

Transformation leadership for presidents of the scientific departments and its relationship with organizational performance

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ABSTRACT

The present research aims to identify the level of transformational leadership among the heads of scientific departments in the College of Education Ibn al-Haytham and its relationship to the college organizational performance. The research population was selected from the faculty members, numbering 458 members, from which a random sample consisting of (100) members was selected. The study required the use of two research tools: transformational leadership scale and organizational performance scale. The researchers adopted the scale developed by (Al-Talbani et al., 2013) to measure the dimensions of transformational leadership. Modifications were made to the scale after presenting it to experts so that it is more appropriate to the study sample and objectives. Then, the validity and reliability were calculated. The transformational leadership scale consisted of 26 items distributed over the following dimensions: charismatic ideal influence, inspirational motivation, intellectual stimulation, and individual considerations. The answer was on a five-point Likert scale (strongly agree - agree - neutral - disagree - strongly disagree), taking the grades (1-2-3-4-5), respectively. The researchers prepared an organizational performance scale consisting of 20 items distributed over the following dimensions: financial dimension, customer dimension, dimension of the institution's internal operations, and learning and growth dimension. The answer was on a Likert scale (strongly agree - agree - neutral - disagree - strongly disagree) taking the degrees (1-2-3-4-5), respectively. The validity and reliability indicators of the scale were verified. The study concluded that the heads of scientific departments in the College of Education Ibn al-Haytham possess a good level of transformational leadership and that the college has good organizational performance. Moreover, there is a positive and statistically significant correlation between transformational leadership among heads of scientific departments and organizational performance. Based on the results of the present research, the researcher reached conclusions, recommendations, and suggestions.

Keywords: transformational leadership, organizational performance

Research problem:

One of the most prominent factors that may cause the failure of educational institutions is the weakness of leadership in terms of its administrative and organizational empowerment. A new and advanced approach is needed in managing the institution, such as the transformation from formal leadership to wise leadership that enjoys a strategic vision in anticipating the future and

possesses a distinctive type of motivational patterns that guide others and inspire them to achieve the goals that contribute to its success (Al-Anzi, 2015, p. 404). Since the scientific department is the basic unit of the educational institution and most decisions are taken through it, their success and achievement of their goals depend on the capabilities of the head of the department and his/her role and leadership that transfers the department from stagnation to dynamism and growth. The administrative and academic work in scientific departments needs leadership that can draw a clear vision for the department and develop special strategies and procedures to develop it and improve its performance in a way that reflects positively on the development of the educational process and enables the department to compete with its counterparts. Thus, the availability of a transformational leadership pattern in the management of scientific departments contributes greatly to developing the college's overall performance. In addition, previous studies failed to identify the relationship between transformational leadership and organizational performance. Through the above, the research problem lies in the following question: is there a relationship between transformational leadership among heads of scientific departments in the College of Education Ibn al-Haytham and the college's organizational performance.

Significance of the research

A scientific department in the educational institution is an administrative, organizational, and scientific unit that is responsible for disseminating, developing, and applying knowledge through teaching, scientific research, and community service. Through scientific departments, the college succeeds in fulfilling its mission and achieving its goals. Moreover, the reputation of the college depends on the reputation of its departments while the strength and solidity of the departments is based on their leadership (Al-Asadi et al., 1997, p. 243). Therefore, leadership represents an important axis in the administrative process, as the results of performance at the individual, group, and organizational levels is greatly affected by the dimensions of this leadership. It is a process of suggestion, inspiration, or influence on others to make them work with high commitment and perseverance to accomplish and perform the tasks required of them (Al-Amiri and Al-Ghalbi, 2008, p. 456).

Transformational leadership is one of the modern trends in leadership. It is a suggestive leadership that works to influence subordinates to do the best possible efforts for the benefit of the organization to improve performance. It is also a leadership that can bring about change and achieve creativity by organizing the needs and interests of subordinates and helping them



use new methods to solve problems and encouraging them to discuss the current situation. Transformational leadership creates significant change at the level of subordinates and the organization in addition to its ability to lead change in the organization's mission, strategies, structure, and culture (Previous source, p. 479). Organizational performance is the result of all interactions that take place in the organization and the sum of the performance of all departments in the organization (Stankard, 2002). It is also the optimal use of all the organization's resources in a way that enables it to compete and face external challenges (Baum and Rowley, 2005, p22). Measuring the level of organizational performance is the main axis of the success or failure of the institution and determining its position and capabilities compared to other institutions. The high performance of the institution can be achieved through its ability to manage its internal capabilities to adapt and adjust to the surrounding environmental variables. It represents the indicator for estimating the success of the institution's decisions, plans, and strategies (Jassim, 2019, p. 515).

Particularly, the importance of the research is evident in the following:

- 1- Enriching libraries, scientific research centers, and institutions interested in theoretical sources that may fill a scientific gap in the research variables and may open a scope for new research, in addition to being one of the few and rare studies in this field in Iraq to the best of the researchers' knowledge.
- 2- This research derives its importance from the fact that it will fill an important gap in previous studies, which indicated the absence of a study linking the variables of this research: transformational leadership and organizational performance.
- 3- The current research provides tools to measure the research variables (transformational leadership and organizational performance) that may be used by other researchers for the same variables.

Research objectives:

The study aims to identify: -

- 1- The level of transformational leadership among the heads of scientific departments in the College of Education Ibn al-Haytham.
- 2- The level of the college organizational performance.

3- The strength and direction of the correlation between transformational leadership among the heads of scientific departments and the college's organizational performance.

Research limits:

The current research is limited to the faculty members of the scientific departments in the College of Education Ibn al-Haytham for the academic year 2023-2024.

Definition of terms:

i. Transformational leadership:

Al-Qabli and Al-Omrani (1438 AH) defined Transformational leadership as a style of leadership in which the leader interacts with subordinates by forming a common vision, increasing motivation, persuasion, excitement, working in a team spirit, and developing capabilities and skills to reach a high level of desired goals (Al-Qabli and Al-Omrani, 1438, p. 12).

According to Al-Hawari (1996), it is a leadership that seeks to raise the level of subordinates for the sake of achievement and self-development and work on developing groups and the organization as a whole (qtd. in Kawash et. al, 2020, p. 405)

(Avolio & Bass, 1990) define TL as a style of leadership that occurs when leaders work to increase interest and promote the interests of subordinates and generate more interest, awareness and acceptance of the purpose and message of the organization by subordinates. They defined it with four dimensions: charismatic attraction, inspirational motivation, intellectual stimulation, and individual consideration (Avolio & Bass, 1990).

Theoretical definition: The present study adopted the definition of Bass & Avolio as a theoretical definition of transformational leadership

Operational definition: TL is the total score obtained by the research sample members (faculty members) on the transformational leadership scale that was modified and adopted to achieve the objectives of the present research.

ii. Organizational performance:

OP is defined by Al-Qaryouti (2003) as the ability of the organization to achieve long and short-term goals that reflect the balance of power in favor of the parties involved in the organization. (Al-Qaryouti, 2003, p. 104)



According to Al-Anzi (2013), it means the integration of the organization and human resources that leads to the smoothness and efficiency of operations or the quality of internal operations (Al-Anzi, 2013, p. 79)

In Al Sayyad and Al Sanbani (2024) view, OP is an integrated system of activities carried out by the organization with the aim of achieving its organizational goals, by achieving customer satisfaction, improving infrastructure, and developing and enhancing the skills of human cadres (Al-Sayyad and Al-Sanbani, 2024, p. 642).

Theoretical definition: The researchers adopted Al-Anzi (2013)'s definition as a theoretical definition of organizational performance in the present study.

Operational definition: It is measured by the points obtained by the research sample members (faculty members) on the items of the organizational performance scale prepared to achieve the research objectives.

Theoretical background and previous studies

First: Theoretical background:

1. Transformational leadership:

A. The concept of transformational leadership:

This term specifically appeared in 1978, so it is a relatively modern concept by (Burns) in his book *Leadership*. It is considered one of the modern and contemporary approaches in the field of leadership, and it is a type of normative leadership, meaning that it does not describe how leaders actually behave, but how they should behave. (Burns) believes that leaders must work more for the desires and needs of individuals. Therefore, this leadership must move beyond the desires and needs of individuals by caring about their true values (Al-Maghribi, 2018, p. 196). Transformational leadership behavior stems from the leader's values, personal beliefs, and influential ideas, not from exchanging benefits with subordinates. The transformational leader seeks to bring about real and positive changes in the employees' ideas, methods, and ways of performing their tasks, urging them to recognize the importance of those tasks, and creating a sense of loyalty and belonging to the organization. This prompts them to prefer and put its public interest ahead of their personal interests (Qandeel, 2010, p. 61).

B. Transformational Leadership Goals:

- Caring for the individual by developing their performance and improving their skills by setting objective standards to measure their performance.
- Emphasizing teamwork and working as a team, which motivates individuals to be creative and innovative.
- Applying the principles of democracy by involving others in decision-making, bearing responsibility, and delegating part of their powers.
- Encouraging innovation by submitting proposals and implementing new ideas by employees and making efforts to achieve the mission and goals of the institution.
- Empowering individuals by providing all the necessary capabilities to achieve the institution's goals.
- Understanding the individual differences among employees and working to meet their needs (Hamdan, 2020, p. 39) .

C- Behavioral characteristics of transformational leadership

- 1- Dealing with complex problems and situations and finding solutions with new ideas, methods, and techniques.
- 2- Confronting problems courageously, revealing facts to subordinates, and acting rationally in managing affairs.
- 3- Believing in the vision and mission of the institution, understanding it, and communicating it to subordinates in a way that enables them to believe in it.
- 4- Appreciating others and recognizing their capabilities and participating in decisions.
- 5- Influential presence that provides opportunities for change and development.
- 6- Understanding the needs of subordinates and working to develop them and prepare them to be future leaders.
- 7- High self-confidence and striving to achieve self-realization and motivating employees for the same (Houriya and Ali, 2019, p. 225).

D- Dimensions of transformational leadership

- Ideal influence: The leader's ability to demonstrate extraordinary skills and resort to risk so that followers create loyalty, dedication, and a sense of common purpose.

- Inspirational motivation: The leader's ability to communicate high performance expectations to others and use symbols to direct efforts and express important goals in simple ways, i.e. accomplishing many tasks by increasing the effort expended.
- Intellectual stimulation: Stimulating employees to think in new ways to solve problems and use logical thinking before taking any action or behavior, as the intellectual behavioral effect is represented by the satisfaction that transformational leadership creates. This effect continues when the leadership effect ends, to stimulate motives and direct them towards disciplined behavior by increasing mental awareness and mental perception towards work.
- Individual considerations: The leaders' personal interest in their subordinates, responding to them, and distributing tasks to them based on their needs and abilities, and working to train and guide them to achieve further growth and development (Avolio, 2003, p. 76)

2. Organizational performance:

A. The concept of organizational performance:

Organizational performance is an important and essential concept for industrial and production institutions in general and educational institutions in particular, as they provide society with human resources in various scientific and human specializations. Organizational performance represents a central axis for improving the success of the institution's decisions, plans, and strategies, in addition to being the most important dimension for various institutions around which the existence of the institution revolves. The effective performance of the organization can be achieved through its ability to manage its internal capabilities to adapt and adjust to the surrounding environmental variables (Jassim et al., 2019, p. 517). It is a reflection of how the organization uses its financial and human resources and invests them in a way that enables it to achieve its goals (Wright, 1997) and the result of all the operations carried out by the organization. Any defect in any of them must be reflected in the performance, which is the mirror of the organization (Daft, 1992, p. 43). Hence, it is an appropriate allocation of human, financial, and information resources with the presence of an effective tool capable of setting strategies in a clear manner known to all (Koher, 2003, p. 23)

B. Dimensions of organizational performance:

1- The financial dimension: Many researchers and scholars in the administrative field agree that financial performance is the basic criterion that determines the success or failure of an organizations. Some even consider it the most important goal of the organization; the method

used to measure financial performance is the analysis of financial ratios, which is a criterion used to determine the strength of financial performance and overall performance.

2- Customer dimension: It is related to the extent of the institution's ability to meet the requirements and needs of customers for administrative services, as it is represented by the satisfaction of employees and their loyalty to the institution.

3- The dimension of the institution's internal operations: It is represented by all the internal operations and activities that distinguish the institution from other institutions, through which it meets the needs of customers and the goals and objectives of the leaders of this institution.

4- Learning and growth dimension: This dimension reflects the institution's ability to develop and renew in the long term. In light of the current developments, the institution's survival and continuity have become dependent on its ability to innovate and develop by possessing human energies that have a permanent readiness and ability to innovate. Within this dimension, the capabilities that must grow in the institution are determined in order to achieve high-level internal operations (Faeq and Al-Mushrif, 2018, p. 128)

Second: Previous studies:

(Al-Faqih 2006) studied the degree of practicing transformational leadership behavior by education directors in the Kingdom of Saudi Arabia. The study also examined the degree of organizational effectiveness of education departments from the perspective of consistent values and the relationship between the degree of practice of transformational leadership behavior by education directors and the degree of organizational effectiveness of education departments. The researcher used the descriptive analytical approach and the study reached several results, including that education directors in the Kingdom of Saudi Arabia practice transformational leadership behavior to an average degree. It also found that the self-efficacy of education departments from organizers of competing values reached an average degree. The study also confirmed the existence of a relationship between the practice of transformational leadership behavior by education directors and the degree of organizational effectiveness of education departments (Al-Faqih, 2006).

(Jack, 2007) reviewed the prevailing leadership style in industrial companies in the United States of America and the nature of the relationship between the leadership style followed and a group of organizational results. The results included satisfaction with the leader, the desire of subordinates to make an additional effort, and the subordinates' awareness of the effectiveness of the leader. The study sample was a group of industrial clothing companies in the United

States. The study came out with many results, including that the prevailing leadership style is the transformational leadership style. It also concluded that there is a strong correlation between the transformational leadership style and the variables of organizational results that the study identified, which is stronger than the relationship between the exchange or lax style and the specific group of organizational results.

(Al-Talbani et al., 2013) aimed to identify the relationship between transformational leadership and its four dimensions (ideal influence, inspirational motivation, intellectual motivation, individual considerations) and empowerment of workers in Palestinian universities in Gaza Strip. The researchers used the descriptive analytical research method, and the research community was selected from workers in the Gaza Strip, where the questionnaire was used as a tool for collecting data. 660 questionnaires were distributed to administrative academics. The results of the study concluded that the elements of empowerment and areas of transformational leadership (ideal influence, inspirational motivation, intellectual motivation, individual considerations) are available in Palestinian universities. Moreover, there is a positive correlation between transformational leadership and administrative empowerment. The researchers came up with a number of recommendations and proposals, the most important of which were increasing attention to the personal and scientific needs of workers and encouraging managers and officials to increase delegation and empowerment (Al-Talbani et al., 2013, p. 733).

(Barqan, 3013) aimed to identify the use of transformational leadership skills by department heads in two Saudi public and private universities in managing their departments from the point of view of faculty members, relying on the descriptive analytical approach. The study data was collected based on a special questionnaire that included 93 respondents. The study concluded that there is a high degree of transformational leadership among heads of the departments (Barqan, 2013, p. 10).

(Abbas and Haider, 2015) examined the extent of the availability of transformational leadership skills among the heads of departments of the colleges of the University of Baghdad from the point of view of the lecturers. The study aimed to build a scale for transformational leadership skills and determine the degree of practice of transformational leadership skills by HODs from the perspective of the lecturers. The study sample amounted to 300 lecturers who were selected randomly. The scale consisted of five areas: transformational discourse of the head, cooperative teamwork, modifying behavior with values, extracting the tasks of the shared vision, and

understanding and apology. The number of its items was 25. The results of the study were the availability of transformational leadership skills in favor of females (Abbas and Haider, 2015, p. 415).

(Kawash et al., 2020) aimed to identify the degree of availability of transformational leadership among HODs at Mohamed Seddik Ben Yahia University from perspective of faculty members. The study also aimed to identify any difference in the degree of transformational leadership availability that can be attributed to the HODs' personal and professional characteristics. Data was collected from 144 faculty members based on a special form. The study concluded that transformational leadership was available at an average level for the dimensions of inspirational motivation, ideal influence, intellectual stimulation, and individual considerations. There were no statistically significant differences in the degree of availability of transformational leadership attributed to personal characteristics, but there were significant differences attributed to the seniority variable (Kawash et al., 2020, p. 395).

Al-Ghamdi and Al-Zahrani (2021) aimed to study the relationship between administrative empowerment and organizational performance through an applied study on the Saudi Telecom Company. The researchers used the descriptive analytical approach, and the tool was a questionnaire that was applied to a sample of (240) employees in the company. The results of the study showed a strong positive relationship between administrative empowerment and organizational performance, with a greater impact of empowerment dimensions such as information and responsibility on organizational performance (Al-Ghamdi and Al-Zahrani, 2021, p. 23).

(Al-Muawi, 2022) studied the impact of change management on organizational performance at Bisha University. The study aimed to know the concept of change management, its importance, and its most important dimensions and to identify the reality of change at Bisha University, the opinions of employees about change, and its impact on organizational performance. The descriptive analytical approach was used and the questionnaire was used as a tool for collecting data, and the sample amounted to 105 employees at Bisha University. The results revealed that there was agreement among the study individuals on the opinions of employees regarding change management and organizational performance and the existence of a statistically significant direct relationship between change management and organizational performance at Bisha University (Al-Muawi, 2022, p. 206).

Previous studies were used to examine the theoretical literature on the concepts of transformational leadership and organizational performance and to choose the appropriate approach for the study, as most studies agreed on using the descriptive approach. The studies also contributed to the researchers' ability to prepare the study tools, determine the dimensions of the research variables, and identify the statistical treatments, but the current study differed from previous studies in finding a correlation between transformational leadership and organizational performance. In previous studies, transformational leadership was linked as an independent variable to other variables, such as administrative empowerment, and organizational performance was linked as a dependent variable to other variables, such as administrative empowerment and change management, except in Jack's study and Al-Faqih's study. The two studies dealt with the relationship between transformational leadership and organizational effectiveness and some organizational results, which is somewhat close to the current study that adopted the relationship between transformational leadership and organizational performance.

Research Methodology and Procedures

i. Research methodology:

The present study adopted the descriptive research method as it is the most appropriate method for studying the correlations between variables and revealing the differences between them. This is because the descriptive method is one of the scientific research methods that depends on studying reality or the phenomenon as it is in reality and is concerned with describing it accurately and expressing it quantitatively and qualitatively. The qualitative expression describes the phenomenon and clarifies its characteristics, while the quantitative expression gives us a numerical description to clarify the amount or size of this phenomenon and the degrees of its association with other phenomena (Obeidat et. al, 1996, p. 289).

ii. Research population:

The research population refers to all the components or units of the phenomenon under research, to which the researcher seeks to generalize the results related to the problem (Al-Naimi et. al, 2015, p. 77). The study population is represented by the faculty members in the College of Education Ibn al-Haytham, whose number reached (457) members.

i. Research sample:

The sample means a part of the population on which the study of any social or educational phenomenon or problem is conducted, and through which we can reach the information we are



trying to identify, due to the impossibility of studying the phenomenon for the entire population (Al-Tabib, 1999, p. 227). A random sample was chosen from the research population, consisting of (100) members.

ii. Research tools:

The measurement tool is an organized tool for measuring the phenomenon being measured and expressing it in numerical data (Abu Jado, 2013, p. 398). To achieve the research objectives, two tools had to be available to measure the research variables (transformational leadership, organizational performance).

A: Transformational leadership scale:

The researchers adopted the scale developed by (Al-Talbani et al., 2013)

1- Theoretical definition and areas of transformational leadership:

The researchers adopted the definition in (Avolio & Bass, 1990) as a theoretical definition. They defined transformational leadership with four dimensions: ideal influence (charismatic), inspirational motivation, intellectual stimulation, and individual considerations.

2- Items of the transformational leadership scale:

The scale consists of (26) items with five alternatives for the answer (strongly agree - agree - neutral - disagree - strongly disagree) by giving a score of (5 - 4 - 3 - 2 - 1) respectively, as the highest score for the scale was (130) and the lowest was (26) with a hypothetical average of (78), distributed over the following areas:

A- Ideal influence (charisma): The number of its items reached (7 items) taking the sequence of items in the scale (1-7)

B- Inspirational motivation: The number of its items reached (7 items) taking the sequence of items in the scale (8-14)

C- Intellectual stimulation: The number of its items reached (5 items) taking the sequence of items in the scale (15-19)

D- Individual considerations: The number of its items reached (7 items) taking the sequence of items in the scale (20-26)

3- Verifying the validity of the items:

The validity of the items is a basic condition of the measurement tools in measuring the phenomenon being measured, as the validity of the test means that it measures what it was designed for, i.e. the validity of the test to measure a specific goal or aspect (Abu Jado, 2013: 399). Therefore, the dimensions and items of the scale and the response alternatives of the five-point Likert method were presented to a group of specialists in educational and psychological sciences, measurement, and evaluation, numbering (16) experts. In light of their observations and opinions, some items were modified and all items were kept in the scale.

4- Exploratory experiment (clarity of instructions, items, and time required):

The scale requires, before applying it to the main research sample, to be applied to a small sample of the research community that is similar in its characteristics to the main research sample. The aim is to determine the extent of clarity of the instructions, items, and time required. Therefore, the researchers applied the scale to (15) faculty members from the college departments who were chosen intentionally. After the exploratory application, it was clear that the instructions and items were clear and that the time required to answer was 35 minutes.

5- Psychometric properties of the transformational leadership scale:

i. Validity:

- Face validity: The term face validity is used to indicate the extent to which the test appears to include items that are related to the variable being measured, and that the content of the test is consistent with the purpose (Anstasi & Urbina, 1997. 148). This type of validity was achieved in the transformational leadership scale when the scale was presented in its initial form to a group of experts in educational and psychological sciences, measurement, and evaluation, who agreed on the validity of the scale to measure what it was designed for, and their number reached (16) experts.

ii. Reliability:

Reliability has a special importance in testing and using a test for a specific purpose, as it indicates the degree of confidence that we can place in the results of our tests. The main goal of testing individuals is to reach trusted judgments and decisions related to them. Therefore, these judgments must be based on accurate and reliable tools in their measurement (Awda, 1998: 215). Hence, reliability was calculated using the Alpha-Cronbach equation. The reliability coefficient for the transformational leadership scale with this equation reached (0.82), which is a good and reliable indicator of reliability.

B: Organizational performance scale:

To achieve the research objectives, the availability of an organizational performance tool was required. In the absence of a tool that was compatible with the research objectives, the researchers constructed an organizational performance scale according to the following steps:

1. Defining the concept and dimensions of organizational performance:

After reviewing the theoretical literature and previous studies that addressed the concept of organizational performance, the definition of Al-Sayyad and Al-Sanbani (2024) was adopted. Through the definition and previous studies, the researchers relied on four dimensions in constructing the organizational performance scale: the financial dimension, the customer dimension, the dimension of the institution's internal operations, and the dimension of learning and growth.

2- Formulating items for the organizational performance scale:

The scale in its initial form consisted of (20) items, divided into four dimensions: the financial dimension, measured by statements (1-5); the customer dimension, measured by items (6-10); the dimension of the institution's internal operations, measured by items (11-15); the learning and growth dimension, measured by items (16-20). The responses were calculated on a five-point scale according to the Likert scale. The scale includes items that are all in the positive direction, and a high score indicates a high level of organizational performance.

3- Verifying the validity of the items:

The validity of the items is a basic condition of the measurement tools in measuring the phenomenon being measured, as the validity of the test means that it measures what it was designed for, i.e. the validity of the test to measure a specific goal or aspect (Abu Jado, 2013: 399). Therefore, the scopes and items of the scale and the response alternatives were presented to a group of specialists in educational and psychological sciences, measurement, evaluation, and educational administration, numbering (16) experts. In light of their observations and opinions, some items were modified and all items in the scale were kept.

4- Exploratory experiment (clarity of instructions, items, and time required):

The scale requires, before applying it to the main research sample, to be applied to a small sample of the research population that is similar in its characteristics to the main research sample. The aim is to determine the extent of clarity of the instructions and items and the time

required. Therefore, the researchers applied the scale to (20) faculty members from the college departments. After the exploratory application, it became clear that the instructions and items were clear and that the time required to answer was 35 minutes.

4- Statistical analysis of the items of the organizational performance scale:

The aim of the analysis of the items is to keep the items that reveal the accuracy in measuring what they were created for (Ebel, 1972: 392). Therefore, the discriminating power of the items and the correlation of the item score with the total score of the field to which it belongs and the degree of correlation of the field score with the total score of the scale were verified.

i. The discriminating power of the items:

The discriminating power and its validity coefficients are among the most important psychometric characteristics that should be verified in the items of the organizational performance scale. Therefore, the researchers decided to verify the discriminating power of the items and their validity coefficients on the research sample of (100) members who were chosen randomly. As shown in Table (1), they were verified using the method of the two extreme groups. The answers were corrected, then the total score for each form was calculated. The forms were arranged in descending order according to the total score. Then the two extreme groups were determined based on a percentage of (50%) for each group due to the small sample size. Thus, the number of individuals in each group became (50) members. After applying the t-test for two independent samples to determine the significance of the difference between the two extreme groups in the scores of each item of the scale, it became clear that the calculated t-values for all items are greater than the tabular t-value, which is (1.980) at a degree of freedom (98) and a significance level of (0.05), as shown in Table (1).

Table 1: Discriminatory power coefficients for the items of the organizational performance scale

Item sequen ce	Top Group		Lower group		Calculat ed T- value	Significan ce level
	Arithme tic mean	Standar d deviati on	Arithme tic mean	Standar d deviati on		
1	4.44	0.675	2.96	1.068	8.282	Significan t
2	4.54	0.542	3.08	1.175	7,976	Significan t
3	4.32	0.819	2.88	1.100	7,452	Significan t

4	4.40	0.756	2.62	0.987	10,121	Significant
5	4.62	0.530	3.20	1.069	8,414	Significant
6	4.44	0.611	3.00	1.178	7,672	Significant
7	4.34	0.722	3.04	0.880	7,979	Significant
8	4.40	0.782	2.80	1.069	8,540	Significant
9	4.28	0.730	2.76	1.061	8,349	Significant
10	4.38	0.697	2.86	0.990	8,879	Significant
11	4.50	0.580	3.10	1.249	7,186	Significant
12	4.28	0.671	2.64	0.898	10,343	Significant
13	4.46	0.579	2.86	1.178	10,343	Significant
14	4.54	0.542	2.46	1.092	2,038	Significant
15	4.44	0.733	2.84	1.149	8,300	Significant
16	4.48	0.614	2.42	1.012	7,145	Significant
17	4.46	0.706	2.92	1.085	8,413	Significant
18	4.28	0.730	2.74	0.899	9,404	Significant
19	4.36	0.693	2.40	1.050	11,019	Significant
20	4,40	0.760	3.36	1.064	5,847	Significant

ii. Validity of the items:

A- Correlation of the item score with the total score of the dimension:

This method is one of the most widely used methods in analyzing items for psychological and educational scales, due to its ability to determine the extent of homogeneity of the scale items in measuring the behavioral phenomenon (Lindquist, 1988, p. 286). This procedure is complementary to the discriminatory power and is determined by calculating the correlation between the item scores and the total score of the scale. The higher and more positive the

correlation, the more likely it is to obtain more homogeneous items in measuring what they were designed for (Al-Nabhan, 2004, p. 296). To achieve this, the researchers relied on sample forms and the correlation coefficient was calculated using the Pearson method between the sample scores on each item and their scores on each dimension of the organizational performance scale. Accordingly, the results showed that all correlation coefficients are statistically significant when compared to the critical value of the correlation coefficient of (0.189) at a significance level of (0.05) and a degree of freedom of (99). This is illustrated in Table (2):

Table 2: Correlation coefficients between the score of each item and the score of the dimension to which it belongs in the organizational performance scale

T	First dimension correlation coefficient	T	Second dimension correlation coefficient	T	Third Dimension Correlation Coefficient	T	Fourth Dimension Correlation Coefficient
1	0,632	6	0,652	11	0,547	16	0,633
2	0,572	7	0,663	12	0,454	17	0,526
3	0,623	8	0,510	13	0,527	18	0,344
4	0,580	9	0,434	14	0,734	19	0,621
5	0,612	10	0,374	15	0,387	20	0,525

B- The relationship between the domain score and the total score of the organizational performance scale:

Pearson's correlation coefficient was used to calculate the relationship between the dimensions of organizational performance and the total score of the scale for a sample of faculty members and to know the scores of each dimension and the total score of each respondent on the scale. After obtaining the results and comparing the calculated correlation coefficients with the critical value of the correlation coefficient, it became clear that all the domain items were significant at a significance level of (0.05) and a degree of freedom of (99) compared to the critical value of (0.098). Table (3) shows this.

Table 3: The relationship between the degree of dimensions and the total degree of the organizational performance scale

Dimensions	Correlation coefficient

Financial dimension	0,954
Customers dimension	0,943
The dimension of the institution's internal operations	0.923
Learning and growing dimension	0.893

1. Psychometric characteristics of the organizational performance scale:

- 1- Validity: Validity means that the scale measures the characteristic for which it was created, and the validity of the scale provides us with direct evidence of the extent of its suitability to perform its function and achieve the purposes for which it was created (Karajah, 1997, p. 141). The two researchers verified validity according to the following methods:
 - **Face validity:** It was verified by presenting the scale items, answer alternatives, and scale instructions to experts and arbitrators in educational and psychological sciences, measurement and evaluation, and educational administration. Their number reached 16 arbitrators, and it was modified according to their opinions.
 - **Construct validity:** The construct validity was verified through the discriminatory power indicators of the items and the validity of the items through internal consistency (correlation coefficients of the item score with the total score of the four dimensions, and correlation of the dimension score with the total score of the organizational performance scale).
- 2- Reliability (Alpha-Cronbach equation): The idea of this method depends on calculating the correlations between the items included in the test and dividing it into a number of parts equal to the number of its items, meaning that each item constitutes a sub-test (Awda, 1998, p. 354). To estimate the internal consistency of the scale, the answers of the reliability sample were used, which amounted to (100) members, and the reliability

coefficient reached (0.86), which is a good reliability coefficient, indicating the consistency of the items with each other.

3- The organizational performance scale in its final form:

After verifying the statistical properties of the organizational performance scale items and verifying its validity and reliability, the number of items of the scale in its final form reached (20) items with five-point Likert alternatives for response (Strongly agree - agree - neutral - disagree - strongly disagree). The response degrees range was (1-2-3-4-5), and the highest degree of the scale reached (100) while the lowest degree was (20) with a hypothetical average of (60).

Presentation and interpretation of results

This chapter presents and interprets the results reached by the present research based on the theoretical framework and discusses them in light of the results of previous studies. It also presents a number of recommendations and suggestions developed by the researchers.

The first objective: to identify the level of transformational leadership among the heads of scientific departments at the College of Education Ibn al-Haytham.

To achieve this goal, the researchers applied the transformational leadership scale to the current research sample, which amounted to (100) faculty members. The results showed that the arithmetic mean of the sample's scores on the scale as a whole amounted to (86.46) degrees, with a standard deviation of (16.124). To identify the significance of the difference between the arithmetic mean of the sample and the hypothetical mean of (78), the t-test for one sample was used. The results of the statistical analysis revealed that the calculated t-value amounted to (5.248), which is greater than the tabular t-value of (1.980) at a significance level of (0.05) and a degree of freedom of (99), as shown in Table (4).

Table 4: T-test results for the significance of the differences between the arithmetic mean and the hypothetical mean of the transformational leadership scale

variable	Sample	Arithmetic mean	Standard deviation	Hypothetical mean	T-value		Significance (0,05)
					Calculated	Tabular	
Transformational Leadership	100	86.46	16.124	78	5.248	1,980	Significant

The table above shows that the heads of scientific departments in the College of Education Ibn al-Haytham possess dimensions of transformational leadership from the perspective of the instructors. The researchers believe that this result is logical because the heads of scientific departments possess the behavioral characteristics of transformational leadership. They have influential roles on individuals, which enable them to achieve the goals of the organization. This result is consistent with (Al-Talbani et al., 2013), (Kawash et al., 2020), and (Abbas and Haider 2015) that heads of scientific departments possess dimensions of transformational leadership.

The second objective: To identify the level of organizational performance of the College of Education Ibn al-Haytham.

To achieve this objective, the researchers applied the organizational performance scale to the current research sample, which amounted to (100) members. The results showed that the arithmetic mean of the sample's scores as a whole on the scale amounted to (74.83) degrees with a standard deviation of (9.201). To identify the significance of the difference between the arithmetic mean of the sample and the hypothetical mean of (60), the t-test was used for a single sample. The results of the statistical analysis revealed that the calculated t-value amounted to (16.119), which is greater than the tabular t-value of (1.980) at a significance level of (0.05) and at a degree of freedom of (99), as shown in Table (5).

Table 5: T-test results for the significance of the differences between the arithmetic mean and the hypothetical mean of the organizational performance scale.

Variable	Sample	Arithmetic mean	Standard deviation	Hypothetical mean	T-value		Significance (0,05)
					Calculated	Tabular	
Organizational performance	100	74.83	9.201	60	16.119	1,980	Significant

The table shows that the college has achieved the dimensions of organizational performance and the researchers believe that the result is logical as it is an educational institution concerned with preparing teachers in various scientific specializations. Organizational performance is considered important to the college through the availability of its dimensions from the perspective of the teachers as it is linked to achieving the goals of the organization. The college

is keen to achieve the best performance in its various activities that ensure its survival and continuity and create a competitive advantage as its good performance is identified through the performance of all its scientific departments.

The third objective: To identify the strength and direction of the correlation between transformational leadership among heads of scientific departments and the organizational performance of the college.

To achieve this objective, the values of the Pearson correlation coefficients were calculated between transformational leadership and organizational performance in the basic research sample, as the value of the correlation coefficient between them reached (0.756). The researchers found that the t-value of the calculated correlation coefficient significance, which amounted to (12.194), is greater than the tabular t-value, which amounted to (1.980), at a significance level of (0.05) This means that there is a significant, positive, and strong correlation between transformational leadership among heads of scientific departments in the college and its organizational performance. This is shown in Table (6).

Table 6: The correlation between transformational leadership and organizational performance.

Variables	Correlation coefficient value	T-value		Statistical significance
		Calculated	Tabular	
Transformational Leadership	0.756	12.194	1,980	Significant
Organizational performance				

It is clear from the table above that there is a significant and positive correlation between transformational leadership and organizational performance. The researchers believe that this result is logical and consistent, as the concept of transformational leadership is linked to the concept of ethical transformation of the organization. Transformational leaders work on the structure of an ethical environment, which pushes the organization to achieve more effectiveness (Carson & Perew, 1995). This result is consistent with the results of studies, such as (Al-Faqih, 2006) and (Jack, 2007), which indicated the existence of a strong correlation

between the transformational leadership style and the variables of organizational results and organizational effectiveness of institutions.

Conclusions:

In light of the research results, the following conclusions were reached:

- 1- The heads of scientific departments in the College of Education Ibn al-Haytham possess the dimensions of transformational leadership from the perspective of faculty members.
- 2- The organizational performance of the college is at a good level and achieves the dimensions included in the tool.
- 3- There is a significant and positive correlation between transformational leadership and organizational performance.

Recommendations:

Based on the results, the researchers recommended the following:

- 1- Those in charge of managing the scientific departments in other colleges affiliated to the university should take into account the activation of the concepts of transformational leadership and organizational performance in their management of the departments.
- 2- Holding seminars and workshops on administrative methods and procedures necessary to develop the institution's performance.

Suggestions for future studies:

The researchers suggest conducting the following studies:

- 1- The relationship between transformational leadership and the job performance of faculty members.
- 2- Evaluation of the organizational performance of educational institutions.

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