

Leadership Styles and Their Impact on Decision-Making Quality

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Abstract

This study aimed to identify the level of application of transformational, transactional, participative, and collaborative leadership styles and the level of decision-making quality at the University of Hail. It also examined the effect of leadership styles on decision-making quality and identified the leadership style most strongly associated with improving decision-making quality. The study adopted a descriptive-analytical correlational approach, using a questionnaire administered to 366 respondents. The results showed that the overall application of leadership styles was very high, with transformational leadership ranking first, followed by transactional, collaborative, and participative leadership. The overall level of decision-making quality was also very high. Problem diagnosis ranked first, followed by generation of alternatives, evaluation of alternatives and selection of the most appropriate alternative, and information collection and analysis. The findings further indicated a positive and statistically significant effect of the four leadership styles on decision-making quality. The study recommends strengthening effective leadership practices, developing employees' capabilities through continuous training, improving incentive and reward systems, enhancing employee participation in problem-solving and decision-making, developing mechanisms for collecting and analyzing accurate information, using decision-support systems, and adopting clear criteria for generating, evaluating, and selecting alternatives.

Keywords:

Leadership Styles, Transformational Leadership, Participative Leadership, Decision-Making Quality, University of Hail.

1. Introduction

Contemporary universities face increasing challenges as a result of rapid changes in the business environment, technological development, and intensifying competition among institutions. These developments have made decision-making one of the most important administrative processes upon which organizations rely to achieve their objectives and ensure their continuity. Administrative decisions represent the core of organizational activities, as management relies on them to determine policies and strategies and to select appropriate alternatives for addressing organizational problems and achieving efficiency and effectiveness in institutional performance ([1]).

In this context, administrative leadership emerges as one of the critical factors in directing employees' behavior,

influencing the management of organizational resources, and formulating administrative decisions. The leader's role is not limited to making decisions; rather, it extends to guiding and motivating employees, involving them in analyzing organizational problems, and selecting appropriate alternatives to address them. [2] indicated that effective leadership contributes to improving the quality of organizational decisions by directing collective efforts toward achieving common goals and enhancing the university's ability to respond to environmental challenges.

Administrative literature also indicates that leadership styles represent one of the fundamental determinants of the effectiveness of organizational decisions, as the leader's influence on the decision-making process varies according to the leadership style adopted in managing subordinates. Transformational leadership, for example, motivates employees and engages them in creative thinking and problem-solving, whereas transactional leadership focuses on the exchange of benefits between leaders and employees through incentives and rewards. Participative and collaborative leadership, meanwhile, contribute to enhancing collective participation and information sharing among university members, which positively affects the quality of decisions made ([3]).

As organizational problems become increasingly complex and the alternatives available to decision-makers become more numerous, decision-making quality has come to depend on following systematic and scientific procedures that begin with accurately diagnosing the problem, followed by collecting and analyzing information, generating appropriate alternatives, evaluating them, and selecting the alternative most suitable for achieving the university's objectives. Administrative literature indicates that following these stages contributes to improving the effectiveness of organizational decisions and reducing the risks associated with them ([4]).

Accordingly, this study seeks to analyze the impact of leadership styles on decision-making quality within the university by focusing on a set of leadership styles, namely transformational leadership, transactional leadership, participative leadership, and collaborative leadership, and examining their relationship with the dimensions of the decision-making process, including problem diagnosis,

information collection and analysis, generation of alternatives, and evaluation and selection of the most appropriate alternative. The study aims to provide a deeper scientific understanding of the nature of the relationship between leadership and decision-making within contemporary organizations.

2. Statement of the Problem

This study seeks to answer the following main question: What is the impact of leadership styles on decision-making quality at the University of Hail? This main question is further divided into the following sub-questions:

1. What is the level of practicing leadership styles (transformational leadership, transactional leadership, participative leadership, and collaborative leadership) at the University of Hail?
2. What is the level of decision-making quality through its various dimensions (problem diagnosis, evaluation of alternatives, and selection of the most appropriate alternative) at the University of Hail?
3. Is there a statistically significant impact of leadership styles on decision-making quality?
4. Which leadership style has the greatest impact on improving decision-making quality at the University of Hail?

3. Study Objectives

This study aims to achieve a set of main objectives, as follows:

1. To identify the level of application of the leadership styles under investigation (transformational leadership, transactional leadership, participative leadership, and collaborative leadership).
2. To determine the level of decision-making quality at the University of Hail through its various dimensions, such as problem diagnosis, evaluation of alternatives, and selection of the most appropriate alternative.
3. To analyze the nature of the relationship between leadership styles and decision-making quality at the University of Hail.
4. To measure the impact of leadership styles on improving decision-making quality within the university.
5. To identify which leadership style has the greatest impact on decision-making quality compared with the other leadership styles.

6. To provide a set of recommendations that contribute to enhancing effective leadership styles in a manner that supports improving decision-making quality.

4. Study Hypotheses

The study hypotheses can be formulated as follows:

Main Hypothesis

There is a statistically significant impact of leadership styles on improving decision-making quality at the University of Hail.

Sub-Hypotheses

1. There is a statistically significant impact of transformational leadership on decision-making quality.
2. There is a statistically significant impact of transactional leadership on decision-making quality.
3. There is a statistically significant impact of participative leadership on decision-making quality.
4. There is a statistically significant impact of collaborative leadership on decision-making quality.

5. Significance of the Study

Scientific Significance

The scientific significance of this study stems from its focus on two important topics in contemporary administrative thought: leadership styles and decision-making quality. The study contributes to enriching the scientific literature concerning the role of leadership in improving the effectiveness of organizational decisions. It also provides a knowledge framework that helps researchers and those interested in understanding the relationship between different leadership styles and the level of decision quality within organizations.

Practical Significance

The practical significance of the study lies in the potential use of its findings to assist administrative leaders in selecting the most effective leadership styles for improving decision-making quality. The study also contributes to providing practical recommendations that can help organizations develop their leadership practices in ways that positively enhance the efficiency and effectiveness of organizational decisions.

6. Study Limitations

This study is defined by a set of limitations that clarify its scientific and practical scope, as follows:

Subject Matter Limitations. The study is limited to examining the impact of leadership styles, represented by transformational leadership, transactional leadership, participative leadership, and collaborative leadership, on decision-making quality through its dimensions represented by problem diagnosis, information collection, generation of alternatives, evaluation of alternatives, and selection of the most appropriate alternative.

Geographical Limitations

This study is conducted at the University of Hail, which represents the study setting.

Human Limitations

The study is limited to employees at the University of Hail, including administrative leaders and employees who are involved in the decision-making process.

Temporal Limitations

This study is conducted during the year 2026.

7. Research Methodology

To achieve the objectives of the study, the descriptive-analytical approach was adopted. This approach is based on studying the phenomenon as it exists in reality, describing it accurately, and expressing it quantitatively to explain the impact of the independent variable (leadership styles) on the dependent variable (decision-making quality). This approach is considered one of the principal approaches in administrative sciences, as it is appropriate for describing leadership styles and examining their impact on improving decision-making quality at the University of Hail. The data were interpreted and analyzed in order to reach findings that contribute to achieving the objectives of the study.

7.1 Unit of Analysis

The unit of analysis at the university level consists of the university's leaders. Information will be collected from the leadership of the university under study.

8. Theoretical Framework and Previous Studies

8.1 Operational Definitions of the Study Variables

Leadership:

In this study, leadership refers to the set of practices and behaviors carried out by a leader within an organization to direct, influence, and motivate employees toward achieving the organization's objectives efficiently and effectively.

Leadership Style:

In this study, leadership style refers to the approach or method adopted by a leader in dealing with, directing, and influencing employees' behavior in order to achieve the organization's objectives. It is manifested through a set of leadership practices and behaviors perceived by employees in the work environment.

8.2 Concept of Leadership Style

Several researchers have addressed the concept of leadership style as one of the factors influencing employees' behavior and the effectiveness of decisions within an organization. [5] explained that leadership styles represent the approaches adopted by a leader to direct and influence subordinates while managing work and making decisions. Differences in leadership style may lead to differences in the nature of decisions made, particularly under conditions of environmental turbulence.

[6] also indicated that administrative leadership style refers to the manner in which a leader exercises organizational authority in managing and communicating with individuals and directing them toward achieving the organization's objectives. An effective leadership style contributes to enhancing communication between supervisors and subordinates and improving human relations, thereby supporting the decision-making process within the organization.

In the same context, [7] explained that transformational leadership represents one of the modern leadership styles that focuses on empowering and motivating employees and developing their capabilities, which positively affects organizational performance and the quality of administrative decisions within institutions. Haitham [8] further indicated that leadership styles, particularly transformational leadership, influence employees' behavior by motivating them to innovate and participate in solving organizational problems, thereby enhancing the efficiency of the decision-making process within the organization.

Monia [9] confirmed that administrative leadership represents a process of directing and influencing employees exercised by a leader with the aim of achieving organizational objectives. Selecting an appropriate leadership style is considered one of the fundamental factors contributing to improving the effectiveness of administrative decisions.

Similarly, Rabie [10] indicated that the democratic leadership style contributes to reducing employees' resistance to organizational decisions by involving them in the decision-making process, thereby enhancing their acceptance of decisions and facilitating their implementation more effectively.

8.3 Leadership Styles

8.3.1 Transformational Leadership

Transformational leadership is considered one of the modern leadership styles that aims to bring about positive changes in employees' behaviors and attitudes in ways that contribute to achieving organizational objectives efficiently and effectively. [11] indicated that transformational leadership represents a leadership approach that focuses on inspiring and motivating employees to achieve a shared organizational vision by influencing their values, encouraging innovation, and developing their capabilities, thereby helping them move beyond traditional performance boundaries.

[12] also explained that transformational leadership is a leadership style in which the leader identifies the changes required within the organization, formulates a clear vision for change, and works to guide and motivate employees to support that vision and achieve organizational objectives efficiently.

In the Arab context, [13] found that transformational leadership represents a leadership approach based on the leader's ability to influence and motivate subordinates to work in a team-oriented manner, thereby contributing to improved organizational performance and achieving institutional excellence.

[14] also indicated that transformational leadership aims to bring about fundamental changes within organizations by motivating and inspiring employees to adopt new visions, improve institutional performance, and increase the effectiveness of administrative processes.

Similarly, [15] concluded that transformational leadership is a leadership style based on idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration of employees, which contributes to enhancing job satisfaction and improving organizational performance.

In this study, transformational leadership is defined as the leadership style through which a leader inspires and motivates employees and encourages them to adopt a shared vision and strive to achieve organizational objectives with a high level of efficiency. This is achieved by strengthening trust, fostering creativity and innovation, and motivating employees to transcend their individual interests in favor of achieving organizational interests.

8.3.2 Transactional Leadership

Transactional leadership is defined as a leadership style based on the exchange of benefits between leaders and subordinates. The leader relies on providing incentives and rewards in return for achieving the required performance and complying with organizational instructions. [5] indicated that a leadership style based on exchange and motivation influences employees' behavior and the nature of organizational decisions made, particularly in

environments characterized by a degree of instability or environmental turbulence.

Operationally, transactional leadership is defined in this study as the leadership style based on a reciprocal relationship between the leader and employees, whereby the leader clearly specifies the roles and tasks required of employees in return for providing incentives and rewards when the required objectives are achieved, or taking corrective measures when performance deviations occur.

8.3.3 Participative Leadership

Participative leadership is defined as a leadership style based on involving employees in the decision-making process and benefiting from their opinions and experiences in solving organizational problems. Rabie [10] demonstrated that involving subordinates in the decision-making process contributes to reducing employees' resistance to organizational decisions and enhances their acceptance and effective implementation. [6] also indicated that participative leadership supports continuous communication between supervisors and subordinates, thereby contributing to improving human relations within the organization and enhancing the effectiveness of administrative decisions.

Operationally, participative leadership is defined in this study as the leadership style based on involving employees in work-related decision-making, encouraging them to express their opinions and suggestions, and contributing to problem-solving. This enhances a spirit of cooperation and organizational belonging and contributes to improving performance and achieving organizational objectives.

8.3.4 Collaborative Leadership

Collaborative leadership refers to a leadership style that promotes cooperation and teamwork among members of an organization by building relationships based on trust and joint coordination to achieve organizational objectives. [16] explained that leadership styles that promote cooperation and information sharing among employees contribute to improving the quality of organizational decisions by providing the information necessary to support the decision-making process.

In this study, collaborative leadership is defined as the leadership style that promotes a spirit of cooperation and teamwork among employees, encourages them to exchange experiences and information, and engage in joint efforts to achieve the organization's objectives efficiently and effectively. The leader works to build positive relationships among employees and coordinate their efforts in ways that contribute to improving organizational performance.

8.4 The Concept of the Decision-Making Process

The decision-making process is considered one of the fundamental administrative processes upon which

organizations rely to achieve their objectives. [17] explained that the decision-making process represents a set of organizational procedures undertaken by a leader or decision-maker to select the most appropriate alternative from among several possible alternatives under conditions that may involve certainty, risk, or uncertainty.

[16] also indicated that rational decision-making depends on the availability of accurate information and data concerning the organization's internal and external environment. Transformational leadership contributes to supporting this type of decision-making by providing information and motivating employees to analyze it objectively.

[18] demonstrated that decision-making styles are closely associated with leaders' administrative capabilities, as adaptive leadership practices influence the way organizational problems are analyzed and appropriate alternatives are selected to address them.

[19] further explained that the quality of decision-making in modern institutions has become highly dependent on the use of data and digital technologies to analyze information, which contributes to improving the accuracy and effectiveness of decisions.

In the same context, Amira [20] indicated that the effectiveness of decision-making within institutions is reflected in the quality of the decision, its acceptance by employees, and its ability to achieve organizational objectives. She emphasized that effective leadership styles contribute to enhancing these aspects.

[21] also indicated that decision-making under complex circumstances, such as crises and disasters, depends on clarity of leadership vision, the availability of accurate information, and rapid coordination among work teams, thereby enhancing the ability to make sound decisions at the appropriate time.

In this study, decision-making quality refers to the degree of efficiency and effectiveness of decisions made within the organization through following scientific and systematic steps in the decision-making process.

8.5 Dimensions of the Decision-Making Process

8.5.1 Problem Diagnosis

Problem diagnosis refers to identifying the nature of an organizational problem, its causes, and the factors influencing it before proceeding to make the appropriate decision to address it. [17] indicated that problem diagnosis represents the first step in the decision-making process, through which the situation or problem requiring an administrative decision is identified and addressed.

Operationally, the problem diagnosis dimension is defined in this study as the ability of decision-makers within the organization to accurately identify the problem, understand its underlying causes, collect relevant information and data, and analyze them systematically in a manner that helps

determine the nature and dimensions of the problem as a preliminary step toward selecting appropriate alternatives to address it.

8.5.2 Information Collection and Analysis

Information collection and analysis refers to the process of obtaining data and information related to the organizational problem and analyzing them scientifically in a manner that helps the decision-maker understand the dimensions of the problem. [19] explained that the availability of accurate information and reliable data contributes to improving decision-making quality, particularly in light of digital transformation, which provides modern tools for analyzing organizational data.

Operationally, the information collection and analysis dimension is defined in this study as the process of obtaining data and information related to the problem or decision to be made from various sources, and then organizing and analyzing them in a scientific and systematic manner that helps decision-makers accurately understand and interpret the dimensions of the problem, thereby supporting the process of evaluating alternatives and selecting the most appropriate decision.

8.5.3 Generation of Alternatives

Generation of alternatives refers to the process of proposing a set of possible solutions or options for addressing an organizational problem. [18] demonstrated that effective leaders seek to develop a variety of alternatives before making the final decision, thereby increasing the likelihood of selecting the solution most appropriate to the administrative situation.

In this study, generation of alternatives refers to the process of proposing and developing a set of possible solutions or options for addressing a problem or situation that requires a decision. This is achieved by utilizing available information, previous experiences, and employee participation in proposing different ideas and suggestions, enabling decision-makers to compare multiple alternatives and select the most appropriate alternative for achieving the organization's objectives.

8.5.4 Evaluation of Alternatives and Selection of the Most Appropriate Alternative

Evaluation of alternatives refers to the process of comparing available solutions according to a set of organizational criteria, such as efficiency, feasibility, and cost, and then selecting the alternative most capable of achieving the organization's objectives. [21] indicated that evaluating alternatives represents a critical stage in the decision-making process, as the success of an administrative decision depends on the leader's ability to analyze alternatives and select the most appropriate solution based on the available information.

In this study, evaluation of alternatives and selection of the most appropriate alternative refers to the process of analyzing and comparing the various alternatives available for addressing a problem according to a set of objective criteria, such as efficiency, effectiveness, cost, and expected outcomes, with the aim of selecting the alternative that achieves the organization's objectives in the best possible manner while minimizing risks.

8.6 Previous Studies

[5] The study, entitled "The Impact of Leadership Styles on Decision-Making under Environmental Turbulence: An Applied Study on Kuwaiti Industrial Companies," aimed to identify the impact of leadership styles on decision-making under conditions of environmental turbulence. The results demonstrated that leadership styles had an impact on decision-making, with environmental turbulence serving as a mediating variable. The findings also showed an impact of the democratic leadership style on decision-making in the presence of environmental turbulence as a mediating variable. Furthermore, the results indicated an impact of the autocratic leadership style on decision-making with environmental turbulence as a mediating variable. Similarly, the study found an impact of the laissez-faire leadership style on decision-making with environmental turbulence as a mediating variable.

[6] The study, entitled "The Impact of Administrative Leadership Style on the Decision-Making Process within the Organization," aimed to identify the administrative leadership style and its impact on the decision-making process. To achieve this objective, the study adopted the descriptive-analytical approach through an applied study conducted at the Directorate of Youth and Sports in Tipaza Province. The significance of the study lies in highlighting the problems that organizations may face and providing appropriate solutions by strengthening continuous communication channels between supervisors and subordinates, thereby contributing to building positive human relationships that support the effectiveness of the decision-making process.

[7] The study, entitled "Transformational Leadership and Its Impact on Decision-Making Quality among Administrative Leaders at the Directorate of Youth and Sports in Menoufia Governorate," aimed to determine the impact of transformational leadership on decision-making quality within the Directorate of Youth and Sports in Menoufia Governorate. The researcher adopted the descriptive-analytical approach and collected data using a questionnaire administered to administrative leaders. The analysis of the results demonstrated that transformational leadership contributes to empowering employees, developing their skills, and enhancing trust. It also positively affects decision-making quality by promoting teamwork and improving organizational performance. The

study recommended the need to clarify the future vision and develop strategies that contribute to achieving organizational objectives.

[17] The study, entitled "The Impact of Leadership Styles on Decision-Making Strategies under Conditions of Certainty, Risk, and Uncertainty," aimed to measure the relationship between leadership styles and decision-making strategies within EGAS, while analyzing the moderating role of conditions of certainty, risk, and uncertainty. The researchers adopted the descriptive-analytical approach and collected data through an electronic questionnaire that included variables related to leadership styles, decision-making strategies, and conditions of certainty, risk, and uncertainty. The results indicated partial support for the study hypotheses, suggesting that the impact of leadership styles on decision-making strategies varies according to the prevailing conditions of certainty, risk, or uncertainty.

[19] The study, entitled "The Impact of Digital Transformation Programs on the Quality of Data-Driven Decision-Making among Administrative Leaders in Government Institutions in Sirte," aimed to examine the impact of digital transformation programs on the quality of data-driven decision-making among administrative leaders. The researcher adopted the descriptive-analytical approach and used a questionnaire administered to a sample of 45 administrative leaders. The results demonstrated a statistically significant positive relationship between the components of digital transformation—digital skills, knowledge management, and digital communications—and the quality of data-driven decision-making. The study highlighted the importance of developing the digital skills of leaders and improving knowledge management systems to enhance decision quality.

[16] The study, entitled "Transformational Leadership and Its Impact on Rational Decision-Making," published by the Kufa Studies Center, aimed to analyze the relationship between transformational leadership and rational decision-making in an Iraqi petroleum products distribution organization. The researchers adopted the analytical approach. The results demonstrated that transformational leadership is positively associated with rational decision-making through supporting information and data related to the market and competitors, thereby contributing to the quality of organizational decisions.

Rabie [10] The study, entitled "The Impact of Leadership Styles on Employees' Resistance to Decisions in Organizations: An Experimental Study Applied to the International Committee of the Red Cross (Lebanon)," aimed to investigate the impact of different leadership styles on employees' resistance to organizational decisions within the organization. The study adopted a field experimental approach, and data were collected through a questionnaire administered to 61 employees in administrative departments. The results demonstrated a statistically significant impact of leadership styles on resistance to

decisions within the organization, accounting for approximately 31%. The researcher concluded that strengthening the democratic leadership style and involving subordinates in decision-making reduces resistance and enhances the effective implementation of decisions.

[18] The study, entitled “Adaptive Leadership and Decision-Making Styles among Department Heads from the Perspective of Faculty Members at the Islamic University of Madinah,” aimed to analyze the level of department heads’ practice of adaptive leadership dimensions and decision-making styles from the perspective of faculty members, and to identify the relationship between these dimensions and decision-making styles. The researcher adopted the descriptive-analytical approach and collected data through a questionnaire. The study demonstrated a relationship between adaptive leadership dimensions and decision-making styles, with some leadership dimensions showing a high predictive ability in explaining decision-making styles within the university.

[8] The study, entitled “A Study of the Relationship between Transformational Leadership and the Decision-Making Process,” published in the Scientific Journal of Commercial and Environmental Studies, aimed to examine the theoretical integration between transformational leadership and the decision-making process based on findings from previous studies. The study adopted a theoretical analytical approach. The findings demonstrated the importance of transformational leadership in improving the efficiency and effectiveness of the decision-making process by influencing followers’ behavior and motivating them to innovate and address challenges, thereby enhancing organizations’ ability to achieve their objectives efficiently. Amira Hatif [20] The study, entitled “The Impact of Motivating Leadership Strategies on Decision-Making Effectiveness: An Exploratory Study of a Sample of Employees at the Diwanayah Investment Commission,” aimed to evaluate the impact of motivating leadership variables, such as employee engagement, capacity building, and transparency, on decision-making effectiveness, including decision quality, decision acceptance, and decision implementation. The study adopted a survey methodology using a questionnaire distributed to 28 employees. The results demonstrated that motivating leadership has a direct positive impact on decision-making effectiveness in the workplace.

Monia [9] The study, entitled “Administrative Leadership and Its Role in the Decision-Making Process,” presented a theoretical analytical review of the importance of administrative leadership and its styles in supporting the decision-making process within organizations. The researcher indicated that selecting an appropriate leadership style is directly associated with the effectiveness of administrative decisions and, consequently, with the successful achievement of organizational objectives. The study adopted the descriptive-analytical approach to

examine the nature of the relationship between leadership and decision-making.

[21] The study, entitled “Leadership and Decision-Making during Disasters and Crises,” examined the relationship between leadership styles and decision-making in crisis and disaster contexts. The study demonstrated that decision quality during crises depends on clarity of leadership vision, the availability of accurate information, and team coordination. It also indicated that effective leadership characteristics enhance organizations’ ability to make sound decisions under pressure.

8.6.1 Synthesis of Previous Studies

A review of previous studies reveals growing interest in examining the relationship between leadership styles and the decision-making process within organizations. Many studies have focused on analyzing the impact of different leadership styles on improving the efficiency and quality of organizational decisions. Studies such as [5] and [7] confirmed a clear impact of leadership styles, particularly transformational and democratic leadership, in enhancing the effectiveness of the decision-making process and improving the quality of its outcomes within institutions. Other studies, such as [16], found that transformational leadership contributes to supporting rational decision-making by providing information and motivating employees to participate in analyzing alternatives and making appropriate decisions.

In a related context, some studies have indicated that decision-making effectiveness is influenced not only by leadership style but also by several contextual and organizational factors. [17] demonstrated that the relationship between leadership styles and decision-making strategies varies according to the degree of certainty or risk faced by the organization. Meanwhile, [21] highlighted the importance of leadership in decision-making during crises and disasters, emphasizing that clarity of leadership vision and the availability of information contribute to more effective decisions in unstable environments.

Some recent studies have also examined contemporary variables associated with decision-making, such as digital transformation and employees’ resistance to organizational decisions. [19] demonstrated a positive relationship between digital transformation programs and the quality of data-driven decision-making, whereas Rabie [10] showed that the democratic leadership style contributes to reducing employees’ resistance to organizational decisions and enhances their acceptance and implementation within the organization. Similarly, studies such as [18] and [20] focused on analyzing the relationship between contemporary leadership styles and decision-making effectiveness, emphasizing the importance of participation, communication, and capacity building in improving the quality of organizational decisions.

Despite the important scientific contributions of these studies in clarifying the relationship between leadership and the decision-making process, most were conducted in different organizational contexts, including governmental, industrial, and service institutions in several Arab and foreign countries. This limits the extent to which their findings can be generalized to all organizational environments. Moreover, some studies focused on a specific leadership style, such as transformational or adaptive leadership, without examining a broader range of leadership styles that may have varying effects on decision-making quality within organizations.

Accordingly, the present study seeks to contribute to addressing this research gap by examining the impact of leadership styles on decision-making quality within organizations in the Kingdom of Saudi Arabia. This will be achieved by analyzing a set of leadership styles and examining their relationship with the dimensions of decision-making quality. The study aims to provide a deeper scientific understanding of this relationship within the contemporary organizational environment and to generate findings that may assist administrative leaders in improving the effectiveness of organizational decisions.

9 Methodological Procedures of the Study

9.1 Introduction

This chapter presents the procedures of the field study, including the study methodology, population, and sample. It also explains the steps and scientific procedures followed by the researcher in developing and describing the study instrument. In addition, it presents the study design and variables, the procedures used to assess the reliability and validity of the instrument to ensure its suitability, a description of the study population and sample, and the statistical methods used to analyze the data collected for this study, as follows:

9.2 Study Methodology

The present study adopted the descriptive-analytical and correlational approach, using a questionnaire to measure the impact of leadership styles on decision-making quality at the University of Hail. This approach was adopted because it is consistent with the nature and objectives of the present study.

The descriptive-analytical approach is one of the most widely used approaches in educational and human sciences. It aims to describe a phenomenon as it exists in reality, analyze it and the relationships among its variables, and interpret it scientifically and accurately ([22]; [23]). This approach also involves collecting quantitative and qualitative data related to the phenomenon under

investigation, organizing and analyzing them, and reaching conclusions that contribute to a deeper understanding of the phenomenon ([24]).

9.3 Nature of the Study

In terms of its nature, this study is considered an applied study, relying on a questionnaire as a data collection instrument. It aims to examine the impact of leadership styles on decision-making quality at the University of Hail.

9.4 Study Population and Sample

9.4.1 Study Population

The study population refers to the total group of elements to which the researcher seeks to generalize the findings related to the problem under investigation. Based on the research problem and objectives, the target population consists of all employees of the University of Hail in the Kingdom of Saudi Arabia, totaling 3,126 male and female employees at the University of Hail in the Kingdom of Saudi Arabia, according to statistics published on university websites for the academic year 1446 AH/2025.

9.4.2 Study Sample

The study sample represents a subset of the study population whose members are selected from that population. The sample was selected using the simple random sampling method. There are several methods for determining the appropriate sample size, one of the most important being the Krejcie and Morgan method, which is used when the study population is known.

Accordingly, the researcher calculated the required sample size to be drawn from the study population based on the Krejcie and Morgan equation, as follows:

The required sample size was obtained as **(341.99)**. After rounding to the nearest whole number, the required sample size was no less than **(342)**. To ensure obtaining the required number of responses, the researcher designed the questionnaire link using Google Forms, requiring respondents to complete all fields without leaving any blank responses and preventing multiple submissions from the same email address.

The questionnaire link was then distributed among employees of the University of Hail. Following intensive follow-up efforts by the researcher, including contacting employees individually, these efforts resulted in obtaining 366 responses. Thus, the researcher collected a sample

exceeding the required minimum, thereby contributing to enhancing the accuracy and reliability of the study results.

9.5 Data and Information Collection Method

The researcher relied on the following sources:

1. **Primary Data:** Primary data were obtained through the questionnaire. This involved identifying the questions and topics that should be included in the questionnaire, selecting a representative sample, distributing the questionnaire to the selected sample members, collecting participants' responses, and analyzing the data to understand the main trends and information obtained using appropriate statistical methods. The findings and recommendations were then summarized
2. **Secondary Data:** The secondary data used in this study consisted of a range of Arabic and foreign sources, including books, periodicals, master's theses, doctoral dissertations, articles, previous studies, and research relevant to the subject of the study.

9.6 Study Instrument

The questionnaire was used as the data collection instrument to achieve the objectives of the present study. The questionnaire examining the impact of leadership styles on decision-making quality at the University of Hail was developed through a review of the literature and previous studies related to the research topic, while also benefiting from the instruments used in those studies.

9.6.1 Questionnaire for Measuring the Impact of Leadership Styles on Decision-Making Quality at the University of Hail

The questionnaire consisted of two sections:

Section One: (5) This section contained five variables representing the personal and functional characteristics of the study sample, namely: (Gender-Age-Academic qualification-Years of experience-Administrative level

Section Two

This section contained the main study data, represented by the dimensions through which the study variables were identified. It consisted of two main axes:

Axis One: Level of Application of Leadership Styles at the University of Hail. This axis consisted of 20 items divided into four dimensions, as follows: **First Dimension:** Transformational Leadership. This dimension consisted of 5 items. **Second Dimension:** Transactional Leadership. This dimension consisted of 5 items.

Third Dimension: Participative Leadership. This dimension consisted of 5 items. **Fourth Dimension:** Collaborative Leadership.

This dimension consisted of 5 items.

Axis Two: Level of Decision-Making Quality at the University of Hail

This axis measures the level of decision-making quality at the University of Hail and consists of 20 items divided into four dimensions, as follows: **First Dimension:** Problem Diagnosis.

This dimension consists of 5 items.

Second Dimension: Information Collection and Analysis. This dimension consists of 5 items. **Third Dimension:** Generation of Alternatives.

This dimension consists of 5 items.

Fourth Dimension: Evaluation of Alternatives and Selection of the Most Appropriate Alternative. This dimension consists of 5 items. The items in each dimension and axis were formulated using a five-point Likert scale: (Strongly Agree / Agree / Neutral / Disagree / Strongly Disagree).

9.6.2 Statistical Methods for Measuring the Impact of Leadership Styles on Decision-Making Quality at the University of Hail

9.7 Instrument Validity

One of the essential characteristics that should be present in a data collection instrument before its use is reliability, which refers to the degree to which the measurement instrument is free from errors, particularly random errors. Measuring the reliability and validity of an instrument is important to ensure that it produces accurate results whenever it is used. An unstable measurement instrument cannot be relied upon, nor can its results be considered dependable; consequently, the findings may become misleading and unreliable ([25]). To ensure the suitability of the study instrument, both validity and reliability tests were employed, as follows:

9.7.1 Expert Judgment Validity (Face Validity)

The researcher presented the questionnaire to a group of experts and specialists in the field related to the subject of the study. The experts were asked to provide their opinions regarding the questionnaire and the appropriateness of its items, the comprehensiveness and diversity of its content, the quality of its linguistic formulation, and any observations they considered appropriate concerning modification, revision, or deletion. After retrieving the questionnaire from all the experts, the researcher made the necessary deletions and modifications based on their recommendations. The questionnaire was

subsequently finalized and prepared in its final form, as presented in Appendix (1).

9.7.2 Scale Validity

9.7.2.1 Internal Consistency Coefficient Between Each Item and the Total Score of Its Dimension

The researcher calculated the Pearson correlation coefficient to assess the internal consistency of the questionnaire. Statistical tests were conducted to measure the correlation coefficients and establish the validity of the scale, as follows:

9.7.2.1.1 Dimensions of the Independent Axis: Level of Application of Leadership Styles at the University of Hail

9.7.2.2 Internal Consistency Validity of the Dimensions of the Independent Variable: Level of Application of Leadership Styles at the University of Hail

The internal consistency validity was assessed for the dimensions of transformational leadership, transactional leadership, participative leadership, and collaborative leadership by calculating the correlation between each item and the total score of its respective dimension.

The following table presents the correlation coefficients between each item of the dimensions of the independent axis, Level of Application of Leadership Styles at the University of Hail, and the total score of its respective dimension.

Table 1: Correlation Coefficients Between Each Item of the Leadership Styles Dimensions and the Total Score of Its Respective Dimension

First Dimension: Transformational Leadership			Second Dimension: Transactional Leadership		Third Dimension: Participative Leadership		Fourth Dimension: Collaborative Leadership		Result
N	Pearson Correlation	Sig.	Pearson Correlation	Sig.	Pearson Correlation	Sig.	Pearson Correlation	Sig.	
1	.719**	.000	.759**	.000	.799**	.000	.800**	.000	Significant at the 0.01
2	.798**	.000	.765**	.000	.873**	.000	.837**	.000	Significant at the 0.01
3	.784**	.000	.813**	.000	.818**	.000	.869**	.000	Significant at the 0.01
4	.815**	.000	.823**	.000	.838**	.000	.814**	.000	Significant at the 0.01
5	.800**	.000	.777**	.000	.786**	.000	.822**	.000	Significant at the 0.01

Note: Correlation is statistically significant at the 0.01 level. Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program. The table shows that all correlation coefficients for the items measuring the level of application of leadership styles at the University of Hail range from (.719–.815**) for the first dimension (transformational leadership), from (.759–.823**) for the second dimension (transactional leadership), from (.786–.873**) for the third dimension (participative leadership), and from (.800–.869**) for the fourth dimension (collaborative leadership). These values are relatively high, and all correlations are statistically significant at the 0.01 level, as their significance values were less than 0.05. This indicates that all items are significantly correlated with the total score of their respective dimensions and collectively measure the intended construct. Therefore, the dimensions demonstrate

satisfactory internal consistency validity and are valid for measuring the constructs for which they were designed.

9.7.2.3 Dimensions of the Dependent Variable: Level of Decision-Making Quality at the University of Hail

9.7.2.4 Internal Consistency Validity of the Items of the Dependent Variable: Level of Decision-Making Quality at the University of Hail

The internal consistency validity of the items was assessed for the dimensions of problem diagnosis, information collection and analysis, generation of alternatives, and evaluation of alternatives and selection of the most appropriate alternative by calculating the

correlation between each item and the total score of its respective dimension.

The following table presents the correlation coefficients between each item of the dimensions of the

dependent axis, Level of Decision-Making Quality at the University of Hail, and the total score of its respective dimension.

Table 2: Correlation Coefficients Between Each Item of the Decision-Making Quality Dimensions and the Total Score of Its Respective Dimension

First Dimension: Problem Diagnosis			Second Dimension: Information Collection and Analysis		Third Dimension: Generation of Alternatives		Fourth: Evaluation of Alternatives and Selection of the Most Appropriate Alternative		Result
N	Pearson Correlation	Sig.	Pearson Correlation	Sig.	Pearson Correlation	Sig.	Pearson Correlation	Sig.	
1	.698**	.000	.747**	.000	.783**	.000	.851**	.000	Significant at 0.01.
2	.815**	.000	.759**	.000	.842**	.000	.840**	.000	Significant at 0.01.
3	.788**	.000	.808**	.000	.815**	.000	.833**	.000	Significant at 0.01.
4	.839**	.000	.831**	.000	.867**	.000	.850**	.000	Significant at 0.01.
5	.764**	.000	.770**	.000	.806**	.000	.883**	.000	Significant at 0.01.

Note: Correlation is statistically significant at the 0.01 level.

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The table shows that all correlation coefficients for the items measuring the level of decision-making quality at the University of Hail range from (.698–.839**)** for the first dimension (problem diagnosis), from (.747–.831**)** for the second dimension (information collection and analysis), from (.783–.867**)** for the third dimension (generation of alternatives), and from (.833–.883**)** for the fourth dimension (evaluation of alternatives and selection of the most appropriate alternative). These values are relatively high, and all correlations are statistically significant at the 0.01 level, as their significance values were less than 0.05. This indicates that all items are significantly correlated with the total score of their respective dimensions and collectively measure the intended construct. Accordingly, the dimensions demonstrate satisfactory internal consistency validity and are valid for measuring the constructs for which they were designed.

9.7.3 Construct Validity

Construct validity is one of the measures used to assess the validity of an instrument. It examines the extent to which the instrument achieves the objectives for which it was designed and indicates the degree of association between each dimension of the study and the total score of the instrument items. Accordingly, construct validity was assessed by estimating the correlation coefficients between all dimensions of the study variables and the total score of each axis, as follows:

9.7.3.1 Construct Validity of the Independent Variable Axis: Level of Application of Leadership Styles at the University of Hail

Table No. (3) presents the correlation coefficients between the dimensions of the axis measuring the level of application of leadership styles at the University of Hail and the total score of the axis.

Table 3: Correlation Coefficients of the Dimensions of the Level of Application of Leadership Styles Axis with the Total Score

Axis	Dimensions	Pearson Correlation	Sig.	Result
Level of Application of Leadership Styles	First Dimension: Transformational Leadership	.717**	.000	دال عند 0.01
	Second Dimension: Transactional Leadership	.848**	.000	دال عند 0.01
	Third Dimension: Participative Leadership	.847**	.000	دال عند 0.01
	Fourth Dimension: Collaborative Leadership	.821**	.000	دال عند 0.01

Note: Correlation is statistically significant at the 0.01 level.
Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program. The table shows that all dimensions of the Level of Application of Leadership Styles at the University of Hail have positive and statistically significant correlations with the total score of their respective axis at the 0.05 significance level. Accordingly, all dimensions measure the constructs for which they were designed and collectively contribute to measuring the overall axis.

9.7.3.2 Construct Validity of the Dependent Variable Axis: Level of Decision-Making Quality at the University of Hail

Table No (4) presents the correlation coefficients between the dimensions of the Level of Decision-Making Quality at the University of Hail axis and its total score.

Table 4: Correlation Coefficients of the Dimensions of the Level of Decision-Making Quality Axis with the Total Score

Axis	Dimensions	Pearson Correlation	Sig.	Result
Level of Decision-Making Quality	First Dimension: Problem Diagnosis	.850**	.000	Significant at 0.01.
	Second Dimension: Information Collection and Analysis	.917**	.000	Significant at 0.01.
	Third Dimension: Generation of Alternatives	.902**	.000	Significant at 0.01.
	Fourth Dimension: Evaluation of Alternatives and Selection of the Most Appropriate Alternative	.907**	.000	Significant at 0.01.

Note: Correlation is statistically significant at the 0.01 level.
Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program. The table shows that all dimensions of the Level of Decision-Making Quality at the University of Hail have positive and statistically significant correlations with the total score of their respective axis at the 0.05 significance level. Accordingly, all dimensions measure the constructs

for which they were designed and collectively contribute to measuring the overall axis.

9.7.3.3 Construct Validity of the Study: The Impact of Leadership Styles on Decision-Making Quality at the University of Hail

Table 5: Correlation Coefficients of the Study Axes Measuring the Impact of Leadership Styles on Decision-Making Quality at the University of Hail with the Overall Study Score

Study Axes	Pearson Correlation	Sig.	Result
Axis One: Level of Application of Leadership Styles at the University of Hail	.902**	.000	Significant at 0.01.
Axis Two: Level of Decision-Making Quality at the University of Hail	.917**	.000	Significant at 0.01.

Note: Correlation is statistically significant at the 0.01 level.
Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.
The table shows that all study axes examining the impact of leadership styles on decision-making quality at the University of Hail have correlation coefficients between the total scores of the study axes and the overall study score ranging from (.902**-.917**). These values are very high and all are positive. Moreover, all correlations are statistically significant at the 5% significance level, as their significance values were less than 0.05. This indicates that the study axes have positive and statistically significant correlations with the overall study score to which they belong. Accordingly, all dimensions of the instrument measure the constructs for which they were designed and collectively contribute to measuring the overall study instrument.

9.8 Instrument Reliability

9.8.1 Cronbach's Alpha Method

Reliability refers to the stability and internal consistency of a measurement instrument, meaning that the instrument produces consistent results when administered repeatedly to the same sample under similar conditions. The higher the reliability and stability of the instrument, the greater the confidence in its results.

There are several methods for assessing the reliability of a measurement instrument. In this study, the researcher calculated the reliability coefficient using Cronbach's Alpha, which takes values ranging from zero to one. A value closer to zero indicates low internal consistency, whereas a value closer to one indicates high internal consistency. Thus, a higher Cronbach's Alpha coefficient indicates greater internal consistency and reliability of the questionnaire.

Table 6: Cronbach's Alpha Results for Assessing the Reliability of the Study Instrument by Dimensions and Axes

Study Variables	Study Axes and Dimensions	N of Items	Cronbach's Alpha
Leadership Styles	First Dimension: Transformational Leadership	5	.842
	Second Dimension: Transactional Leadership	5	.847
	Third Dimension: Participative Leadership	5	.879
	Fourth Dimension: Collaborative Leadership	5	.885
Overall Independent Variable Axis: Level of Application of Leadership Styles at the University of Hail		20	.929
Decision-Making Quality	First Dimension: Problem Diagnosis	5	.839
	Second Dimension: Information Collection and Analysis	5	.841

Study Variables	Study Axes and Dimensions	N of Items	Cronbach's Alpha
	Third Dimension: Generation of Alternatives	5	.881
	Fourth Dimension: Evaluation of Alternatives and Selection of the Most Appropriate Alternative	5	.905
Overall Dependent Variable Axis: Level of Decision-Making Quality at the University of Hail		20	.952
Overall Study Instrument		40	.960

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

It is evident from Table (6) that the reliability test results for all dimensions of the axis measuring the level of application of leadership styles at the University of Hail reached (.929), while the reliability coefficient for all dimensions of the axis measuring the level of decision-making quality at the University of Hail reached (.952). At the overall study level, the reliability coefficient reached (.960). All of these values were greater than (60%), indicating that the study instrument has a high degree of reliability across all dimensions and axes of the study. This also indicates that the data collected through the instrument are characterized by a high degree of reliability and validity and fulfill the purposes of the study. Therefore, these responses can be relied upon to achieve the objectives of the study and analyze its results.

9.9 Testing the Normal Distribution of the Data (Kolmogorov–Smirnov Test)

This test aims to determine whether the data follow a normal distribution. It is considered a necessary test for selecting the appropriate statistical tests, particularly hypothesis tests. If the data follow a normal distribution, parametric tests are considered appropriate. However, if the data do not follow a normal distribution, non-parametric tests are appropriate for testing the study hypotheses. This condition is considered one of the important assumptions of parametric statistical tests, and without meeting this assumption, the test cannot be practically applied. If this condition is ignored and the test is applied, the results may be illogical and inaccurate, and consequently, all conclusions derived from the test may be invalid. To ensure that the data follow a normal distribution, the Kolmogorov–Smirnov test was used. The results of the normality test are presented below:

Table 7: Results of the Normal Distribution Test for the Study Variables

Dimensions and Axes of the Study	Kolmogorov-Smirnov Z	Asymp. Sig.
First Dimension: Transformational Leadership	.670	.760
Second Dimension: Transactional Leadership	.667	.765
Third Dimension: Participative Leadership	.533	.939
Fourth Dimension: Collaborative Leadership	.474	.978
Independent Axis: Level of Application of Leadership Styles at the University of Hail	.746	.635
First Dimension: Problem Diagnosis	.626	.828
Second Dimension: Information Collection and Analysis	.472	.979
Third Dimension: Generation of Alternatives	.497	.966
Fourth Dimension: Evaluation of Alternatives and Selection of the Most Appropriate Alternative	.558	.914
Dependent Axis: Level of Decision-Making Quality at the University of Hail	.669	.763
Overall Study Total	.599	.866

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of SPSS v.26.

It is evident from Table (7) that the results of the normal distribution test show that the significance level for all study variables is greater than (0.05). This indicates that these values confirm the normal distribution of the sample data across all dimensions and axes of the study variables. This, in turn, indicates the possibility of using parametric tests to examine the significance of differences. It also indicates that the results obtained by the study through the use of these tests accurately represent the population from which the sample was drawn.

9.10 Statistical Methods Used

The data were analyzed using the statistical software SPSS, and the following statistical methods were employed:

1. Conducting Validity and Reliability Tests: These included the following:
 - a. Pearson Correlation Coefficient: It was used to measure the degree of correlation and to calculate the internal consistency and construct validity coefficients of the questionnaire.
 - b. Cronbach's Alpha: It was used to determine the reliability of the questionnaire items.
 - c. Kolmogorov-Smirnov Test: It was used to test the normal distribution of the study variables.
2. Percentages and Frequencies: This procedure is primarily used to determine the frequency of categories of a variable and is utilized to describe the characteristics of the study sample.
3. Descriptive Statistical Methods: These were used to describe the characteristics of the study items through the following:
 - a. Arithmetic Mean: The arithmetic mean was calculated for each item, and the mean of the item was compared with the hypothetical mean of the study according to the Likert scale used.
 - b. Standard Deviation: This was used to determine the extent to which the responses of the study sample members to each item of the study variables deviated from their arithmetic mean. The closer the standard deviation is to zero, the more concentrated the responses are and the lower their dispersion on the scale.
 - c. Relative Weight (%): This was used to determine the percentage represented by the arithmetic mean by dividing the arithmetic mean by the scale used in the study and multiplying the result by one hundred percent.
4. One-Sample t-Test: This was used to test the level of the sample's responses to the items of the study dimensions and axes.
5. Simple Linear Regression Analysis: This was used to test the statistical significance of the study hypotheses through the following:
 - a. Correlation Coefficient (R): It is a statistical indicator used to determine the type and degree of the relationship between variables. The closer its value is to one, the stronger the relationship; whereas the closer its value is to zero, the weaker the relationship between the variables. The sign of the correlation coefficient also indicates the type of relationship. A positive sign indicates a positive relationship, while a negative sign indicates an inverse relationship.
 - b. Coefficient of Determination (R Square): It is an indicator used to determine the model's ability to explain the relationship between variables. The closer its value is to one, the better the model fits the relationship between the independent and dependent variables, and consequently, the greater the explanatory power of the independent variables. Conversely, the closer its value is to zero, the weaker the model's ability to explain the relationship between the independent and dependent variables.

9.11 Study Scale

The degree of responses was measured using a five-point Likert Scale, ranging from "Strongly Disagree" at the lowest level to "Strongly Agree" at the highest level, according to the following scale:

Table 8: Five-Point Likert Scale Used in the Study

1	2	3	4	5
Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree

Based on the following equation: (Upper Limit – Lower Limit) divided by the Upper Limit, i.e., (5–1) divided by (5), the interval coefficient is obtained as (0.80). By adding the interval length, which is (1), in the five-point Likert scale to the coefficient, the lower limit of the first category is obtained as (1.80). By repeatedly adding the coefficient to the lower limits of each category, the following five levels are obtained, as shown in Table ().

10 Analysis and Discussion of the Study Results

This chapter presents a detailed analysis of the findings reached by the current study regarding the impact

of leadership styles on decision-making quality at the University of Hail. It presents the results related to the personal and functional characteristics of the respondents, as well as the study questions and hypotheses, based on the appropriate statistical analyses, as follows:

10.1 Personal and Functional Characteristics of the Respondents

The following section presents the frequency distribution results of the personal and functional characteristics of the study sample members:

Table 9: illustrates the frequency distribution of the personal and functional characteristics of the study sample members

Variable	Description	Frequency	Percent
Gender	Male	138	37.7%
	Female	228	62.3%
Age	Less than 30 years	87	23.8%
	30–39 years	159	43.4%
	40 years and above	120	32.8%
Academic Qualification	Post-secondary Diploma	36	9.8%
	Bachelor's Degree	225	61.5%
	Master's Degree	96	26.2%
	Doctorate	9	2.5%
Years of Experience	Less than 5 years	117	32.0%
	5 to less than 10 years	117	32.0%
	10 to less than 15 years	90	24.6%
	More than 15 years	42	11.5%
Administrative Level	Director General	21	5.7%
	Department Manager	24	6.6%
	Head of Department	57	15.6%
	Specialist	264	72.1%

The following can be observed from Table (9):

- The results showed that the majority of the study sample members were female, accounting for (62.3%), while males accounted for (37.7%). This indicates that the study sample included both genders, with a higher proportion of females than males.
- Regarding age, the results showed that the majority of the sample members belonged to the age group of (30–39 years), accounting for (43.4%) of the total sample, followed by the age group of (40 years and above) at (32.8%), and then the group of (less than 30 years) at (23.8%). This distribution reflects diversity in the age groups of the sample members, with greater representation of those aged 30 years and above.
- The results also showed, in terms of academic qualification, that the majority of the sample members held a Bachelor's degree, accounting for (61.5%), followed by those holding a Master's degree at (26.2%), and then those holding a post-secondary Diploma at (9.8%). Doctorate holders came last, accounting for (2.5%). This indicates that the majority of the sample members possess university-level academic qualifications, which is consistent with the nature of the academic and administrative environment at the University of Hail.
- Regarding years of experience, it is evident that the categories of (less than 5 years) and (5 to less than 10 years) ranked first, with each accounting for (32.0%), followed by the category of (10 to less than 15 years) at (24.6%), and then the category of (more than 15 years) at (11.5%). This distribution reflects diversity in the levels of experience among the sample members, with a relatively higher

proportion of respondents having moderate levels of experience.

- Regarding the administrative level, the results showed that the category of specialists ranked first, accounting for (72.1%), followed by department heads at (15.6%), then department managers at (6.6%), while general managers ranked last at (5.7%). This indicates that the majority of the study sample members belonged to the specialist category, with representation from the other administrative levels at the university.

10.2 Study Questions

The data were analyzed by calculating the arithmetic means, standard deviations, and relative weights, and by analyzing the sample responses according to the various dimensions and axes of the study, as follows:

10.2.1 Results Related to the First Question and Their Discussion: To answer the first question, which states:

What is the level of application of leadership styles at the University of Hail in terms of the following?

The data were analyzed by calculating the arithmetic means, standard deviations, and relative weights, and by analyzing the sample responses according to its various dimensions. The results were as follows:

Table (10) presents the arithmetic means, standard deviations, and relative weights of the study sample's opinions regarding the items of the "Transformational Leadership" dimension, as follows:

Table 10: Arithmetic Means, Standard Deviations, and Relative Weights of the Items of the "Transformational Leadership" Dimension

N	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	The leader inspires employees to achieve a clear future vision for the university.	4.66	.570	93.1%	Very High	1
2	The leader encourages innovation and the presentation of new ideas to improve work at the university.	4.40	.698	88.0%	Very High	4
3	The leader is concerned with developing employees' capabilities and improving their skills.	4.38	.694	87.5%	Very High	5

N	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
4	The leader promotes a spirit of commitment and belonging among employees at the university.	4.48	.669	89.5%	Very High	2
5	The leader deals with problems in a motivational manner that promotes positive change.	4.41	.699	88.2%	Very High	3
All Statements		4.46	.523	89.3%	Very High ¹	

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (10) show that the overall level of application of leadership styles at the University of Hail for the Transformational Leadership dimension was very high, based on the responses, with an arithmetic mean of (4.46), a standard deviation of (.523), and a relative weight of (89.3%), indicating a very high level. This indicates that the sample members perceive that practices associated with the transformational leadership style are implemented at a very high level at the university. The arithmetic means of all items measuring the Transformational Leadership dimension ranged between (4.38–4.66), and all these values exceeded the measurement criterion adopted for this study, which was (3.4), indicating a very high level.

Item (1) ranked first as the most prominent item, stating: “The leader inspires employees to achieve a clear future vision for the university.” Its level of application was very high, with a relative weight of (93.1%). This reflects the high appreciation of the sample members for the role of leaders in inspiring employees and directing them toward a clear future vision for the university. Item (4) ranked second in terms of its level of application, stating: “The leader promotes a spirit of commitment and belonging among employees at the university.” Its level of application was very high, with a relative weight of (89.5%). Item (5) ranked third, stating: “The leader deals with problems in a motivational manner that promotes positive change.” Its level of application was very high, with a relative weight of (88.2%). These results indicate that university leaders are concerned with strengthening employees’ sense of

belonging and commitment, in addition to employing motivational approaches when dealing with problems and supporting positive change.

It is evident that the least frequently reported item among the study sample members was Item (3), which states: “The leader is concerned with developing employees’ capabilities and improving their skills.” It ranked last, with a relative weight of (87.5%). This indicates that the sample members nevertheless highly appreciate the leaders’ concern with developing employees’ capabilities and improving their skills, as it also achieved a very high level of application in terms of its prevalence among the sample members.

The researcher believes that the high level of application of transformational leadership at the University of Hail may be attributed to the university leaders’ interest in directing employees toward achieving a clear future vision, strengthening their institutional commitment and sense of belonging, as well as encouraging positive change and innovation in the work environment.

10.2.1.1 First Dimension: Transformational Leadership 10.2.1.2 Second Dimension: Transactional Leadership

Table (11) presents the arithmetic means, standard deviations, and relative weights of the study sample’s opinions regarding the items of the “Transactional Leadership” dimension, as follows:

Table 11: Arithmetic Means, Standard Deviations, and Relative Weights of the Items of the “Transactional Leadership” Dimension

N	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	The leader clearly explains to employees what is expected of them.	4.33	.719	86.6%	Very High	2
2	The leader relies on a reward system in exchange for good performance.	4.34	.723	86.9%	Very High	1

N	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
3	The leader intervenes when errors occur or when there is a deviation from standards.	4.13	.725	82.6%	High	5
4	The leader links the achievement of university goals with the incentives granted to employees.	4.23	.767	84.6%	Very High	4
5	The leader monitors employees' performance to ensure compliance with university regulations.	4.31	.759	86.2%	Very High	3
All Statements		4.27	.582	85.4%	Very High	

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (11) indicate that the overall level of application of the Transactional Leadership dimension among the leadership styles at the University of Hail was very high, based on the responses, with an arithmetic mean of (4.27), a standard deviation of (.582), and a relative weight of (85.4%). This indicates that the study sample members perceive that practices associated with the transactional leadership style are implemented at a very high level at the university. All items measuring the Transactional Leadership dimension achieved high or very high levels, with arithmetic means ranging between (4.13–4.34). All these values exceeded the measurement criterion adopted for this study, which was (3.4). Four items achieved a very high level of application, while one item achieved a high level of application. This reflects the generally high level of application of transactional leadership practices from the perspective of the study sample members.

Item (2) ranked first as the most prominent item, stating: “The leader relies on a reward system in exchange for good performance.” Its level of application was very high, with a relative weight of (86.9%). This result indicates the high appreciation of the sample members for the leaders’ reliance on rewards as a means of motivating employees and enhancing good performance. Item (1) ranked second in terms of its level of application, stating: “The leader clearly explains to employees what is expected of them.” Its level of application was very high, with a relative weight of (86.6%). Item (5) ranked third, stating: “The leader monitors employees’ performance to ensure compliance with university regulations.” Its level of application was very high, with a relative weight of (86.2%). These two results reflect the leaders’ interest in clearly defining performance expectations for employees, in addition to monitoring their performance to ensure compliance with the regulations and systems in force at the university.

It is evident that the least frequently reported item among the study sample members was Item (3), which

states: “The leader intervenes when errors occur or when there is a deviation from standards.” It ranked last, with a relative weight of (77%), and nevertheless achieved a high level of application in terms of its prevalence among the sample members. This indicates that leadership intervention to address errors and deviations from standards is considered a highly practiced behavior from the perspective of the study sample members.

The researcher believes that the high level of application of transactional leadership at the University of Hail may indicate that university leaders are concerned with clearly defining the tasks and expectations required of employees, monitoring their performance levels, and linking good performance to incentives and rewards. The fact that the item related to the reward system ranked first also indicates the importance of performance-based motivation in leadership practices. Meanwhile, the fact that intervention when errors or deviations from standards occur ranked last may reflect a greater focus by leaders on motivation, guidance, and continuous monitoring compared with corrective intervention after errors occur.

The finding of the current study is consistent with the study by [5] and the study by [6] in terms of the high level of leadership practices and their relationship with the decision-making process. However, it differs from these studies in terms of the context and the leadership dimensions examined by each study.

10.2.1.3 Third Dimension: Participative Leadership

Table (12) presents the arithmetic means, standard deviations, and relative weights of the study sample’s opinions regarding the items of the “Participative Leadership” dimension, as follows:

Table 12: Arithmetic Means, Standard Deviations, and Relative Weights of the Items of the “Participative Leadership” Dimension

N	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	The leader involves university employees in the decision-making process.	4.16	.815	83.3%	High	2
2	The leader listens to employees’ opinions before making important decisions.	4.11	.852	82.3%	High	4
3	The leader encourages open dialogue and discussion among team members.	4.18	.801	83.6%	High	1
4	The leader provides employees with the opportunity to freely express their opinions and suggestions.	4.14	.814	82.8%	High	3
5	The leader relies on employee participation in addressing problems.	4.07	.917	81.5%	High	5
All Statements		4.13	.691	82.7%	High	-

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (12) indicate that the overall level of application of leadership styles at the University of Hail in the Participative Leadership dimension was high, based on the responses, with an arithmetic mean of (4.13), a standard deviation of (.691), and a relative weight of (82.7%), indicating a high level. All items measuring this dimension achieved a high level, with arithmetic means ranging between (4.07–4.18). All these values exceeded the measurement criterion adopted for this study, which was (3.4), and indicated a high level of application.

Item (3) ranked first as the most prominent item, stating: “The leader encourages open dialogue and discussion among team members.” Its level of application was high, with a relative weight of (83.6%). This indicates the leaders’ interest in providing a work environment that encourages dialogue, exchange of opinions, and discussion among team members. Item (1) ranked second in terms of its level of application, stating: “The leader involves university employees in the decision-making process,” with a relative weight of (83.3%) and a high level of application. Item (4) ranked third, stating: “The leader provides employees with the opportunity to freely express their opinions and suggestions,” with a high level of application and a relative weight of (82.8%). This indicates that university leaders provide employees with opportunities to express their opinions and suggestions and to participate in the work environment.

It is evident that the least frequently reported item among the study sample members was Item (5), which states: “The leader relies on employee participation in addressing problems.” It ranked last, with a relative weight

of (81.5%). Although it was the least frequently reported item, it nevertheless achieved a high level of application. This indicates that employee participation in addressing problems is considered a highly practiced leadership behavior at the University of Hail; however, it was relatively lower than the other participative leadership practices. This may indicate a need to further enhance employees’ direct participation in analyzing problems and proposing appropriate solutions.

The finding of the current study is consistent with the study by [6] in terms of the high level of leadership practices and their role in supporting the decision-making process. It is also generally consistent with [14] study, which showed a high level of leadership practices in the university environment. The current study differs from the study by [17] in terms of the differences in the level and conditions of applying leadership styles according to the study context and the decision-making situation, as well as in terms of the leadership dimensions examined by each study.

10.2.1.4 Fourth Dimension: Collaborative Leadership

Table (13) presents the arithmetic means, standard deviations, and relative weights of the study sample’s opinions regarding the items of the “Collaborative Leadership” dimension, as follows:

Table 13: Arithmetic Means, Standard Deviations, and Relative Weights of the Items of the “Collaborative Leadership” Dimension

N	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	The leader promotes cooperation among different departments at the university.	4.29	.719	85.7%	Very High	1
2	The leader works to build partnership relationships within the work environment.	4.19	.729	83.8%	High	2
3	The leader encourages knowledge sharing among employees.	4.17	.755	83.4%	High	3
4	The leader seeks to resolve conflicts through consensus and dialogue.	4.11	.819	82.1%	High	4
5	The leader supports teamwork to achieve common goals.	4.09	.759	81.8%	High	5
All Statements		4.17	.627	83.4%	High	-

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (13) indicate that the overall level of application of the Collaborative Leadership dimension among the leadership styles at the University of Hail was high, based on the responses, with an arithmetic mean of (4.17), a standard deviation of (.627), and a relative weight of (83.4%), indicating a high level. All items measuring this dimension achieved a high level except for one item, which achieved a very high level. The arithmetic means ranged between (4.09–4.29), and all these values exceeded the measurement criterion adopted for this study, which was (3.4).

Item (1) ranked first as the most prominent item, stating: “The leader promotes cooperation among different departments at the university.” Its level of application was very high, with a relative weight of (85.7%). This indicates the leaders’ interest in strengthening cooperation and coordination among the different departments within the university, thereby contributing to greater integration in work. Item (2) ranked second in terms of its level of application, stating: “The leader works to build partnership relationships within the work environment.” Its level of application was high, with a relative weight of (83.8%). This demonstrates the leaders’ interest in building relationships based on cooperation and partnership among employees within the work environment. Item (3) ranked third, stating: “The leader encourages knowledge sharing among employees.” Its level of application was high, with a relative weight of (83.4%). This indicates the leaders’ interest in encouraging the exchange of knowledge and experience among employees and benefiting from them to improve work performance.

It is evident that the least frequently reported item among the study sample members was Item (5), which states: “The leader supports teamwork to achieve common goals.” It ranked last, with a relative weight of (81.8%). Although it ranked last, it achieved a high level of application. This indicates that supporting teamwork is a highly practiced leadership behavior; however, it was relatively lower than the other collaborative leadership practices. This may indicate the importance of further strengthening teamwork and integration among employees to achieve the university’s common goals.

The finding of the current study is consistent with [14] study, which addressed leadership and its relationship with decision-making styles in the university environment, and with [6] study, which emphasized the importance of communication and interaction between leaders and employees in supporting the decision-making process.

At the Overall Level of the Results Obtained in Answering the First Question, Which States: What Is the Level of Application of Leadership Styles at the University of Hail?

Table (14) presents the arithmetic means, standard deviations, and relative weights of the study sample’s responses to the items related to the “Level of Application of Leadership Styles at the University of Hail,” as follows:

Table 14: Arithmetic Means, Standard Deviations, and Relative Weights of the Items Related to the Level of Application of Leadership Styles at the University of Hail

Level of Application of Leadership Styles	N	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
First Dimension: Transformational Leadership	366	4.46	.523	89.3%	Very High	First
Second Dimension: Transactional Leadership	366	4.27	.582	85.4%	Very High	Second
Third Dimension: Participative Leadership	366	4.13	.691	82.7%	High	Fourth
Fourth Dimension: Collaborative Leadership	366	4.17	.627	83.4%	High	Third
Overall Level of Application of Leadership Styles at the University of Hail	366	4.26	.492	85.2%	Very High	—

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (14) show that the overall level of application of leadership styles at the University of Hail was high according to the responses, with an arithmetic mean of (4.26), a standard deviation of (.492), and a relative weight of (85.2%), indicating a very high level. All dimensions measuring the level of application of leadership styles achieved high or very high levels. In terms of ranking, the Transformational Leadership dimension ranked first, with a very high level and a relative weight of (89.3%). The Transactional Leadership dimension ranked second, with a relative weight of (85.4%) and a very high level. The Collaborative Leadership dimension ranked third, with a high level and a relative weight of (83.4%), while the Participative Leadership dimension ranked fourth, with a relative weight of (82.7%) and a high level.

The current study shows high levels in the application of leadership styles at the University of Hail, which is consistent with some previous studies, such as the study by [26], which found a high level of application of transformational leadership among secondary school principals in Tabuk, with a mean of (3.97). It is also generally consistent with [6] study, which examined administrative leadership style and its relationship with the decision-making process and emphasized the importance of leadership practices and communication between leaders and employees in supporting the decision-making process.

The current study differs from the study by Amayrah and Ashour, which found that the level of transformational leadership practices was moderate. This difference may be explained by differences in the organizational environment, population, and sample used in each study.

10.2.2 Results Related to the Second Question and Their Discussion:

To answer the second question, which states: What is the level of decision-making quality at the University of Hail in terms of the following?

The data were analyzed by calculating the arithmetic means, standard deviations, and relative weights, and by analyzing the sample responses according to its various dimensions. The results were as follows:

10.2.2.1 First Dimension: Problem Diagnosis

Table (15) presents the arithmetic means, standard deviations, and relative weights of the study sample's opinions regarding the items of the "Problem Diagnosis" dimension, as follows:

Table 15: Arithmetic Means, Standard Deviations, and Relative Weights of the Items of the “Problem Diagnosis” Dimension

	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	The administration ensures that the problem is accurately identified before beginning to search for solutions.	4.54	.668	90.8%	Very High	1
2	A distinction is made between the symptoms of the problem and its root causes within the administration.	4.35	.677	87.0%	Very High	2
3	The administration relies on systematic analysis to understand the dimensions and impacts of the problem.	4.30	.766	85.9%	Very High	3
4	Relevant stakeholders are involved in discussing and diagnosing the nature of the problem.	4.30	.787	85.9%	Very High	4
5	The scope and boundaries of the problem are clearly defined before moving to the stage of generating alternatives.	4.27	.821	85.4%	Very High	5
All Statements		4.35	.582	87.0%	Very High	

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (15) show that the overall level of decision-making quality at the University of Hail for the Problem Diagnosis dimension was high according to the responses, with an arithmetic mean of (4.35), a standard deviation of (.582), and a relative weight of (87.0%), indicating a very high level. This indicates that problem diagnosis is considered an important and noticeable component of decision-making at the university.

All items measuring this dimension achieved a very high level, with arithmetic means ranging between (4.27–4.54). All these values exceeded the measurement criterion adopted for this study, which was (3.4), indicating a very high level.

Item (1) ranked first as the most prominent item, stating: “The administration ensures that the problem is accurately identified before beginning to search for solutions.” Its level of application was very high, with a relative weight of (90.8%). This indicates the administration’s interest in accurately identifying the problem before proceeding to search for solutions. Item (2) ranked second in terms of its level of application, stating: “A distinction is made between the symptoms of the problem and its root causes within the administration.” Its

level of application was very high, with a relative weight of (87.0%), indicating the administration’s interest in distinguishing between the manifestations of a problem and its underlying causes. Item (3) ranked third, stating: “The administration relies on systematic analysis to understand the dimensions and impacts of the problem.” Its level of application was high, with a relative weight of (85.9%), reflecting the administration’s reliance on systematic analysis to understand problems and their various dimensions.

It is evident that the least frequently reported item among the study sample members was Item (5), which states: “The scope and boundaries of the problem are clearly defined before moving to the stage of generating alternatives.” It ranked last, with a relative weight of (85.4%), while still achieving a very high level of application. Its last ranking does not indicate weak application; rather, it indicates that it was relatively lower than the other problem-diagnosis practices. This may indicate the importance of further strengthening practices related to clearly defining the scope and boundaries of problems before moving to the stage of generating alternatives.

The current study results indicate that the level of decision-making quality at the University of Hail, particularly with regard to the first dimension, Problem Diagnosis, was very high.

10.2.2.2 Second Dimension: Information Collection and Analysis

Table (16) presents the arithmetic means, standard deviations, and relative weights of the study sample's opinions regarding the items of the "Information Collection and Analysis" dimension, as follows:

Table 16: Arithmetic Means, Standard Deviations, and Relative Weights of the Items of the "Information Collection and Analysis" Dimension

	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	The administration ensures that sufficient information is collected before making any decision.	4.24	.759	84.8%	Very High	3
2	Available data are analyzed using appropriate scientific methods.	4.24	.791	84.8%	Very High	4
3	The administration relies on reliable information sources when studying problems.	4.27	.726	85.4%	Very High	2
4	The accuracy of information is verified before it is used in decision-making.	4.20	.797	83.9%	Very High	5
5	The university uses information systems to support the decision-making process.	4.33	.707	86.6%	Very High	1
All Statements		4.25	.592	85.1%	Very High	-

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (16) indicate that the overall level of decision-making quality at the University of Hail in the Information Collection and Analysis dimension was high according to the responses, with an arithmetic mean of (4.25), a standard deviation of (.592), and a relative weight of (85.1%), indicating a very high level. All items measuring the Information Collection and Analysis dimension achieved a very high level. The arithmetic means of the dimension ranged between (3.72–3.97), and all these values exceeded the measurement criterion adopted for this study, which was (3.4).

Item (5) ranked first as the most prominent item, stating: "The university uses information systems to support the decision-making process." Its level of application was very high, with a relative weight of (86.6%). This indicates the administration's interest in relying on information systems to support the decision-making process. Item (3) ranked second in terms of its level of application, stating: "The administration relies on reliable information sources when studying problems." Its level of application was very high, with a relative weight of (85.4%), indicating the

administration's interest in relying on reliable information sources when studying problems and supporting the decision-making process. Item (1) ranked third, stating: "The administration ensures that sufficient information is collected before making any decision." Its level of application was very high, with a relative weight of (84.8%), reflecting the administration's interest in providing the necessary information before initiating the decision-making process.

It is evident that the least frequently reported item among the study sample members was Item (4), which states: "The accuracy of information is verified before it is used in decision-making," with a relative weight of (83.9%). Nevertheless, it achieved a very high level of application. This indicates that verifying the accuracy of information is a highly practiced behavior, although it ranked relatively last compared with the other information collection and analysis practices. This may indicate the importance of further strengthening mechanisms for verifying information accuracy before using it in the decision-making process.

The current study results indicate that the level of decision-making quality at the University of Hail, particularly with regard to the second dimension, Information Collection and Analysis, was very high.

10.2.2.3 Third Dimension: Generation of Alternatives

Table (17) presents the arithmetic means, standard deviations, and relative weights of the study sample's opinions regarding the items of the "Generation of Alternatives" dimension, as follows:

Table 17: Arithmetic Means, Standard Deviations, and Relative Weights of the Items of the "Generation of Alternatives" Dimension

	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	Several solutions are proposed when facing an organizational problem.	4.32	.682	86.4%	Very High	1
2	The administration encourages creative thinking when proposing alternatives.	4.32	.682	86.4%	Very High	2
3	Employees participate in proposing multiple solution options.	4.29	.672	85.7%	Very High	4
4	The administration relies on generating and studying several alternatives before selecting the appropriate solution.	4.26	.723	85.2%	Very High	5
5	The advantages and disadvantages of each alternative are analyzed before making a decision.	4.30	.701	86.1%	Very High	3
All Statements		4.30	.569	86.0%	Very High	-

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (17) indicate that the overall level of decision-making quality at the University of Hail in the Generation of Alternatives dimension was very high according to the responses, with an arithmetic mean of (4.30), a standard deviation of (.569), and a relative weight of (86.0%), indicating a very high level. All items measuring the Generation of Alternatives dimension achieved a very high level, with arithmetic means ranging between (4.26–4.32). All these values exceeded the measurement criterion adopted for this study, which was (3.4).

Item (1) ranked first as the most prominent item, stating: "Several solutions are proposed when facing an organizational problem." Its level of application was very high, with a relative weight of (86.4%). This indicates the administration's interest in proposing more than one solution when facing organizational problems. Item (2) ranked second in terms of its level of application, stating: "The administration encourages creative thinking when proposing alternatives." Its level of application was very high, with a relative weight of (86.4%), reflecting the administration's interest in encouraging creative thinking

when generating alternatives. Item (5) ranked third, stating: "The advantages and disadvantages of each alternative are analyzed before making a decision." Its level of application was very high, with a relative weight of (86.1%), indicating an interest in examining the advantages and disadvantages of alternatives before comparing and selecting among them.

It is evident that the least frequently reported item among the study sample members was Item (4), which states: "The administration relies on generating and studying several alternatives before selecting the appropriate solution." It ranked last, with a relative weight of (85.2%). Despite ranking last, it achieved a very high level of application. This indicates that studying multiple alternatives before selecting the appropriate solution is a highly practiced behavior, although it was relatively lower than the other practices related to generating alternatives.

The current study results indicate that the level of decision-making quality at the University of Hail, particularly with regard to the third dimension, Generation of Alternatives, was very high. This indicates a high level

of practice in generating alternatives within the decision-making process at the University of Hail.

(Evaluation of Alternatives and Selection of the Most Table (18) presents the calculation of the arithmetic means, standard deviations, and relative weights of the study sample's responses to the items related to the dimension

“Evaluation of Alternatives and Selection of the Most Appropriate Alternative,” as follows:

Appropriate Alternative)

10.2.2.4 Fourth Dimension: Evaluation of Alternatives and Selection of the Most Appropriate Alternative

Table 18: presents the Arithmetic Means, Standard Deviations, and Relative Weights of the Statements of the Dimension

	Statement	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
1	The available alternatives are evaluated according to clear and predetermined criteria.	4.36	.715	87.2%	Very High	1
2	Alternatives are compared based on a cost-benefit analysis for each option.	4.30	.710	85.9%	Very High	3
3	The potential risks of each alternative are taken into consideration before selection.	4.28	.750	85.6%	Very High	4
4	The selection of the most appropriate alternative is based more on objective data than on personal opinions.	4.30	.789	86.1%	Very High	2
5	The alternative that achieves the university's objectives with the highest efficiency and effectiveness and the lowest possible risk is selected.	4.22	.764	84.4%	Very High	5
All Statements		4.29	.635	85.8%	Very High	-

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS program.

The results in Table (18) indicate that the overall degree of decision-making quality at the University of Hail for the dimension “Evaluation of Alternatives and Selection of the Most Appropriate Alternative” appeared at a high level according to the responses, with an arithmetic mean of (4.29), a standard deviation of (.635), and a relative weight of (85.8%), with a Very High level. This indicates the effectiveness of this dimension in achieving decision-making quality at the university. All statements measuring the dimension “Evaluation of Alternatives and Selection of the Most Appropriate Alternative” were rated at a Very High level, as the arithmetic means for the dimension ranged between (4.22–4.36). All these values exceed the measurement criterion adopted for this study, which is (3.4).

Statement No. (1) ranked first as the most important statement, which states: “The available alternatives are evaluated according to clear and predetermined criteria.” Its level of application was Very High, with a relative weight of (87.2%), reflecting the administration's اهتمام with using clear and predetermined criteria when evaluating available alternatives. Statement No. (4) ranked second in terms of its level of application, which states: “The selection of the most

appropriate alternative is based more on objective data than on personal opinions.” Its level of application was Very High, with a relative weight of (86.1%), indicating the administration's orientation toward relying on objective data and information when selecting alternatives and limiting the influence of personal opinions in the selection process. Statement No. (2) ranked third, which states: “Alternatives are compared based on a cost-benefit analysis for each option.” Its level of application was Very High, with a relative weight of (85.9%), indicating the administration's اهتمام with comparing alternatives based on the benefits and costs they generate before making a decision.

It is evident that the least common practice among the study sample members was Statement No. (5), which states: “The alternative that achieves the university's objectives with the highest efficiency and effectiveness and the lowest possible risk is selected.” It ranked last, with a relative weight of (84.4%). Despite ranking last, it achieved a Very High level of application, indicating that selecting the alternative that achieves the university's objectives efficiently and effectively while minimizing risks is a

practice that is implemented at a very high level; however, it was relatively lower compared with the other practices related to evaluating alternatives and selecting the most appropriate alternative.

The current study results indicate that the level of decision-making quality at the University of Hail, particularly with regard to the fourth dimension, "Evaluation of Alternatives and Selection of the Most Appropriate Alternative," was Very High. This reflects the administration's اهتمام with evaluating alternatives according to clear criteria, relying on objective data, and comparing costs and benefits, thereby supporting the selection of more appropriate alternatives for achieving the university's objectives.

At the Overall Level

The results obtained in response to the second research question, which states: "What is the level of decision-making quality at the University of Hail in the following dimensions?"

The table (18) presents the calculation of the arithmetic means, standard deviations, and relative weights of the study sample's responses to the statements concerning "The Level of Decision-Making Quality at the University of Hail," as follows:

Table 19: presents the Arithmetic Means, Standard Deviations, and Relative Weights of the Statements Concerning "The Level of Decision-Making Quality at the University of Hail"

	N	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
First Dimension: (Problem Diagnosis)	366	4.35	.582	87.0%	Very High	First
Second Dimension: (Information Collection and Analysis)	366	4.25	.592	85.1%	Very High	Fourth
Third Dimension: (Generation of Alternatives)	366	4.30	.569	86.0%	Very High	Second
Fourth Dimension: (Evaluation of Alternatives and Selection of the Most Appropriate Alternative)	366	4.29	.635	85.8%	Very High	Third
Overall Level of Decision-Making Quality at the University of Hail	366	4.30	.532	86.0%	Very High	—

Source: Prepared by the researcher based on the results of the 2026 field study and the outputs of the SPSS.v26 program.

The results in Table (19) show that the overall level of decision-making quality at the University of Hail appeared at a high level according to the responses, with an arithmetic mean of (4.30), a standard deviation of (.530), and a relative weight of (86.0%), with a Very High level. All dimensions measuring the level of Decision-Making Quality were rated at a Very High level.

According to the dimensions, the "Problem Diagnosis" dimension ranked first, with a Very High level and a relative weight of (87.0%). The "Generation of Alternatives" dimension ranked second, with a Very High level and a relative weight of (86.0%). The "Evaluation of Alternatives and Selection of the Most Appropriate Alternative" dimension ranked third, with a Very High level and a relative weight of (85.8%). Meanwhile, the "Information Collection and Analysis" dimension ranked

last, with a relative weight of (85.1%), and was also rated at a Very High level.

These results indicate that the level of decision-making quality at the University of Hail was generally high, with a clear elevation across all stages constituting the decision-making process. This result is generally consistent with the study by [7], which examined transformational leadership and decision-making quality and emphasized the importance of leadership and organizational practices in enhancing the quality of decisions. It is also generally consistent with the study by [18], which examined adaptive leadership and decision-making styles in the university environment and demonstrated a relationship between leadership dimensions and decision-making styles.

The results are also generally consistent with the study by [19], which found a statistically significant

positive relationship between digital transformation and the quality of data-driven decision-making, confirming the importance of the availability of information and systematic organizational practices in supporting decision quality.

The current study differs from previous studies in terms of examining decision-making quality as an integrated process that includes problem diagnosis, information collection and analysis, generation of alternatives, and evaluation of alternatives and selection of the most appropriate alternative, in addition to its application in the university environment at the University of Hail and its linkage to the leadership styles examined in the study.

10.2.3 Results Related to the Third Research Question and Their Discussion:

To answer the third research question, which states: “What is the effect of leadership styles on decision-making quality at the University of Hail in the following aspects?”

Data were analyzed by calculating the arithmetic means, standard deviations, and relative weights, and by analyzing the sample responses according to their different dimensions. The results were as follows:

Table 20: presents the Descriptive Statistical Analysis of the Study Dimensions and Factors Regarding the Effect of Leadership Styles on Decision-Making Quality at the University of Hail

Study Dimensions	N	Mean	Std. Deviation	Relative Weight %	Level of Application	Rank
First Dimension: Level of Application of Leadership Styles at the University of Hail	366	4.26	.492	85.2%	Very High	Second
Second Dimension: Level of Decision-Making Quality at the University of Hail	366	4.30	.532	86.0%	Very High	First
All Study Dimensions	366	4.28	.465	85.6%	Very High	

The results in Table (20) indicate that the overall mean of the study concerning the effect of leadership styles on decision-making quality at the University of Hail was (4.28), with a standard deviation of (.465) and a Very High level of effect, as the relative weight reached (85.6%).

According to the dimensions, the Decision-Making Quality at the University of Hail dimension ranked first, with an arithmetic mean of (4.30), a relative weight of (86.0%), and a Very High level. Meanwhile, the Application of Leadership Styles at the University of Hail dimension ranked second, with an arithmetic mean of (4.26), a relative weight of (85.2%), and a Very High level of effect.

10.3 Results Related to Hypothesis Testing

To test the study hypotheses, simple linear regression analysis was used, as follows.

10.3.1 First Main Hypothesis: There is no statistically significant effect of the application of leadership styles on achieving Decision-Making

Quality at the University of Hail. The following sub-hypotheses are derived from the first main hypothesis:

10.3.1.1 First Sub-Hypothesis: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of the application of leadership styles in the dimension of (Transformational Leadership) on Decision-Making Quality at the University of Hail, as follows:

The researcher used simple linear regression analysis to determine the causal effect between the independent variable, represented by the application of leadership styles in the dimension of (Transformational Leadership), and the dependent variable, represented by (Decision-Making Quality). The results were as follows:

Table 21: presents the Results of the Simple Linear Regression Estimation to Determine the Effect of Transformational Leadership on Decision-Making Quality

Simple Regression Analysis: Decision-Making Quality	R	R Square	β	F	Beta	Sig.
Transformational Leadership	.551a	.304	.560	158.616	.551	.000

and that the linear relationship model is statistically significant.

The following can be concluded from Table (21):

The results of the simple linear regression analysis indicate the existence of a statistically significant positive correlation between the application of leadership styles in the (Transformational Leadership) dimension and Decision-Making Quality, where the correlation coefficient reached ($R=.551$). This indicates that the higher the level of application of transformational leadership, the higher the level of Decision-Making Quality.

The value of the adjusted coefficient of determination was (.304), indicating that the transformational leadership dimension explains (30.4%) of the variance in Decision-Making Quality.

The results also showed that the unstandardized regression coefficient β was (.560), which is a positive value. This means that an increase of one unit in the application of transformational leadership leads to an increase of (.560) units in the level of Decision-Making Quality.

The standardized regression effect coefficient Beta was (.551), indicating a statistically significant positive effect of transformational leadership on Decision-Making Quality. This reflects that an increase in the level of application of transformational leadership is associated with an increase in the level of Decision-Making Quality.

The F-test, which is concerned with testing the significance of the model, showed a value of (158.616), which is statistically significant, as the significance level of the test was (0.000), which is lower than the significance level of 0.05. This indicates a good fit of the relationship

The researcher concludes by accepting the alternative hypothesis, which states: "There is a statistically significant effect of transformational leadership on Decision-Making Quality at the University of Hail," and rejecting the null hypothesis, which states: "There is no statistically significant effect of transformational leadership on Decision-Making Quality at the University of Hail."

The result of the current study, which demonstrated a statistically significant effect of transformational leadership on Decision-Making Quality, is consistent with the study by [7], which found a positive effect of transformational leadership on decision-making quality. It is also consistent with the study by [8], which emphasized the importance of transformational leadership in improving the efficiency and effectiveness of the decision-making process. These findings support the results of the current study that transformational leadership contributes to improving decision-making quality at the University of Hail.

10.3.1.2 Second Sub-Hypothesis: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of the application of leadership styles in the dimension of (Transactional Leadership) on Decision-Making Quality at the University of Hail, as follows:

The researcher used simple linear regression analysis to determine the causal effect between the independent variable, represented by the application of leadership styles in the dimension of (Transactional Leadership), and the dependent variable, represented by (Decision-Making Quality). The results were as follows:

Table 22: presents the Results of the Simple Linear Regression Estimation to Determine the Effect of Transactional Leadership on Decision-Making Quality

Simple Regression Analysis: Decision-Making Quality	R	R Square	β	F	Beta	Sig.
Transactional Leadership	.551a	.304	.560	158.616	.551	.000

The following can be concluded from Table (22):

The results of the simple linear regression analysis indicate the existence of a statistically significant positive correlation between the application of leadership styles in the (Transactional Leadership) dimension and Decision-Making Quality, where the correlation coefficient reached ($R=.541$). This indicates that the higher the level of application of transactional leadership, the higher the level of Decision-Making Quality.

The value of the adjusted coefficient of determination ($\text{Adjusted } R^2=.292$) indicates that the transactional leadership dimension explains (29.2%) of the variance in Decision-Making Quality.

The results also showed that the unstandardized regression coefficient β was (.494), which is a positive value. This means that an increase of one unit in the application of transactional leadership leads to an increase of (.494) units in the level of Decision-Making Quality.

The standardized regression effect coefficient Beta was (.541), indicating a statistically significant positive effect of transactional leadership on Decision-Making Quality. This reflects that an increase in the level of application of transactional leadership is associated with an increase in the level of Decision-Making Quality.

The F-test, which is concerned with testing the significance of the model, showed a value of (150.292), which is statistically significant, as the significance

level of the test was (0.000), which is lower than the significance level of 0.05. This indicates a good fit of the relationship and that the linear relationship model is statistically significant.

The researcher concludes by accepting the alternative hypothesis, which states: "There is a statistically significant effect of transactional leadership on Decision-Making Quality at the University of Hail," and rejecting the null hypothesis, which states: "There is no statistically significant effect of transactional leadership on Decision-Making Quality at the University of Hail."

The result of the current study, which demonstrated a statistically significant effect of transactional leadership on Decision-Making Quality, is consistent with the study by [5], which demonstrated an effect of leadership styles on decision-making, and with the study by [6], which found an effect of the administrative leadership style on the decision-making process. This agreement indicates the importance of leadership practices, including clarity of expectations, follow-up, and incentives, in supporting the decision-making process.

10.3.1.3 Third Sub-Hypothesis: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of the application of leadership styles in the dimension of (Participative Leadership) on Decision-Making Quality at the University of Hail, as follows:

The researcher used simple linear regression analysis to determine the causal effect between the independent variable, represented by the application of leadership styles in the dimension of (Participative Leadership), and the dependent variable, represented by (Decision-Making Quality). The results were as follows:

Table 23: presents the Results of the Simple Linear Regression Estimation to Determine the Effect of Participative Leadership on Decision-Making Quality

Simple Regression Analysis: Decision-Making Quality	R	R Square	β	F	Beta	Sig.
Participative Leadership	.509a	.259	.392	127.181	.509	.000

The following can be concluded from Table (23):

The results of the simple linear regression analysis indicate the existence of a statistically significant positive correlation between the application of leadership styles in the (Participative Leadership) dimension and Decision-Making Quality, where the correlation coefficient reached ($R=.509$). This indicates that the higher the level of application of participative leadership, the higher the level of Decision-Making Quality.

The value of the adjusted coefficient of determination (Adjusted $R^2=.259$) indicates that the participative leadership dimension explains (25.9%) of the variance in Decision-Making Quality.

The results also showed that the unstandardized regression coefficient β was (.392), which is a positive value. This means that an increase of one unit in the application of participative leadership leads to an increase of (.392) units in the level of Decision-Making Quality.

The standardized regression effect coefficient Beta was (.509), indicating a statistically significant positive effect of participative leadership on Decision-Making Quality. This reflects that an increase in the level of application of participative leadership is associated with an increase in the level of Decision-Making Quality.

The F-test, which is concerned with testing the significance of the model, showed a value of (127.181), which is statistically significant, as the significance level of the test was (0.000), which is lower than the significance level of 0.05. This indicates a good fit of the relationship and that the linear relationship model is statistically significant.

The researcher concludes by accepting the alternative hypothesis, which states: "There is a statistically significant effect of participative leadership on Decision-Making Quality at the University of Hail," and rejecting the null hypothesis, which states: "There is no statistically significant effect of participative leadership on Decision-Making Quality at the University of Hail."

The result of the current study, which demonstrated a statistically significant effect of participative leadership on Decision-Making Quality, is consistent with the study by [6], which emphasized the importance of continuous communication between superiors and subordinates in supporting the effectiveness of decision-making. It is also consistent with the study by Rabie [10], which concluded that strengthening democratic leadership and involving employees in decision-making contributes to improving the implementation of decisions. This further highlights the importance of participation, dialogue, and the exchange of opinions in enhancing decision-making quality.

10.3.1.4 Fourth Sub-Hypothesis: There is a statistically significant effect at the significance level ($\alpha \leq 0.05$) of the application of leadership styles in the dimension of (Collaborative Leadership) on Decision-Making Quality at the University of Hail, as follows:

The researcher used simple linear regression analysis to determine the causal effect between the independent variable, represented by the application of leadership styles in the dimension of (Collaborative Leadership), and the dependent variable, represented by (Decision-Making Quality). The results were as follows:

Table 24: presents the Results of the Simple Linear Regression Estimation to Determine the Effect of Collaborative Leadership on Decision-Making Quality

Simple Regression Analysis: Decision-Making Quality	R	R Square	β	F	Beta	Sig.
Collaborative Leadership	.530a	.281	.450	141.977	.530	.000

The following can be concluded from Table (24):

The results of the simple linear regression analysis indicate the existence of a statistically significant positive correlation between the application of leadership styles in the (Collaborative Leadership) dimension and Decision-Making Quality, where the correlation coefficient reached ($R=.530$). This indicates that the higher the level of application of collaborative leadership, the higher the level of Decision-Making Quality.

The value of the adjusted coefficient of determination ($\text{Adjusted } R^2=.281$) indicates that the collaborative leadership dimension explains (28.1%) of the variance in Decision-Making Quality. The results also showed that the unstandardized regression coefficient β was (.450), which is a positive value. This means that an increase of one unit in the application of collaborative leadership leads to an increase of (.450) units in the level of Decision-Making Quality. The standardized regression effect coefficient Beta was (.530), indicating a statistically significant positive effect of collaborative leadership on Decision-Making Quality. This reflects that an increase in the level of application of collaborative leadership is associated with an increase in the level of Decision-Making Quality. The F-test, which is concerned with testing the significance of the model, showed a value of (141.977), which is statistically significant, as the significance level of the test was (0.000), which is lower than the significance level of 0.05. This indicates a good fit of the relationship and that the linear relationship model is statistically significant.

The researcher concludes by accepting the alternative hypothesis, which states: "There is a statistically significant effect of collaborative leadership on Decision-Making Quality at the University of Hail," and rejecting the null hypothesis, which states: "There is no statistically significant effect of collaborative leadership on Decision-Making Quality at the University of Hail."

The result of the current study, which demonstrated a statistically significant effect of collaborative leadership on Decision-Making Quality, is consistent with the findings of

[7] regarding the importance of teamwork in enhancing decision-making quality. It is also generally consistent with the study by [18], which demonstrated a relationship between leadership dimensions and decision-making styles in the university environment. This can be explained by the fact that cooperation, knowledge sharing, and teamwork provide a supportive environment for making higher-quality decisions.

11. Summary of Study Results

11.1 Study Results

11.1.1 Field Results

11.1.1.1 Results Related to the Study Variables

The study results indicate that the overall mean regarding the effect of leadership styles on decision-making quality at the University of Hail was at a Very High level. The results show that the Decision-Making Quality at the University of Hail dimension ranked first with a high level of effect, while the Application of Leadership Styles at the University of Hail dimension ranked second and also demonstrated a high level. The results were as follows:

First: The study results for the dimensions of the level of application of leadership styles at the University of Hail are as follows:

1. It was found that the (Transformational Leadership) dimension appeared at a high level, ranking first with a relative weight of (89.3%). The highest-rated statement in this dimension was: "The leader inspires employees to achieve a clear future vision for the university," with a high level. The least frequently occurring statement among the study sample members for this dimension was: "The leader is concerned with developing employees' capabilities and improving their skills," which also received a high rating.
2. It was found that the (Transactional Leadership) dimension appeared at a high level, ranking second with a relative weight of (85.4%). The highest-rated statement in this dimension was: "The leader relies on a reward system in exchange for good

performance,” which received a high rating. The least frequently occurring statement among the study sample members for this dimension was: “The leader intervenes when errors occur or when there is a deviation from standards,” which also received a high rating.

3. It was found that the (Collaborative Leadership) dimension appeared at a high level, ranking third with a relative weight of (83.4%). The highest-rated statement in this dimension was: “The leader encourages dialogue and open discussion among members of the work team,” with a high level. The least frequently occurring statement among the study sample members for this dimension was: “The leader relies on employees’ participation in addressing problems,” which also received a high rating.
4. It was found that the (Participative Leadership) dimension appeared at a high level, ranking last with a relative weight of (82.7%). The highest-rated statement in this dimension was: “The leader encourages dialogue and open discussion among members of the work team,” with a high level. The least frequently occurring statement among the study sample members for this dimension was: “The leader relies on employees’ participation in addressing problems,” which also received a high rating.

Second: The study results for the dimensions of the level of decision-making quality at the University of Hail are as follows:

1. It was found that the (Problem Diagnosis) dimension appeared at a Very High level, ranking first with a relative weight of (87.0%). The highest-rated statement in this dimension was: “The administration ensures that the problem is accurately identified before beginning to search for solutions,” with a Very High level. The least frequently occurring statement among the study sample members for this dimension was: “The scope and boundaries of the problem are clearly defined before moving to the stage of generating alternatives,” which also received a Very High rating.
2. It was found that the (Generation of Alternatives) dimension appeared at a Very High level, ranking second with a relative weight of (86.0%). The highest-rated statement in this dimension was: “Several solutions are proposed when facing an organizational problem,” with a Very High level. The least frequently occurring statement among the study sample members for this dimension was:

“The administration relies on generating and studying several alternatives before selecting the appropriate solution,” which also received a Very High rating.

3. It was found that the (Evaluation of Alternatives and Selection of the Most Appropriate Alternative) dimension appeared at a Very High level, ranking third with a relative weight of (85.8%). The highest-rated statement in this dimension was: “The available alternatives are evaluated according to clear and predetermined criteria,” with a Very High level. The least frequently occurring statement among the study sample members for this dimension was: “The alternative that achieves the university’s objectives with the highest efficiency and effectiveness and the lowest possible risk is selected,” which also received a Very High rating.
4. It was found that the (Information Collection and Analysis) dimension appeared at a Very High level, ranking last with a relative weight of (85.1%). The highest-rated statement in this dimension was: “The university uses information systems to support the decision-making process,” with a Very High level. The least frequently occurring statement among the study sample members for this dimension was: “The accuracy of information is verified before it is used in decision-making,” which also received a Very High rating.

Results Related to the Study Hypotheses

Hypotheses Results

1. The results demonstrated a statistically significant effect of the application of leadership styles, represented by the (Transformational Leadership) dimension, on Decision-Making Quality at the University of Hail.
2. The results also demonstrated a statistically significant effect of the application of leadership styles, represented by the (Transactional Leadership) dimension, on Decision-Making Quality at the University of Hail.
3. The results demonstrated a statistically significant effect of the application of leadership styles, represented by the (Participative Leadership) dimension, on Decision-Making Quality at the University of Hail.
4. There was a statistically significant effect of the application of leadership styles, represented by the (Collaborative Leadership) dimension, on Decision-Making Quality at the University of Hail.

11.2 Study Recommendations

In light of the findings reached by the study, the researcher recommends the following:

1. Strengthening the application of effective leadership styles, particularly transformational leadership, given its positive effect on improving Decision-Making Quality at the University of Hail.
2. Focusing on developing employees' capabilities and enhancing their skills through continuous training programs that support institutional performance.
3. Developing incentive and reward systems and linking them to performance, thereby contributing to increasing employee motivation and improving performance quality.
4. Enhancing employee participation in problem-solving and decision-making, while encouraging dialogue and teamwork within the university.
5. Developing mechanisms for collecting and analyzing information and verifying its accuracy, and benefiting from decision-support systems in administrative decision-making.
6. Adopting clear scientific criteria for generating and evaluating alternatives and selecting the most appropriate alternative, thereby enhancing Decision-Making Quality.
7. Utilizing the study findings in developing university leadership programs in alignment with the objectives of the Saudi Vision 2030.

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