

The Role of Cognitive Abilities in Enhancing High-Performance Work Systems: An Exploratory Study of Administrative Leaders' Perspectives at the University of Tikrit

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ARTICLE INFO	ABSTRACT
Received: 02 May 2025	The present study aimed to determine the role of cognitive capabilities, with their dimensions (learning capabilities, cultural capabilities, communication capabilities, and creative capabilities), in enhancing High-Performance Work Systems (HPWS), with their dimensions (comprehensive training and efficient employee selection), among administrative leaders at Tikrit University. The descriptive analytical approach was adopted to collect, describe, and analyze the data gathered through a questionnaire, which served as the primary data collection instrument. The study population consisted of the administrative leaders at Tikrit University, totaling (298) individuals. A comprehensive survey method was employed, and (298) electronic questionnaires were distributed. After review, (255) valid questionnaires were retrieved and deemed suitable for analysis, representing a response rate of (%85.6) . The study relied on the statistical programs (SPSS v.26) and (Excel) for data analysis and processing. The findings revealed a significant and positive effect of cognitive capabilities, across their various dimensions, on enhancing High-Performance Work Systems. This indicates that the administrative leaders at Tikrit University are capable of investing their cognitive skills to improve institutional performance. The study concluded with several recommendations, most notably the need to strengthen training and cognitive development programs for leaders in order to achieve higher levels of institutional performance and academic excellence.
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Introduction

Educational institutions are among the most important organizations contributing to societal development through knowledge creation and the preparation of individuals capable of leading change. With the growing demands of the modern educational environment, these institutions are required to develop their internal capabilities in alignment with the requirements of high performance and institutional excellence. Among these capabilities, the cognitive capabilities of administrative leaders occupy a central position due to their fundamental role in supporting strategic thinking and effective decision-making processes. Cognitively aware leadership is better equipped to understand changes, comprehend the challenges of the university environment, and formulate appropriate solutions. In light of these considerations, many universities have begun adopting advanced work systems known as High-Performance Work Systems (HPWS). Understanding the relationship between cognitive capabilities and these systems has thus become a contemporary research and institutional necessity.

Despite the adoption of High-Performance Work Systems by some educational institutions, their effective implementation faces significant challenges, most notably the limited cognitive preparedness of

administrative leaders and their insufficient skills to apply these systems efficiently. Such systems require a high level of understanding, analysis, and coordination among human and organizational resources. A noticeable gap exists between the available capabilities and the expected outcomes of these systems within university institutions. Accordingly, there is a pressing need to identify the factors influencing the effectiveness of these systems. Cognitive capabilities emerge as a fundamental factor that can contribute to bridging this gap. Without a profound understanding of this relationship, efforts to implement high-performance systems will remain limited in impact.

Section One: Research Methodology

First: Research Problem

In light of the rapid and successive developments across various fields, particularly in the higher education sector, it has become essential for academic institutions to improve their systems and enhance the job performance of their members. Investing in the cognitive capabilities of administrative leaders is considered one of the most prominent factors contributing to the achievement of high performance. These capabilities encompassing critical thinking, analysis, and creativity play a vital role in enhancing academic and administrative efficiency within universities, thereby fostering a more productive and effective work environment.

The research problem is summarized in the following main question: (What is the role of the cognitive capabilities possessed by administrative leaders in enhancing High-Performance Work Systems at Tikrit University?)

From this main question, several sub-questions emerge to help analyze the dimensions of the problem:

1. To what extent are the dimensions of cognitive capabilities available among administrative leaders in the researched university?
2. To what extent are High-Performance Work Systems available among administrative leaders in the researched university?
3. Is there a role for the dimensions of cognitive capabilities in improving High-Performance Work Systems in the researched university?
4. Which dimension of cognitive capabilities among administrative leaders plays the most significant role in improving High-Performance Work Systems in the researched university?

Second: Research Importance

The scientific importance of the study lies in highlighting cognitive capabilities as a fundamental element in achieving High-Performance Work Systems. This study provides a qualitative addition to the existing literature by exploring how these capabilities influence performance improvement in academic institutions, thereby expanding knowledge regarding the relationship between cognitive skills and institutional efficiency.

Furthermore, the study contributes to bridging a knowledge gap related to the application of cognitive capabilities within the higher education environment in Iraq, particularly in light of technological transformations and modern concepts in academic management.

Third: Research Objectives

1. To identify the dimensions of cognitive capabilities in the researched university.

2. To identify the High-Performance Work Systems in the researched organization.
3. To clarify the extent of the correlation and effect between cognitive capabilities and High-Performance Work Systems in the researched university.
4. To provide a set of recommendations based on the study findings regarding how to improve the cognitive capabilities of administrative leaders, in a way that contributes to developing work systems and enhancing institutional performance efficiency in universities.

Fourth: The Hypothetical Framework of the Study

The framework includes the relationship between the independent and dependent variables. The dimensions of cognitive capabilities are identified as the independent variable, while the dimensions of High-Performance Work Systems represent the dependent variable. The hypotheses concerning the relationship between these variables are tested accordingly.

The hypothetical framework of the study can be represented as follows:

1. **Independent Variable:** Cognitive Capabilities, represented by the following dimensions (learning capabilities, communication capabilities, cultural capabilities, and creative capabilities).
2. **Dependent Variable:** High-Performance Work Systems, represented by two dimensions (comprehensive training and efficient employee selection).

The hypothetical framework is illustrated in Figure (1), prepared by the researcher to clarify the relationship between the study variables and their sub-dimensions.

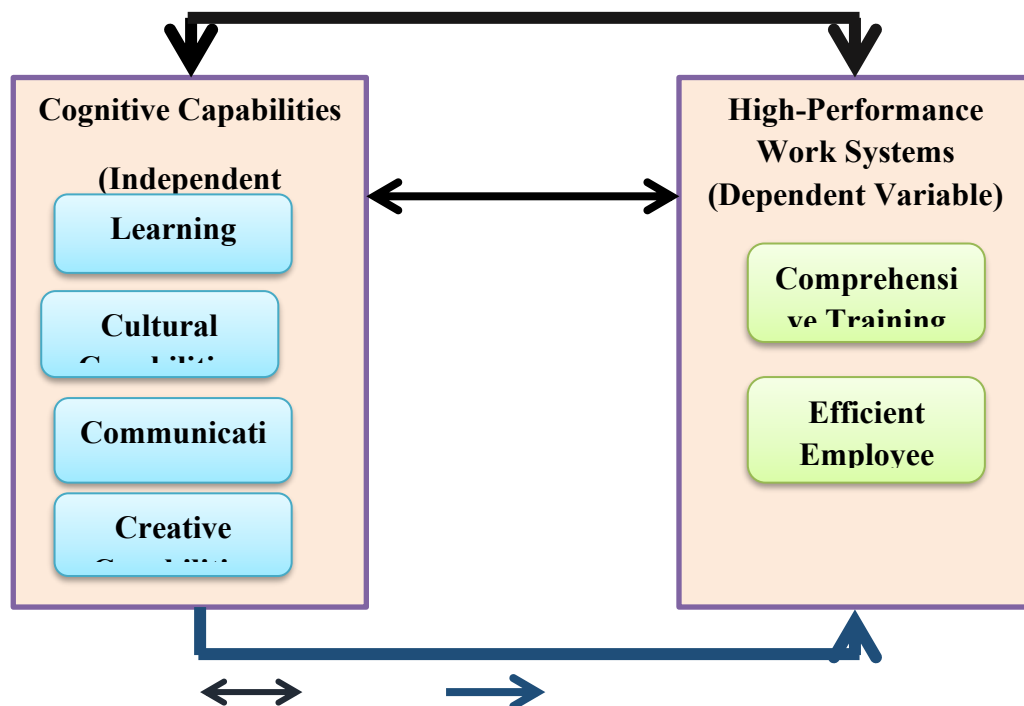


Figure (1): The Study's Hypothetical Framework

Source: Prepared by the Researcher

Fifth: Research Hypotheses

Based on the study's hypothetical framework, the hypotheses to be formulated have become clear, through which the proposed relationship between the two variables can be clarified. Accordingly, the research hypotheses were formulated as follows:

1. **First Main Hypothesis:**

There is a statistically significant correlation between cognitive capabilities and High-Performance Work Systems in the researched university. The following sub-hypotheses are derived from it:

- a. There is a statistically significant correlation between learning capabilities and High-Performance Work Systems.
- b. There is a statistically significant correlation between cultural capabilities and High-Performance Work Systems.
- c. There is a statistically significant correlation between communication capabilities and High-Performance Work Systems.
- d. There is a statistically significant correlation between creative capabilities and High-Performance Work Systems.

2. **Second Main Hypothesis:**

There is a statistically significant effect of cognitive capabilities on High-Performance Work Systems in the researched university. The following sub-hypotheses are derived from it:

- a. There is a statistically significant effect of learning capabilities on High-Performance Work Systems.
- b. There is a statistically significant effect of cultural capabilities on High-Performance Work Systems.
- c. There is a statistically significant effect of communication capabilities on High-Performance Work Systems.
- d. There is a statistically significant effect of creative capabilities on High-Performance Work Systems.

3. **Third Main Hypothesis:**

The effect of the dimensions of cognitive capabilities on High-Performance Work Systems varies in the researched university.

Sixth: Study Methodology

Given the nature and objectives of the study, which seek to analyze the impact of cognitive capabilities on the implementation of High-Performance Work Systems among administrative leaders at Tikrit University, the descriptive analytical approach was adopted as the most appropriate method for this type of study. This approach allows for describing the studied phenomenon by collecting data related to the opinions of the sample members regarding the study variables and then analyzing them statistically to reveal the existing relationships and trends among them.

A questionnaire was designed as the primary instrument for data collection from the sample members. Appropriate statistical methods were selected to verify the validity and accuracy of the results in a manner that serves the study's hypotheses and objectives.

Seventh: Study Limitations

In accordance with the nature of the studied topic and the researched field, the study limitations are as follows:

1. **Human Limits:** The study sample consisted of (255) administrative leaders at Tikrit University.
2. **Spatial Limits:** The practical aspect of the study was conducted at Tikrit University, located in Salah al-Din Governorate.
3. **Temporal Limits:** The duration of preparing the study, both theoretically and practically, extended from (15/9/2024) to (4/5/2025).
4. **Cognitive Limits:** The cognitive boundaries of the study were represented by two variables: the independent variable (cognitive capabilities) and the dependent variable (High-Performance Work Systems).

Eighth: Study Population and Sample

1. **Population:** The study population included the administrative leaders at Tikrit University. The total number of leaders in the university was (298) individuals, from the level of division head and above.
2. **Sample:** The study adopted a comprehensive survey method of a purposive sample representing the entire study population, consisting of the administrative leaders at Tikrit University. This included the university president, his assistants, college deans, assistant deans, and directors of centers, departments, and administrative divisions. The total population amounted to (298) individuals, and the questionnaire was distributed to all of them. A total of (255) valid questionnaires were retrieved for statistical analysis, representing a response rate of approximately 85.6%, which is considered scientifically appropriate and reliable for conducting analysis and deriving conclusions.

Section Two: The Theoretical Side of the Research

First: Cognitive Capabilities

1. The Concept of Cognitive Capabilities

In recent years, knowledge management has been characterized by the development of advanced cognitive capabilities that include information storage and processing, with a focus on artificial intelligence research and the use of advanced models inspired by computer science, physics, neuroscience, and cognitive psychology (Julia & Sabine, 2014:225). Cognitive capabilities are defined as a set of unique tangible and intangible resources that contribute to organizational distinctiveness and are considered among its most important resources (Cristina et al., 2013:3).

Cognitive capabilities are also commonly associated with certain standard preferences (behavioral outcomes) and are strongly linked to cognitive sciences. In many cases, individuals with high cognitive skills

are more efficient in leadership, decision-making, cost reduction, and loss management (Strauss & Margalit, 2012:187).

Below is Table (1), which presents researchers' views regarding the definitions of cognitive capabilities.

Table (1): Contributions of Some Researchers to the Definitions of Cognitive Capabilities

S	Researcher and Year	Definition
1	(Al-hamiri&Khalil,2018;101)	A set of interrelated processes that enable organizational management to understand changes in its work environment.
2	(Leih & Teece,2019:10)	A set of mental skills and cognitive processes possessed by the individual that enable them to comprehend, analyze, and process information effectively.
3	(Sternberg, 2020,11)	It is the outcome of an individual's ability to think intelligently by effectively analyzing data through intelligence associated with creativity, as more creative individuals tend to be more intelligent, in addition to its connection with the ability to think.
4	(Khaksar et al.,2020: 5)	A set of mental abilities that enable individuals to process information, analyze problems, apply logic, and make decisions.
5	(Shin ,2022;9)	It is the organization's ability to invest its resources and utilize them effectively to disseminate and enhance knowledge at the organizational level. Cognitive capabilities can be considered an integrative or complementary process that enables the organization to continuously acquire, generate, exchange, and apply knowledge.

Source: Prepared by the researcher based on the references cited in the table text

In light of the above, the researcher defines cognitive capabilities as the mental abilities that enable individuals to understand, analyze, interpret, and effectively utilize information in decision-making and problem-solving processes. These capabilities include a set of skills such as memory, attention, critical thinking, creativity, and learning.

2. Objectives of Cognitive Capabilities

Cognitive capabilities aim to achieve the following (Simon, 2019:3):

- To develop the ability to analyze information in a deep and systematic manner. This includes the ability to understand the relationships among different elements and identify patterns and trends, which contributes to making informed decisions and solving problems effectively.
- To enhance individuals' creative thinking by developing the ability to generate new and innovative solutions to problems and to imagine different ways to improve processes and ideas.
- To improve the level of memory and concentration among individuals, which helps them retain and retrieve information when needed, in addition to increasing their ability to handle multiple streams of information simultaneously without distraction.

3. Importance of Cognitive Capabilities

Cognitive capabilities are considered among the fundamental elements contributing to the development of individuals and enhancing their ability to face various challenges in professional life and changing work environments. Their importance lies in enabling individuals to think deeply and analyze information effectively, which helps them make sound decisions and solve problems in innovative ways. These capabilities include a set of skills such as memory, concentration, critical thinking, and creativity, which are essential for achieving high performance across different fields (Al-Hawajra, 2019:10).

In the modern work environment characterized by competitiveness and complexity, the importance of cognitive capabilities is evident through the following (Khalaf & Al-Jubouri, 2022:150):

- Cognitive capabilities help preserve organizational performance based on experience and knowledge and contribute to its improvement.
- Cognitive capabilities enable the organization to determine the required knowledge, document available knowledge, develop and share it, apply it, and evaluate it.
- They serve as a motivating tool for organizations to encourage the creative capabilities of their human resources to generate high-quality knowledge and to detect unknown relationships and gaps in expectations in advance.

4. Dimensions of Cognitive Capabilities

1. **Learning Capabilities:** These represent the ability of organizations to understand external knowledge, establish it, and then transform it into useful internal knowledge. In addition, this capability helps organizations evaluate, acquire, assimilate, and utilize external knowledge to develop new internal knowledge that allows experimentation and evaluation of different scenarios for organizational adaptation to the external environment. Cognitive capabilities emerge from the combined development of implicit accumulation of previous experience, explicit cognitive expression, and knowledge documentation activities. These capabilities are not limited to a specific cognitive or skill domain but rather include the ability to learn across multiple fields and acquire new skills (Al-Hayla, 2020:11).

The ability to learn is one of the approaches used to address and measure organizational learning. This capability is based on factors or characteristics that facilitate the learning process within the organization. Learning capability contributes to enhancing institutional performance by facilitating organizational learning through several dimensions such as experimentation and risk tolerance (Alexandru, 2018:4).

2. **Cultural Capabilities:** Cultural capabilities refer to the organization's vision, values, and attitudes toward learning and knowledge transfer. The best knowledge management practices may fail if the organization does not possess a culture that is receptive to change. Collaborative and supportive culture is a fundamental requirement for promoting high levels of knowledge sharing. Therefore, a knowledge-oriented organizational culture is an effective factor in organizational learning. Thus, the effectiveness of organizational culture is considered one of the critical capabilities influencing the organization's survival and success (Pandey & Dutta, 2013:437).
3. **Communication Capabilities:** Communication capability is a relatively modern concept, and the literature on it remains limited; therefore, there is no clear and established definition yet. Employees within organizations communicate through both formal and informal processes.

Communication is defined as the transmission and reception of messages through symbols. With the changes facing organizations, communication capabilities have become more important, especially when communication with employees is essential. Communication capability is based on several fundamental skills, including the ability to communicate accurately, express ideas clearly, transmit information, persuade during conversations, and listen and understand others (Al-Jubouri & Khalaf, 2022:47).

- 4. Creative Capabilities:** Creative capabilities are considered a fundamental component of cognitive capabilities, as they provide individuals with the ability to innovate and think outside the traditional framework. This dimension highlights the possibility of integrating different information and formulating new perspectives that view problems or concepts from unfamiliar angles, opening broad horizons for novel and unexpected solutions. These capabilities are not merely tools for applying innovative ideas but rather enable individuals to create a work environment that encourages continuous creativity and renewal. Creativity goes beyond relying on scarce resources; it is related to possessing the mental skills and abilities that enable individuals to better understand the work environment and interact flexibly and effectively with surrounding changes (Targhini, 2015:4).

Second: High-Performance Work Systems

1. Concept of High-Performance Work Systems

The term HPWS refers to an integrated or combined system of human resource practices, work structures, and processes designed to produce high levels of employee knowledge, skills, attitudes, motivation, and flexibility (Rehmani, 2020:3). The concept and ideas of High-Performance Work Systems originated in the late twentieth century amid the disturbances in the manufacturing environment in the United States. During that period, the American manufacturing industry recognized the intensity of global competition and the need to rethink manufacturing processes in a new way. Subsequently, several modern concepts related to improving human resource performance emerged, which became fundamental components of High-Performance Work Systems. The concept of High-Performance Work Systems (HPWS) has attracted widespread attention over the past decades of the twentieth century (Abdul, 2022:976).

Several researchers agreed on the definitions presented in Table (2), which shows the operational definitions of the dimensions of High-Performance Work Systems adopted by the researcher in constructing the research instrument and analyzing the study results.

Table (2): Contributions of Some Researchers and Authors to the Definitions of High-Performance Work Systems

S	Researcher and Year	Definition
1	(Bendickson,2018 ;10)	A set of interrelated human resource management practices aimed at enhancing employee and organizational performance by improving workforce competencies, providing opportunities for employee participation, and achieving high levels of employee motivation and effort.

2	(Rentao Miao et al,2019;15)	A comprehensive human resource system oriented toward improving High-Performance Work Systems through investment in employees.
3	(Mihail&Kloutsiniotis,2020;10)	A specific set of human resource practices, work structures, and processes that increase employee knowledge, skills, commitment, and flexibility.
4	(Kim,et,al,2022;7)	A set of interrelated human resource management practices that act as a catalyst for enhancing organizational performance through the effective management of human capital.
5	(Munir,2023;212)	A set of interrelated human resource practices aimed at improving employee and organizational performance.

Source: Prepared by the researcher based on the references cited in the table text

In light of the above, the researcher defines High-Performance Work Systems as a set of human resource management practices represented by job design, training and development, job security, communication, transformational leadership, and performance evaluation, which work to improve performance and help the organization achieve its objectives.

2. Importance of High-Performance Work Systems

The development and implementation of High-Performance Work Systems represent an important strategic investment in human capital and a fundamental transformation in how human resources are organized and managed. This innovative form of work organization is based on the concept of comprehensive development through high commitment, high motivation, and broad participation in decision-making and problem-solving by utilizing social and human resources at the operational level to achieve the organization’s specific strategic requirements. The human resource within High-Performance Work Systems is considered the focus of attention, particularly regarding their innovative capabilities, skills, knowledge, voluntary motivation, and participation in decision-making. These are regarded as vital, standard, and valuable assets for organizational competitiveness and economic success (Al-Sayyid, 2015:35).

The importance of High-Performance Work Systems can be summarized as follows:

- The implementation of High-Performance Work Systems enhances employee retention and prevents their migration to competing organizations (Salas and Vallina, 2018:149).
- The application of High-Performance Work Systems increases job satisfaction and organizational commitment, contributes to the development of human capital, and improves and enhances the productivity skills and motivation of workers (Muntas, 2017:271).
- High-Performance Work Systems directly affect human resource flexibility by enhancing the organization’s human capital, particularly through selection processes, intensive training, and development activities. Intensive training and development programs can support employee growth within the organization. Therefore, employees can always be prepared for change, and the organization can expand the range of skills that enable it to respond quickly to environmental changes (Marzouq, 2018:5).

3. Dimensions of High-Performance Work Systems

• Efficient Employee Selection:

Efficient employee selection is considered one of the main pillars upon which High-Performance Work Systems are built. This dimension focuses on attracting and recruiting individuals with high competencies and skills that are consistent with the organization's goals and strategies, ensuring the achievement of distinguished and sustainable performance. Selective staffing means that the organization takes into account long-term personal characteristics and capabilities, and tests skills, knowledge, and abilities through well-designed recruitment strategies and selection systems. Consequently, the organization will choose the best candidates in terms of job and organizational fit. This method is considered one of the modern approaches used in performance evaluation and is mainly based on studying each type of job (Al-Olaqi, 2020:70).

2. Comprehensive Training:

The human resource management system within the organization relies on selective employment policies, comprehensive training, performance-related compensation, and the enhancement of employee commitment to maximize their contributions to improving organizational performance (Rubel, 2018:319). Comprehensive training during the employment stage has a positive impact on job satisfaction and employee retention rates, contributing to the overall success of workforce integration. By providing early-stage targeted training during the employment relationship, institutions can improve the onboarding experience, accelerate the integration of new employees, and establish the foundation for long-term organizational success (Al-Lafi, 2020:7).

In today's environment, organizations that invest in training achieve a higher return rate, reaching approximately 24% in training investment outcomes. Employees who master new competencies are enabled to handle new and more complex tasks, highlighting the importance of corporate training as a structural component within the organization. One of the main reasons assumed for institutional training inefficiency is the lack of alignment between organizational strategic objectives and management goals, which is primarily related to the comprehensive training system. This misalignment leads to the inability to accurately determine real training needs (Zinchenko, 2023:2).

Section Three: Practical Side of the Study

First: Sample Adequacy and Autocorrelation Test

Sample adequacy was tested to verify the sufficiency of the number of questionnaires according to the study dimensions and variables. This test was conducted using the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test, while the autocorrelation problem was examined through the matrix determinant. The results are presented as follows:

1. Sample Adequacy Test

This test aims to determine the adequacy of the study sample for statistical analysis procedures. Through applying the KMO test for sample adequacy, the KMO values were found to be (0.812) and (0.869) for both cognitive capabilities and High-Performance Work Systems, respectively, as shown in Table (3). These values are higher than the threshold value of 0.50, indicating the adequacy of the sample size for conducting statistical analysis.

This is further supported by Bartlett’s Test, where the significance level of Chi-square reached (0.000), which is less than the required significance level of 5%, confirming the suitability of the sample size for analysis.

2. Correlation Significance Test

Using the significance level of a coefficient tool, the Correlation Matrix was generated to ensure that there was no high correlation exceeding 90% between any two variables. Variables exhibiting correlation coefficients higher than this threshold were excluded. The matrix determinant values were found to be (0.091) and (0.015) for cognitive capabilities and High-Performance Work Systems, respectively, as shown in Table (3). These values are greater than the hypothesized determinant value of (0.0001), indicating that the correlation matrix does not suffer from autocorrelation problems.

Table (3): Sample Adequacy and Autocorrelation Test

Variables and Dimensions	Symbol	(KMO)	Matrix Determinant	(Bartlett's Test)	(Sig.)
Cognitive Capabilities	X	0.812	0.091	603.622	0.000
High-Performance Work Systems	Y	0.869	0.015	1055.06	0.000

Source: The table was prepared by the researcher based on SPSS software

Second: Description of Respondents’ Response Trends to the Items

The study included two variables (cognitive capabilities and High-Performance Work Systems), consisting of 24 items representing both variables across all their dimensions. The following is a description of these items according to the response trends of the sample members:

1. Description of Cognitive Capabilities Items (Independent Variable)

The cognitive capabilities variable (independent variable) included four dimensions (learning capabilities, cultural capabilities, communication capabilities, and creative capabilities). The following is a description of the items of these four dimensions:

A. Description of Learning Capabilities Dimension Items

Table (4) presents a description of the items of the learning capabilities dimension, which is the first dimension of the cognitive capabilities variable (independent variable). This dimension included four items, and the description was based on the arithmetic mean, standard deviation, and relative importance as follows:

Table (4): Description of Respondents’ Response Trends on the Learning Capabilities Dimension

No.	Item	Mean	Standard Deviation	Relative Importance	Agreement Level	Importance Ranking
X1	The work environment motivates me to engage in continuous learning and acquire new skills.	4.400	0.685	88.00%	Very High	1

X2	I have opportunities to acquire new skills that help me improve my job performance.	4.227	0.739	84.55%	Very High	3
X3	I am provided with suitable opportunities to acquire new work-related skills that help improve my job performance.	4.098	0.780	81.96%	High	4
X4	I have the ability to apply the knowledge I have acquired in performing my job.	4.298	0.702	85.96%	Very High	2

Source: The table was prepared by the researcher based on SPSS software

It is observed from Table (4) that there is agreement regarding the availability of all items of the learning capabilities dimension according to the perceptions of the surveyed administrative leaders at Tikrit University. This is evidenced by the calculated mean value, which exceeded the hypothetical value of (3) for all items. This availability is further confirmed by the high relative importance values of these items.

It is also noted that item (X1) achieved the highest level of availability with a mean value of (4.400), followed by item (X4) with a mean value of (4.298), then item (X2) with a mean value of (4.227), and finally item (X3) with a mean value of (4.098). The relatively low standard deviation values indicate consistency and low dispersion in the respondents' answers, supporting the reliability of the mean values in representing the overall sample.

B. Description of Cultural Capabilities Dimension Items

Table (5) presents a description of the items of the cultural capabilities dimension, which is the second dimension of the cognitive capabilities variable (independent variable). This dimension included four items, and the description was based on the arithmetic mean, standard deviation, and relative importance as follows:

Table (5): Description of Respondents' Response Trends on the Cultural Capabilities Dimension

No.	Item	Mean	Standard Deviation	Relative Importance	Agreement Level	Importance Ranking
X5	The organizational values help me understand the nature of work and adapt to the organizational environment.	4.165	0.756	83.29%	High	1
X6	There is strong encouragement for cultural exchange among different teams.	4.043	0.848	80.86%	High	3
X7	The organization provides programs to enhance cultural awareness and improve understanding among employees.	4.024	0.808	80.47%	High	4

X8	I have high flexibility in dealing with diverse work environments.	4.067	0.758	81.33%	High	2
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Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (5) that there is agreement regarding the availability of all statements related to the dimension of cultural competencies, according to the respondents' perceptions.

The respondents, who are administrative leaders at the University of Tikrit, indicated this agreement, as evidenced by the calculated mean value, which exceeded its hypothetical value of (3) for all statements. This availability is further confirmed by the high relative importance values of these statements. It is also observed that statement (X5) achieved the highest level of availability, with a mean of (4.165), followed by statement (X8) with a mean of (4.067), then statement (X6) with a mean of (4.043), and finally statement (X7) with a mean of (4.024). Moreover, the low standard deviation values indicate consistency and a lack of dispersion in the responses of the sample members, which supports the reliability of the mean values in representing the overall sample.

C. Description of the Statements of the Communication Capabilities Dimension

Table (6) presents a description of the statements related to the (Communication Capabilities) dimension, which is the third dimension of the cognitive capabilities variable (independent). This dimension comprised four statements. The description was conducted based on the mean, standard deviation, and relative importance, as follows:

Table (6): Description of the Trends in the Sample Members' Responses to the Communication Capabilities Dimension

S	Statement	Mean	Standard Deviation	Relative Importance	Degree of Agreement	Order of Importance
X9	Communication channels within the organization are characterized by clarity and transparency.	4.051	0.870	81.02%	High	2
X10	I receive feedback from management regarding my performance regularly and constructively.	3.882	0.875	77.65%	High	4
X11	The organization utilizes effective communication tools, such as email, regular meetings, and digital platforms, to facilitate collaboration between employees and management	4.075	0.831	81.49%	High	1

X12	The organization encourages open dialogue and the exchange of opinions among employees.	3.933	0.832	78.67%	High	3
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Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (6) that there is agreement regarding the availability of all statements related to the Communication Capabilities dimension, according to the perceptions of the respondents, who are administrative leaders at the University of Tikrit. This is evidenced by the calculated mean values, which exceeded the hypothetical value of (3) for all statements. The availability is further confirmed by the high relative importance values of these statements. It is also noted that statement (X11) achieved the highest level of availability, with a mean of (4.075), followed by statement (X9) with a mean of (4.051), then statement (X12) with a mean of (3.933), and finally statement (X10) with a mean of (3.882). Moreover, the low standard deviation values indicate consistency and a lack of dispersion in the responses of the sample members, which supports the reliability of the mean values in representing the overall sample.

D. Description of the Statements of the Creative Capabilities Dimension

Table (7) presents a description of the statements related to the (Creative Capabilities) dimension, which is the fourth dimension of the cognitive capabilities variable (independent). This dimension comprised four statements, and the description was conducted based on the mean, standard deviation, and relative importance, as follows:

Table (7): Description of the Trends in the Sample Members’ Responses to the Creative Capabilities Dimension

S	Statement	Mean	Standard Deviation	Relative Importance	Degree of Agreement	Order of Importance
X13	The organization provides me with the opportunity to present new and innovative ideas.	4.090	0.862	81.80%	High	1
X14	Management motivates me to think outside the box and seek new solutions.	3.992	0.905	79.84%	High	2
X15	Creative ideas are supported by providing the necessary resources and facilities.	3.875	0.935	77.49%	High	4
X16	The organization encourages the exchange of innovative ideas among employees.	3.945	0.831	78.90%	High	3

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (7) that there is agreement regarding the availability of all statements related to the Creative Capabilities dimension, according to the perceptions of the respondents, who are administrative leaders at the University of Tikrit. This is evidenced by the calculated mean values, which exceeded the hypothetical value of (3) for all statements. The availability is further confirmed by the high relative importance values of these statements. It is also noted that statement (X13) achieved the highest level of availability, with a mean of (4.090), followed by statement (X14) with a mean of (3.992), then statement (X16) with a mean of (3.945), and finally statement (X15) with a mean of (3.875). Moreover, the low standard deviation values indicate consistency and a lack of dispersion in the responses of the sample members, which supports the reliability of the mean values in representing the overall sample.

2. Description of the Statements of High-Performance Systems (Dependent Variable)

The variable *High-Performance Systems* (dependent) included two dimensions: (Efficient Employee Selection and Comprehensive Training). The statements of these six dimensions are described as follows:

A. Description of the Statements of the Efficient Employee Selection Dimension

Table (8) presents a description of the statements related to the (Efficient Employee Selection) dimension, which is the first dimension of the High-Performance Systems variable (dependent). This dimension comprised four statements, and the description was conducted based on the mean, standard deviation, and relative importance, as follows:

Table (8): Description of the Trends in the Sample Members' Responses to the Efficient Employee Selection Dimension

S	Statement	Mean	Standard Deviation	Relative Importance	Degree of Agreement	Order of Importance
Y1	The organization relies on precise and objective criteria in selecting new employees.	3.973	1.074	79.45%	High	1
Y2	Individuals are employed based on their competencies and experience.	3.682	1.183	73.65%	High	3
Y3	The organization's recruitment system aligns with the actual work requirements, ensuring the selection of suitable employees for the positions.	3.784	1.045	75.69%	High	2
Y4	Employees are selected based on their skills and experience rather than personal relationships.	3.678	1.235	73.57%	High	4

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (8) that there is agreement regarding the availability of all statements related to the Efficient Employee Selection dimension, according to the perceptions of the respondents, who are administrative leaders at the University of Tikrit. This is evidenced by the calculated mean values, which exceeded the hypothetical value of (3) for all statements. The availability is further confirmed by the high relative importance values of these statements. It is also noted that statement (Y1) achieved the highest level of availability, with a mean of (3.973), followed by statement (Y3) with a mean of (3.784), then statement (Y2) with a mean of (3.682), and finally statement (Y4) with a mean of (3.678). Moreover, the low standard deviation values indicate consistency and a lack of dispersion in the responses of the sample members, which supports the reliability of the mean values in representing the overall sample.

B. Description of the Statements of the Comprehensive Training Dimension

Table (9) presents a description of the statements related to the (Comprehensive Training) dimension, which is the second dimension of the High-Performance Systems variable (dependent). This dimension comprised four statements, and the description was conducted based on the mean, standard deviation, and relative importance, as follows:

Table (9): Description of the Trends in the Sample Members’ Responses to the Comprehensive Training Dimension

S	Statement	Mean	Standard Deviation	Relative Importance	Degree of Agreement	Order of Importance
Y5	The organization provides continuous training programs to develop employees’ skills.	4.102	0.854	82.04%	High	2
Y6	Training programs are designed based on actual work requirements.	3.902	0.989	78.04%	High	4
Y7	The organization encourages employees to attend training workshops.	4.122	0.730	82.43%	High	1
Y8	The organization offers a supportive environment for professional growth by providing practical learning opportunities and on-the-job training programs.	3.957	0.834	79.14%	High	3

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (9) that there is agreement regarding the availability of all statements related to the Comprehensive Training dimension, according to the perceptions of the respondents, who are administrative leaders at the University of Tikrit. This is evidenced by the calculated mean values, which exceeded the hypothetical value of (3) for all statements. The availability is further confirmed by the high

relative importance values of these statements. It is also noted that statement (Y7) achieved the highest level of availability, with a mean of (4.122), followed by statement (Y5) with a mean of (4.102), then statement (Y8) with a mean of (3.957), and finally statement (Y6) with a mean of (3.902). Moreover, the low standard deviation values indicate consistency and a lack of dispersion in the responses of the sample members, which supports the reliability of the mean values in representing the overall sample.

3. Descriptive Analysis of the Study Variables and Dimensions

Table (10) presents the descriptive analysis of the study variables (Cognitive Capabilities and High-Performance Systems) along with all their dimensions. This analysis was conducted based on the mean, standard deviation, minimum and maximum values, in addition to using relative importance.

Table (10): Description of the Study Variables and Dimensions

Variables and Dimensions	Code	Mean	Standard Deviation	Relative Importance	Maximum Value	Minimum Value	Degree of Agreement	Order of Importance
A. Learning Capabilities	xx1	4.256	0.522	2.00	5.00	85.12%	Very High	1
B. Cultural Capabilities	xx2	4.075	0.595	2.00	5.00	81.49%	High	2
C. Communication Capabilities	xx3	3.985	0.664	1.50	5.00	79.71%	High	3
D. Creative Capabilities	xx4	3.975	0.725	1.00	5.00	79.51%	High	4
Cognitive Capabilities	X	4.073	0.545	1.81	5.00	81.46%	High	
A. Efficient Employee Selection	yy1	3.779	0.986	1.00	5.00	75.59%	High	6
B. Comprehensive Training	yy2	4.021	0.713	1.00	5.00	80.41%	High	1
High-Performance Systems	Y	3.914	0.676	1.67	5.00	78.27%	High	

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (10) that the level of availability of the Cognitive Capabilities variable, with its four dimensions (Learning Capabilities, Cultural Capabilities, Communication Capabilities, and Creative Capabilities), is high according to the responses of the sample members, who are administrative leaders at the University of Tikrit. This is evidenced by the calculated mean values for the variable and its four dimensions, which exceeded the hypothetical mean value of (3). This high level and agreement regarding the availability of the Cognitive Capabilities variable and its four dimensions is further confirmed by the high relative importance value, with the mean value for the Cognitive Capabilities variable reaching (4.073) and a relative importance of (81.46%). At the dimensional level, it is noted that dimension (A. Learning Capabilities) achieved the highest level of availability, with a mean of (4.256), followed by dimension (B. Cultural Capabilities) with a mean of (4.075), then dimension (C. Communication Capabilities) with a mean of (3.985), and finally dimension (D. Creative Capabilities) with a mean of (3.975). Moreover, the low standard deviation values indicate consistency and a lack of dispersion in the responses of the study sample, which supports and enhances the reliability of the mean values in representing the overall sample.

It is also observed from Table (10) that the level of availability of the High-Performance Systems variable, with its two dimensions (Efficient Employee Selection and Comprehensive Training), is high according to the responses of the sample members, who are administrative leaders at the University of Tikrit. This is evidenced by the calculated mean values for the variable and its two dimensions, which exceeded the hypothetical mean value of (3). This high level and agreement regarding the availability of the High-Performance Systems variable is further confirmed by the high relative importance value, with the mean value for the High-Performance Systems variable reaching (3.914) and a relative importance of (78.27%). At the dimensional level, it is noted that the dimension (Comprehensive Training) achieved the highest level of availability, with a mean of (4.021), followed by the dimension (Efficient Employee Selection) with a mean of (3.779). Moreover, the low standard deviation values indicate consistency and a lack of dispersion in the responses of the study sample, which supports and enhances the reliability of the mean values in representing the overall sample.

3. Hypothesis Testing of the Relationship: This section included one main hypothesis as follows:

(H1) Main Hypothesis 1: There is a statistically significant correlation between Cognitive Capabilities and High-Performance Work Systems at the studied university, from which the following sub-hypotheses are derived:

(H1.1) Sub-Hypothesis 1: There is a statistically significant correlation between Learning Capabilities and High-Performance Work Systems.

To test this hypothesis, the Pearson correlation coefficient was calculated to determine the significance, strength, and direction of the relationship between Learning Capabilities and High-Performance Work Systems. Table (11) presents the results of the relationship test.

Table (11): The Relationship between Learning Capabilities and High-Performance Work Systems

Variables and Dimensions	Symbol	Statement	High-Performance Systems (Y)
A. Learning Capabilities	xx1	(Pearson)	0.520**
		(Sig.)	0.000

(**) Significant at the 1% significance level; (*) Significant at the 5% significance level.
Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (11) that there is a positive (direct) statistically significant correlation at a significance level of less than 5% between learning capabilities and High-Performance Work Systems. This indicates that the availability of learning capabilities among the administrative leaders at the University of Tikrit will be accompanied by the availability of High-Performance Work Systems at the university. Accordingly, the first sub-hypothesis is accepted.

(H1.2) Second Sub-Hypothesis: There is a statistically significant correlation between cultural capabilities and High-Performance Work Systems.

To test this hypothesis, the Pearson correlation coefficient was calculated to determine the significance, strength, and direction of the relationship between cultural capabilities and High-Performance Work Systems. Table (12) presents the results of the relationship test.

Table (12): The Relationship between Cultural Capabilities and High-Performance Work Systems

Variables and Dimensions	Code	Item	High-Performance Systems (Y)
B. Cultural Capabilities	xx2	(Pearson)	0.674**
		(Sig.)	0.000

(**) Significant at the 1% significance level; (*) Significant at the 5% significance level.
Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (12) that there is a positive (direct) statistically significant correlation at a significance level of less than 5% between cultural capabilities and High-Performance Work Systems. This indicates that the availability of cultural capabilities among administrative leaders at the University of Tikrit will be accompanied by the availability of High-Performance Work Systems at the university. Accordingly, the second sub-hypothesis is accepted.

(H1.3) Third Sub-Hypothesis: There is a statistically significant correlation between communication capabilities and High-Performance Work Systems.

To test this hypothesis, the Pearson correlation coefficient was calculated to determine the significance, strength, and direction of the relationship between communication capabilities and High-Performance Work Systems. Table (13) presents the results of the relationship test.

Table (13): The Relationship between Communication Capabilities and High-Performance Work Systems

Variables and Dimensions	Code	Item	High-Performance Systems (Y)
C. Communication Capabilities	xx3	(Pearson)	0.760**
		(Sig.)	0.000

(**) Significant at the 1% significance level; (*) Significant at the 5% significance level.
 Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (13) that there is a positive (direct) statistically significant correlation at a significance level of less than 5% between communication capabilities and High-Performance Work Systems. This indicates that the availability of communication capabilities among administrative leaders at the University of Tikrit will be accompanied by the availability of High-Performance Work Systems at the university. Accordingly, the third sub-hypothesis is accepted.

(H1.4) Fourth Sub-Hypothesis: There is a statistically significant correlation between creative capabilities and High-Performance Work Systems.

To test this hypothesis, the Pearson correlation coefficient was calculated to determine the significance, strength, and direction of the relationship between creative capabilities and High-Performance Work Systems. Table (14) presents the results of the relationship test.

Table (14): The Relationship between Creative Capabilities and High-Performance Work Systems

Variables and Dimensions	Code	Item	High-Performance Systems (Y)
D. Creative Capabilities	xx4	(Pearson)	0.751**
		(Sig.)	0.000

(**) Significant at the 1% significance level; (*) Significant at the 5% significance level.
 Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (14) that there is a positive (direct) statistically significant correlation at a significance level of less than 5% between creative capabilities and High-Performance Work Systems. This indicates that the availability of creative capabilities among administrative leaders at the University of Tikrit will be accompanied by the availability of High-Performance Work Systems at the university. Accordingly, the fourth sub-hypothesis is accepted. Based on the results of the sub-hypotheses, the first main hypothesis can be considered accepted.

Fourth: Testing the Effect Hypothesis: This section includes one main hypothesis as follows:

(H2) Second Main Hypothesis: There is a statistically significant effect of cognitive capabilities on High-Performance Work Systems at the studied university, from which the following sub-hypotheses are derived:

(H2.1) First Sub-Hypothesis: There is a statistically significant effect of learning capabilities on High-Performance Work Systems.

To test this hypothesis, a simple linear regression equation was prepared to estimate the value of High-Performance Work Systems through the learning capabilities dimension, in order to determine the extent of its effect on High-Performance Work Systems, as shown in the following equation:

$$Y = \beta_0 + \beta_{xx1} + e \dots\dots 1$$

Where:

(Y) Dependent variable, which is High-Performance Work Systems.

(xx1) Independent variable, which is the learning capabilities dimension.

(β) Regression coefficient, representing the change in the dependent variable when the independent variable increases or decreases by one unit.

(βo) Constant coefficient, representing the value of the dependent variable when the independent variable is zero.

(e) Standard error.

Table (15) presents the results of the effect analysis.

Table (15): The Effect of the Learning Capabilities Dimension on High-Performance Work Systems

Dimensions	(R ²)	(Adjusted R ²)	(F)	(Sig.)
	0.271	0.268	94.008	0.000
	Constant Coefficient (βo)	Regression Coefficient (β)	(T)	(Sig.)
Learning Capabilities	1.045	0.674	9.696	0.000

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (15) that the validity of the regression model is confirmed by the F-value of (94.008) at a significance level of less than 5%, indicating the possibility of estimating the value of High-Performance Work Systems through the learning capabilities dimension. Meanwhile, the T-value of (9.696) at a significance level of less than 5% indicates a significant effect, and the positive beta (β) coefficient of (0.674) indicates that the effect is positive. This means that the learning capabilities dimension positively influences High-Performance Work Systems by enhancing the availability of these systems at the University of Tikrit under study.

Furthermore, the coefficient of determination (R²) of (0.271) indicates that the learning capabilities dimension explains 27.1% of the variations in High-Performance Work Systems, while the remaining 72.9% is attributable to other factors not included in the current model. Based on the above, the first sub-hypothesis is accepted, and the regression equation can be represented according to the results as follows:

$$Y = 1.045 + 0.674 \text{ xx1} \dots\dots\dots 1$$

(H2.2) Second Sub-Hypothesis: There is a statistically significant effect of cultural capabilities on High-Performance Work Systems.

To test this hypothesis, a simple linear regression equation was prepared to estimate the value of High-Performance Work Systems through the cultural capabilities dimension, in order to determine the extent of its effect on High-Performance Work Systems, as shown in the following equation:

$$Y = \beta_0 + \beta \text{ xx2} + e \dots\dots\dots 2$$

Where:

(Y) Dependent variable, which is High-Performance Work Systems.

(xx2) Independent variable, which is the cultural capabilities dimension.

(β) Regression coefficient, representing the change in the dependent variable when the independent variable increases or decreases by one unit.

(βo) Constant coefficient, representing the value of the dependent variable when the independent variable is zero.

(e) Standard error.

Table (16) presents the results of the effect analysis.

Table (16): The Effect of the Cultural Capabilities Dimension on High-Performance Work Systems

Dimensions	(R ²)	(Adjusted R ²)	(F)	(Sig.)
	0.454	0.452	210.099	0.000
	Constant Coefficient (βo)	Regression Coefficient (β)	(T)	(Sig.)
Cultural Capabilities	0.796	0.765	14.495	0.000

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (16) that the validity of the regression model is confirmed by the F-value of (210.099) at a significance level of less than 5%, indicating the possibility of estimating the value of High-Performance Work Systems through the cultural capabilities dimension. Meanwhile, the T-value of (14.495) at a significance level of less than 5% indicates a significant effect, and the positive beta (β) coefficient of (0.765) indicates that the effect is positive. This means that the cultural capabilities dimension positively influences High-Performance Work Systems by enhancing the availability of these systems at the University of Tikrit under study.

Furthermore, the coefficient of determination (R²) of (0.454) indicates that the cultural capabilities dimension explains 45.4% of the variations in High-Performance Work Systems, while the remaining 54.6% is attributable to other factors not included in the current model. Based on the above, the second sub-hypothesis is accepted, and the regression equation can be represented according to the results as follows:

$$Y = 0.796 + 0.765 \text{ xx2} \dots\dots\dots 2$$

(H2.3) Third Sub-Hypothesis: There is a statistically significant effect of communication capabilities on High-Performance Work Systems.

To test this hypothesis, a simple linear regression equation was prepared to estimate the value of High-Performance Work Systems through the communication capabilities dimension, in order to determine the extent of its effect on High-Performance Work Systems, as shown in the following equation:

$$Y = \beta_0 + \beta \text{ xx3} + e \dots\dots\dots 3$$

Where:

(Y) Dependent variable, which is High-Performance Work Systems.

(xx3) Independent variable, which is the communication capabilities dimension.

(β) Regression coefficient, representing the change in the dependent variable when the independent variable increases or decreases by one unit.

(β0) Constant coefficient, representing the value of the dependent variable when the independent variable is zero.

(e) Standard error.

Table (17) presents the results of the effect analysis.

Table (17): The Effect of the Communication Capabilities Dimension on High-Performance Work Systems

Dimensions	(R ²)	(Adjusted R ²)	(F)	(Sig.)
Communication Capabilities	0.578	0.576	346.340	0.000
	Constant Coefficient (β0)	Regression Coefficient (β)	(T)	(Sig.)
	0.834	0.773	18.610	0.000

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (17) that the validity of the regression model is confirmed by the F-value of (346.340) at a significance level of less than 5%, indicating the possibility of estimating the value of High-Performance Work Systems through the communication capabilities dimension. Meanwhile, the T-value of (18.610) at a significance level of less than 5% indicates a significant effect, and the positive beta (β) coefficient of (0.773) indicates that the effect is positive. This means that the communication capabilities dimension positively influences High-Performance Work Systems by enhancing the availability of these systems at the University of Tikrit under study.

Furthermore, the coefficient of determination (R²) of (0.578) indicates that the communication capabilities dimension explains 57.8% of the variations in High-Performance Work Systems, while the remaining 42.2% is attributable to other factors not included in the current model. Based on the above, the third sub-hypothesis is accepted, and the regression equation can be represented according to the results as follows:

$$Y = 0.834 + 0.773 \text{ xx3} \dots\dots\dots 3$$

(H2.4) Fourth Sub-Hypothesis: There is a statistically significant effect of creative capabilities on High-Performance Work Systems.

To test this hypothesis, a simple linear regression equation was prepared to estimate the value of High-Performance Work Systems through the creative capabilities dimension, in order to determine the extent of its effect on High-Performance Work Systems, as shown in the following equation:

$$Y = \beta_0 + \beta \text{ xx4} + e \dots\dots\dots 4$$

Where:

(Y) Dependent variable, which is High-Performance Work Systems.

(xx4) Independent variable, which is the creative capabilities dimension.

(β) Regression coefficient, representing the change in the dependent variable when the independent variable increases or decreases by one unit.

(β0) Constant coefficient, representing the value of the dependent variable when the independent variable

is zero.

(e) Standard error.

Table (18) presents the results of the effect analysis.

Table (18): The Effect of the Creative Capabilities Dimension on High-Performance Work Systems

Dimensions	(R ²)	(Adjusted R ²)	(F)	(Sig.)
Creative Capabilities	0.563	0.562	326.336	0.000
	Constant Coefficient (β ₀)	Regression Coefficient (β)	(T)	(Sig.)
	1.135	0.699	18.065	0.000

Source: The table was prepared by the researcher based on the (SPSS) program.

It is observed from Table (18) that the validity of the regression model is confirmed by the F-value of (326.336) at a significance level of less than 5%, indicating the possibility of estimating the value of High-Performance Work Systems through the creative capabilities dimension. Meanwhile, the T-value of (18.065) at a significance level of less than 5% indicates a significant effect, and the positive beta (β) coefficient of (0.699) indicates that the effect is positive. This means that the creative capabilities dimension positively influences High-Performance Work Systems by enhancing the availability of these systems at the University of Tikrit under study.

Furthermore, the coefficient of determination (R²) of (0.563) indicates that the creative capabilities dimension explains 56.3% of the variations in High-Performance Work Systems, while the remaining 43.7% is attributable to other factors not included in the current model. Based on the above, the fourth sub-hypothesis is accepted, and based on the results of the sub-hypotheses, the second main hypothesis can be considered accepted. The regression equation can be represented according to the results as follows:

$$Y = 1.135 + 0.699 \text{ xx4} \dots\dots 4$$

Fifth: Testing the Variance of Effect Hypothesis

This section includes one main hypothesis as follows:

(H3) Third Main Hypothesis: The effect of the cognitive capabilities dimensions on High-Performance Work Systems at the studied university varies.

To test this hypothesis, a multiple linear regression equation was prepared using the Backward Regression method, for the purpose of examining the variance in the effects of the cognitive capabilities dimensions (A. Learning Capabilities, B. Cultural Capabilities, C. Communication Capabilities, D. Creative Capabilities), as shown in the following equation:

$$Y = \beta_0 + \beta_1 \text{ xx1} + \beta_2 \text{ xx2} + \beta_3 \text{ xx3} + \beta_4 \text{ xx4} + e \dots\dots 5$$

Where:

(Y) Dependent variable, which is High-Performance Work Systems.

(xx1) Independent variable, which is the learning capabilities dimension.

(xx2) Independent variable, which is the cultural capabilities dimension.

(xx3) Independent variable, which is the communication capabilities dimension.

(xx4) Independent variable, which is the creative capabilities dimension.

(β) Regression coefficient, representing the change in the dependent variable when the independent variable increases or decreases by one unit.

(β₀) Constant coefficient, representing the value of the dependent variable when the independent variable is zero.

(e) Standard error.

Table (19) presents the results of the effect analysis.

Table (19): Variance in the Effect of Cognitive Capabilities Dimensions on High-Performance Work Systems

Dimensions	(R ²)	(Adjusted R ²)	(F)	(Sig.)
		0.650	0.646	155.198
	Constant Coefficient (β ₀)	Regression Coefficient (β)	(T)	(Sig.)
Cultural Capabilities	0.406	0.164	2.478	0.014
Communication Capabilities		0.382	5.670	0.000
Creative Capabilities		0.331	5.678	0.000

Source: The table was prepared by the researcher based on the (SPSS) program.

Table (19) presents the results of the Backward Regression equation, which resulted in two models, with the last one shown in this table. In the Backward Regression method, independent variables that are not statistically significant are excluded from the regression model, and the process is repeated until the best model is reached, including only the variables that have a significant effect on the dependent variable.

According to the second model in the current test, it is observed from the table that the dimensions (B. Cultural Capabilities, C. Communication Capabilities, D. Creative Capabilities) within the cognitive capabilities variable were statistically significant in their effect, and therefore appeared in the second (final) model of this test. Meanwhile, the dimension (A. Learning Capabilities) was excluded from this regression equation due to its non-significant effect on High-Performance Work Systems. The summary of the analysis results is as follows:

1. The validity of the regression model is confirmed by the F-value of (155.198) at a significance level of less than 5%, indicating the possibility of estimating the value of High-Performance Work Systems through three dimensions of the cognitive capabilities variable: (B. Cultural Capabilities, C. Communication Capabilities, D. Creative Capabilities).
2. The T-values for the three dimensions (B. Cultural Capabilities, C. Communication Capabilities, D. Creative Capabilities) at a significance level of less than 5% indicate that these dimensions have a statistically significant effect on High-Performance Work Systems.
3. The positive beta (β) coefficients for the three dimensions indicate that their effect on High-Performance Work Systems is positive. This means that the availability of these three dimensions

among administrative leaders at the University of Tikrit will positively influence the enhancement and consolidation of High-Performance Work Systems at the university. It is also noted that the beta coefficients vary among these dimensions: the C. Communication Capabilities dimension has the strongest effect with a β value of (0.382), followed by D. Creative Capabilities with a β value of (0.331), and finally B. Cultural Capabilities with the lowest effect at a β value of (0.164). Meanwhile, A. Learning Capabilities did not appear as a significant predictor in the model due to the non-significance of its effect. These results indicate that there is variance and disparity in the level of effect of the cognitive capabilities dimensions on High-Performance Work Systems at the University of Tikrit under study.

4. The adjusted coefficient of determination (Adjusted R²) of (0.646) indicates that the three dimensions explain 64.6% of the variations in High-Performance Work Systems, while the remaining 35.4% is attributable to other factors not included in the current model. Based on the above, the third main sub-hypothesis is accepted, and the regression equation can be represented according to the results as follows:

5. $Y = 0.406 + 0.164 xx2 + 0.382 xx3 + 0.331 xx4 \dots\dots\dots 5$

Table (20) presents the results of the study’s hypothesis tests.

Table (20): Results of the Study’s Hypothesis Tests

S	Hypothesis	Result
.(H1)	Main Hypothesis 1: There is a statistically significant correlation between Cognitive Capabilities and High-Performance Work Systems at the studied university.	Accepted
.(H2)	Main Hypothesis 2: Cognitive Capabilities have a statistically significant effect on High-Performance Work Systems at the studied university.	Accepted
.(H3)	Main Hypothesis 3: The effects of the dimensions of Cognitive Capabilities on High-Performance Work Systems vary at the studied university.	Accepted

Source: The table was prepared by the researcher.

Chapter Four: Conclusions and Recommendations

First: Conclusions

1. The results of the descriptive analysis showed that the study variables (Cognitive Capabilities and High-Performance Work Systems) are highly available among administrative leaders at the University of Tikrit, according to the high mean values.
2. The dimension “Learning Capabilities” ranked highest among the dimensions of Cognitive Capabilities in terms of availability, indicating individuals’ awareness of the importance of continuous learning in improving performance.

3. The dimension “Comprehensive Training” emerged as the most available among the six dimensions of High-Performance Work Systems, reflecting the university’s commitment to developing employees’ skills.
4. Correlation tests revealed that all dimensions of Cognitive Capabilities are positively and significantly correlated with High-Performance Work Systems, supporting the theoretical hypotheses of the study.
5. Effect tests indicated that “Communication Capabilities” have the greatest influence in activating High-Performance Work Systems compared to the other dimensions.
6. Multiple regression results showed that “Learning Capabilities” did not have a significant effect in the final model, despite its apparent influence in the simple analysis, suggesting potential overlap with other dimensions.
7. The study revealed a good level of consistency in the responses of the sample, which enhances the reliability of the derived results.

Second: Recommendations

1. Efforts should be made to strengthen institutional communication channels within the university to ensure smooth information exchange and guidance.

Implementation Mechanism: Organize training workshops on formal and informal communication skills, and activate periodic bulletins and interactive meetings.

2. It is necessary to consolidate an organizational culture that promotes respect for diversity and enhances understanding among employees from different backgrounds.

Implementation Mechanism: Launch awareness programs and monthly dialogue seminars focused on shared values and methods of interaction among different teams.

3. Encourage institutional innovation by creating a stimulating environment for generating ideas and adopting developmental proposals.

Implementation Mechanism: Establish a specialized innovation unit within the university to enable proposal submission and follow-up implementation according to practical models.

4. Develop institutional learning programs to align with the requirements of contemporary academic and administrative performance.

Implementation Mechanism: Conduct a comprehensive analysis of training needs and develop applied educational curricula aimed at achieving actual performance outcomes.

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