the total explained variance is 73.839%.

### Correlation Analysis Results

Within the scope of the research, correlation analysis was conducted to examine the relationships between the variables. The results of the correlation analysis between the variables are presented in Table 7 below.

Table 7. Correlation Analysis Results

	Organization performance	Organizational Learning	Artificial Intelligence Anxiety
Organization performance	1		
Organizational Learning	,714**	1	
Artificial Intelligence Anxiety	-,066	,145	1

Notes:  $p < 0.01$ , \* $p < 0.05$  significant relationship,  $p > 0.05$  no significant relationship,  $0 \leq r \leq 0.25$  very weak,  $0.26 \leq r \leq 0.49$  weak,  $0.50 \leq r \leq 0.69$  moderate,  $0.70 \leq r \leq 0.89$  strong,  $0.90 \leq r \leq 1$  very strong (Akgül and Çevik 2003).

According to Pearson correlation test findings, a statistically significant positive correlation exists between organizational learning and organizational performance ( $r = 0.714$ ,  $p < 0.01$ ). No significant relationships were identified among the other variables.

### Hierarchical Regression Mediated Effect Test Results and Interpretation

A mediating variable serves as a mechanism through which the independent variable influences the dependent variable. In mediation analysis, the independent variable affects the mediator, which subsequently influences the dependent variable. According to the Causal Step Approach, mediation can only be established if significant relationships exist between the independent variable, the mediator, and the dependent variable within the model.

If the inclusion of the mediator variable renders the relationship between the independent and dependent variables non-significant, this suggests full mediation. Alternatively, if the relationship weakens but remains significant, partial mediation is observed (Gürbüz & Şahin, 2017, p. 285). For mediation to be valid, the relationships between the independent and dependent variables, the independent and mediator variables, and the mediator and dependent variables must all be statistically significant (Baron & Kenny, 1986). Furthermore, the indirect effect of the

independent variable on the dependent variable through the mediator should be validated using the Sobel test (Sobel, 1982).

Table 8. Artificial Intelligence Anxiety Mediation Test Analysis Results

	Organizational performance	Artificial Intelligence Anxiety
Variables	$\beta$	$\beta$
<b>Model1</b>		
Organizational Learning	,696	x
p	0,001	x
F	182,425	x
R2	0,510	x
Fix it. R2	0,508	x
<b>Model2</b>		
Organizational Learning	x	,166
p	x	0,053
F	x	3,785
R2	x	0,21
Fix. R2	x	0,16
<b>Model 3</b>		
Artificial Intelligence Anxiety	-,066	x
p	,380	x
F	0,775	x
R2	0,04	x
Fix. R2	-0,01	x

Notes:  $p < 0.05$  significant effect,  $p > 0.05$  no significant effect; Hierarchical regression.

The analysis results reveal the following findings: In Model 1, organizational learning (OL) demonstrates a positive and statistically significant effect on organizational performance (OP), with  $\beta = 0.696$  and  $p < 0.05$ . Therefore, Hypothesis H1, which posits that OL has a significant and positive effect on OP, is supported.

In Model 2, however, the effect of OL on artificial intelligence (AI) anxiety is not statistically significant, with  $\beta = 0.166$  and  $p > 0.05$ . Given this insignificance, further mediation analysis is not feasible.

Model 3 additionally demonstrates that AI anxiety does not have a statistically significant effect on OP, as indicated by  $\beta = -0.066$  and  $p > 0.05$ . Based on

these findings, the following hypotheses are not supported:

**H2:** OL has a significant and positive effect on AI anxiety.

**H3:** AI anxiety has a significant and negative effect on OP.

**H4:** AI anxiety mediates the relationship between OL and OP within organizations.

### Conclusion

With the increasing use of artificial intelligence in organizations, employees may be concerned about adapting to technology. The development of artificial intelligence technologies may lead to the automation of some jobs and change the role of the employee in the workplace, potentially leading to job losses. This situation may cause anxiety among employees, which may arise from the fear of job loss. This anxiety may negatively impact the performance of employees. The introduction of artificial intelligence applications within organizations requires employees to adapt to new tasks for which they may lack prior experience with innovation (Yin et al., 2024; Şeker et al., 2024). This scenario can generate anxiety among employees. The emergence of artificial intelligence aims to reshape the nature of work and the dynamics of relationships between workers and machines. Managers are required to develop strategies to address these changes because AI applications will significantly transform the way managers and employees perform their jobs (Kolbjørnsrud et al., 2017: 37; as cited in: Şeker et al., 2024). This change may negatively impact OP.

According to the findings derived from the analysis of the research data, OL has a positive and statistically significant effect on OP ( $\beta=0.696$ ,  $p<0.05$ ). Hypothesis H1, which states that OL has a significant and positive impact on OP, is supported. However, the effect of OL ( $\beta=-0.066$ ,  $p>0.05$ ) on artificial intelligence anxiety is positive but not statistically significant. Hypothesis H2, which posits that OL has a significant and positive effect on AI anxiety, is therefore rejected. Similarly, the effect of AI anxiety on OP was also found to be non-significant ( $\beta=-0.066$ ,  $p>0.05$ ). Hypothesis H3, which suggests that AI anxiety has a significant and negative impact on OP, is also rejected.

In the study conducted by Şeker et al. (2024), it was identified that artificial intelligence anxiety negatively impacts organizational learning. Consistent with this finding, OL has been shown to positively influence OP in various studies (Inthavong et al., 2023; Başar, 2022; Isa and Muafi, 2022). However, it is possible that artificial intelligence anxiety, which adversely affects OL, may also have a detrimental effect on OP. Nevertheless, as highlighted, this effect was found to be statistically insignificant in the present study.



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In social sciences, the variability in results across studies is a common issue. Differences in methods, data collection techniques, measurement tools, sample populations, and operational definitions of variables may produce varied results. Therefore, it is crucial for researchers to consider such differences when interpreting findings. It is recommended that the relationships explored in this study be further investigated through both qualitative and quantitative methods across diverse populations and samples to enhance the robustness of findings.

Concerns regarding artificial intelligence may have a detrimental effect on organizational performance. Such negativity can impair the organization's competitive capacity. Consequently, managers are encouraged to proactively address these issues to mitigate the potential adverse impacts of AI-related anxiety.

Managers are advised to reduce these concerns by implementing appropriate strategies to ensure that employees work efficiently with AI. Managers should also assist employees in adapting to new technologies through targeted training and support programs. Reducing or, if possible, eliminating AI anxiety in organizations can enable employees to enhance their skills and make their work processes more efficient. In this way, it contributes to improving OP and helping organizations achieve a competitive advantage. For developing countries like Turkey, the enhanced performance of organizations can generate significant added value. Within this context, the research findings hold substantial importance. Addressing concerns regarding artificial intelligence not only improves organizational performance but also positively affects employees' overall job satisfaction and psychological well-being. When employees perceive AI as a facilitator of business processes rather than a threat to their roles, they adopt a more open and collaborative approach to AI technologies. This shift paves the way for the development of a more innovative work culture within organizations.

To effectively integrate AI, organizations must prioritize enhancing employees' knowledge and awareness of these technologies. Training programs can assist employees in not only learning to utilize AI but also in understanding how these technologies align with organizational goals. For example, highlighting how AI can take over repetitive and time-consuming tasks, thereby enabling employees to focus on more strategic and creative work, can positively shift employees' perceptions. Additionally, fostering open communication within organizations allows employees to express their concerns regarding AI. Managers play a critical role in addressing these concerns and providing viable solutions, helping employees feel more confident and secure during the transition. Implementing such supportive mechanisms is essential to enabling employees to view AI as a tool for support rather than a threat.

Furthermore, organizations must approach AI adoption within an ethical framework. Employees need assurances that AI technologies will not compromise their job security and that their personal data will remain protected. Providing such guarantees fosters mutual trust between employees and management, which not only enhances current performance but also supports long-term sustainable growth. In developing countries such as Turkey, integrating AI technologies into business processes presents significant potential for enhancing global competitiveness.

### References

- Akgül A., Çevik O. (2003) ,İstatistiksel Analiz Teknikleri, Emek Ofset, Ankara
- Akhtar, S., Arif, A., Rubi, E., & Naveed, S. (2011). Impact of organizational learning on organizational performance: Study of higher education institutes. *International Journal of Academic Research*, 3(5), 327-331.
- Akkaya, B., Özkan, A., & Özkan, H. (2021). Artificial intelligence anxiety (AICA) scale: Turkish adaptation, validity and reliability study, *Alanya Academic Overview*, 5(2), 1125-1146.
- Argote, L., & Miron-Spektor, E. (2011). Organizational learning: From experience to knowledge. *Organization science*, 22(5), 1123-1137.
- Baker, W.E., & Sinkula, J. M. (1999). Learning orientation, market orientation, and innovation: Integrating and extending models of organizational performance," *Journal of Marketing Focus*, 4(4), 295-308. 117.
- Banalieva, E. R., & Sarathy, R. (2011). A Contingency Theory Of Internationalization: Performance For Emerging Market Multinational Enterprises. *Management International Review*, 51, 593-634.
- Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations. *Journal of Personality And Social Psychology*, 51(6), 1173.
- Başar, P. (2022). The Effect of Organizational Learning on Organizational Performance. *Journal of Business Research*, 14(1), 621-634.
- Bhardwaj, G., Singh, S. V., & Kumar, V. (2020, January). An empirical study of artificial intelligence and its impact on human resource functions. In *2020 International Conference on Computation, Automation and Knowledge Management (ICCAKM)* (pp. 47-51). IEEE.
- Bhargava, A., Bester, M., & Bolton, L. (2021). Employees' perceptions of the implementation of robotics, artificial intelligence, and automation (RAIA) on job satisfaction, job security, and employability. *Journal of Technology in Behavioral Science*, 6(1), 106-113.
- Bosco, M. V. (2020). A Study on Artificial Intelligence Interaction with Organizational Performance. *International Journal of Research in Engineering, Science and Management*, 3(2), 483-486.
- Calantone, R. J., Cavusgil, S. T., & Zhao, Y. (2002). Learning Orientation, Firm Innovation Capability, And Firm Performance. *Industrial Marketing Management*, 31(6), 515-524.
- Çalışkan, A., & Kater, S. (2020). A Research on the Effect of Organizational Culture on Organizational Performance and the Mediating Role of Organizational Learning Climate in Mersin Organized Industrial Zone Enterprises. *Toros University IISBF Journal of Social Sciences*, 7(12), 170-198.
- Çaloğlu, H.(2016). Learning Orientation and Market Information Processing: Effects on Marketing and Organizational Outcomes. Boğaziçi University, Published Doctoral Thesis, Istanbul.
- Cho, Y. S. (2004), Examining The Impact Of Human Resource Management: A Performance Based Analytic Model, Unpublished PhD, USA: Las Vegas University, Nevada, 2004, Ps: 34.

- Daft, R. L. & Weick, K. E. (1984) Toward A Model Of Organizations As Interpretation Systems. *Academy Of Management Review*, 9(2), 284- 296.
- Dibella, A. J., Nevis, E. C., & Gould, J. M. (1996). Understanding Organizational Learning Capability. *Journal Of Management Studies*, 33(3), 361-379.
- Dodgson, M. (1993), "Organizational Learning: A Review Of Some Literatures", *Organization Studies*, Vol. 14, Pp. 375-94.
- Duncan R. B., (1972), Toward An Operant Model Of Organizational Learning: Adaptation To Environmental Uncertainty, *Academy Of Management Proceeding*, 155-158.
- Emhan, A., Fatih, C. U. R. A., & Zincirkıran, Y. D. D. M. (2015). The Effect of Job Satisfaction and Learning Capacity on Organizational Performance: An Application in Banking Sector. *Journal of Is,Power, Industrial Relations and Human Resources*, 17(2), 92-108.
- Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. *Academy of management review*, 10(4), 803-813.
- García-Morales, V. J., Jiménez-Barrionuevo, M. M., & Gutiérrez-Gutiérrez, L. (2012). Transformational leadership influence on organizational performance through organizational learning and innovation. *Journal of business research*, 65(7), 1040-1050.
- Giniuniene, J., & Jurksiene, L. (2015). Dynamic capabilities, innovation and organizational learning: Interrelations and impact on firm performance. *Procedia-Social and Behavioral Sciences*, 213, 985-991.
- Gürbüz, S., & Şahin, F. (2017). *Research Methods in Social Sciences*. Seçkin Publishing House, Ankara.
- Ho, L. A. (2008). What affects organizational performance? The linking of learning and knowledge management. *Industrial management & data systems*, 108(9), 1234-1254.
- Huber, G. P. (1991). Organizational learning: The contributing processes and the literatures. *Organization science*, 2(1), 88-115.
- Isa, E. S. A. I., & Muafi, M. (2022). Human Capital, Organizational Learning and Their Effects on Innovation Behavior And Performance of Banking Employees. *International Journal of Finance & Banking Studies* (2147-4486), 11 (1), 01-18.
- Jarad,, A. I. Y., Yusof, N. A., & Nikbin, D. (2010). A review paper on organizational culture and organizational performance. *International journal of business and social science*, 1(3).
- Khandekar, A., & Sharma, A. (2006). Organizational Learning And Performance: Understanding Indian Scenario In Present Global Context. *Education+ Training*, 48(8/9), 682-692.
- Kolbjørnsrud, V., Amico, R., & Thomas, R.J. (2017). Partnering with AI: how organizations can win over skeptical managers, *Strategy & Leadership*, 45(1), 37-43
- Kozcu, G. Y., & ÖZMEN, Ö. (2023). Organizational Learning Capability, Organizational Resilience, Organizational Performance, And Market Turbulence: A Moderated Mediation Model. *Journal of Management Sciences*, 21(49), 482-503.
- Liao, S. H., & Wu, C. C. (2009). The Relationship Among Knowledge Management, Organizational Learning, And Organizational Performance. *International Journal Of Business And Management*, 4(4), 64-76.
- Li, J., & Huang, J. S. (2020). Dimensions of artificial intelligence anxiety based on the integrated fear acquisition theory. *Technology in Society*, 63, 101410.
- Migdadi, M. M. (2019). Organizational learning capability, innovation and organizational performance. *European Journal of Innovation Management*, 24(1), 151-172.
- Mikalef, P., Islam, N., Parida, V., Singh, H., & Altwajiry, N. (2023). Artificial Intelligence (AI) Competencies For Organizational Performance: A B2B Marketing Capabilities Perspective. *Journal Of Business Research*, 164, 113998.
- Olan, F., Arakpogun, E. O., Suklan, J., Nakpodia, F., Damij, N., & Jayawickrama, U. (2022). Artificial intelligence and knowledge sharing: Contributing factors to organizational performance. *Journal of Business Research*, 145, 605-615.
- Onağ, O., & Tepeci, M. (2016). The Effect of Organizational Learning Capability on New Product and Business Performance through Organizational Innovation. *Journal of Isletme İktisadi Institute of Management*, (80), 50.
- Rehman, S. U., Mohamed, R., & Ayoup, H. (2019). The Mediating Role Of Organizational Capabilities Between Organizational Performance And Its Determinants. *Journal Of Global Entrepreneurship Research*, 9(1), 1-23.
- Saadat, V., & Saadat, Z. (2016). Organizational Learning As A Key Role Of Organizational Success. *Procedia-Social And Behavioral Sciences*, 230, 219-225.
- Škerlavaj, M., Štemberger, M. I., & Dimovski, V. (2007). Organizational learning culture-the missing link between business process change and organizational performance. *International journal of production economics*, 106(2), 346-367.
- Sobel, M. E. (1982). Asymptotic Confidence Intervals for Indirect Effects in Structural Equations Models, In S. Leinhardt (Ed.), *Sociological Methodology*, Vol.13, 290-312.
- Soomro, B. A., Mangi, S., & Shah, N. (2021). Strategic factors and significance of organizational innovation and organizational learning in organizational performance. *European Journal of Innovation Management*, 24(2), 481-506.
- Suseno, Y., Chang, C., Hudik, M., & Fang, E. S. (2022). Beliefs, Anxiety And Change Readiness For Artificial Intelligence Adoption Among Human Resource Managers: The Moderating Role Of High-Performance Work Systems, *The International Journal Of Human Resource Management*, 33:6, 1209-1236).
- Sundusiah, S., Rahayu, A., & Wibowo, L. A. (2022, July). The Influence of Organizational Learning and Innovation on Competitive Advantage at SMK in West Java Province. In 6th Global Conference on Business, Management, and Entrepreneurship (GCBME 2021) (pp. 535-542). Atlantis Press.
- Şeker, C., Örucü, E., Ercan Önbıçak, A. (2024). The Role of Artificial Intelligence Anxiety in the Relationship between Innovation and Organizational Learning in Organizations, *Journal of Business Research*, 16 (1), 328-345.
- Tabachnick, B. G., Fidell, L. S., & Ullman, J. B. (2013). *Using multivariate statistics* (Vol. 6, pp. 497-516). Boston, MA: pearson.
- Tavşancıl, E. (2005). *Measurement of Attitudes and Data Analysis with SPSS*. Ankara, Nobel Publication Distribution.
- Turunç, Ö. (2016). The Effect of Information Technology Usage on Organizational Performance of Businesses A Research in the Service Sector. *Toros University İisbf Journal of Social Sciences*, 3(5), 225-247.
- Wamba-Taguimdje, S. L., Fosso Wamba, S., Kala Kamdjoug, J. R., & Tchatchouang Wanko, C. E. (2020). Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects. *Business Process Management Journal*, 26(7), 1893-1924.
- Wang, Y. Y., & Wang, Y. S. (2022). Development and validation of an artificial intelligence anxiety scale: An initial application in predicting motivated learning behavior. *Interactive Learning Environments*, 30(4), 619-634.
- Wang, Y.-Y., & Wang, Y.-S. (2019). Development and validation of an artificial intelligence anxiety scale: an initial application in predicting motivated learning behavior, *Interactive Learning Environments*, doi: 10.1080/10494820.2019.1674887.
- Yin, M., Jiang, S. and Niu, X. (2024). Can AI really help? The double-edged sword effect of AI assistant on employees' innovation behavior, *Computers in Human Behavior*, 150,107987, ISSN 0747-5632.
- Yiyit, T.&Çorbacioğlu, S. (2014). Devlet Üniversitelerinde Stratejik Planlama ve Örgütsel Öğrenme İlişkisi Üzerine Bir Araştırma, *Yönetim Bilimleri Dergisi*,12:24,171-204.