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The Effectiveness of Virtual Leadership Requirements in Saudi Universities Considering the Indicators of the National Center for E-Learning

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ABSTRACT

The study sought to determine the effectiveness of virtual leadership requirements in Saudi universities in light of the indicators of the National Center for E-Learning. The questionnaire was adopted in this research and was given to a sample of 33 faculty members at the University of Hail. The study used a descriptive analytical technique. The research came to the conclusion that the mathematical mean of the three study dimensions—ideal influence, inspirational motivation, and empowerment—had a high level of effectiveness and within a range of 68% to 84%.The results also showed the absence of obstacles, as the arithmetic mean of the field of obstacles was (2.42), which is in a weak degree. Through the results, it was found in the study procedures that there is an effectiveness of the requirements of virtual leadership at the University of Hail in the light of the indicators of the National Center for E-Learning.

Keywords: virtual leadership, Saudi universities, National Center for E-Learning.

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Introduction

Society today is facing a set of variables that made it necessary to move from the traditional society to the society of the information and communication revolution, and thus adopt new mechanisms related to virtual leadership (Mohebi, 2019). This society (Information & Communication Society (ICS)) is characterized by intense change and tremendous growth in all knowledge and information. This made virtual leadership an important reality in universities of all kinds, as it is an important tool in the processes of innovation and creativity in business, improving performance and the ability to speed up achievement (Marshall et al, 2020).

In the same context, and since administrative activities have gradually begun to shift from normal activities to electronic activities to take advantage of their advantages in providing administrative services or what is called electronic management, virtual leadership has become based on the technological and informational dimension (Cunha et al, 2020). The virtual leadership style is one of the leadership styles produced by scientific progress and technical development that enable universities to meet the challenges and modern developments through prior preparation by providing technical, informational and administrative skills efficiently and effectively to move from the current reality to the desired future reality represented by the information society (Bonsu et al, 2018).

According to the previous considerations, virtual leadership is the new trend in contemporary management, so the Kingdom of Saudi Arabia took the initiative to establish bodies for the transformation of e-government in its 2030 vision. On the other hand, the National Center for Digital Certification was established in 1422 H, which enables users of electronic government transactions to conduct their transactions with ease and reliability, and enables the authorized entity to seal, sign and encrypt electronically. As a result of these efforts, the Kingdom of Saudi Arabia has reached advanced ranks in digital government transformation according to the Global Competitiveness Reports 2020 (Schwab, 2018) and the Digital Transformation Achievements Reports 2020, (Transformation Program 2020, 2016).

There were also aspirations for the Kingdom of Saudi Arabia, which represent a historical challenge for building and developing administrative leaders, to assume the tasks of leading comprehensive development paths, and to launch them towards a promising future driven by the passion for leadership. Since the rational leadership believes in the importance of ambitious national leaders, and their profound impact on the future industry, the Honorable Council of Ministers Resolution No. (556) dated 25/12/1437 AH was issued to establish the Center for the Preparation and Development of Administrative Leaders at the Institute of Public Administration. In anticipation of a promising future that fulfills hopes and raises the level of aspirations, the Honorable Council of Ministers Resolution No. (103) dated 20/2/1441 AH was issued changing the name of the Administrative Leadership Development and Preparation Center to the Administrative Leadership Development Academy, to support and achieve the leading role entrusted to the Academy to develop national

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leaders. This great support will advance the Academy's journey towards broader horizons and greater national ambitions (Institute of Public Administration, 2019).

Accordingly, it becomes necessary for Saudi universities to develop thinking towards employing virtual leadership patterns, information skills and e-learning applications so that they can positively deal with the latest scientific developments and benefit from them. Here, Bell et al (2019) pointed out that the world is changing rapidly, and the global system is undergoing unprecedented qualitative transformations in all fields, which requires thinking about how to develop the university institution to keep pace with these changes in modern leadership patterns. Accordingly, the responsibilities of Saudi universities are growing in responding to the challenges of these developments related to virtual leadership and modern management, and working to develop them and absorb their applications. Saudi universities should be more diversified in their subjects in line with modern leadership styles.

This means that the search to know the reality of applying the requirements of virtual leadership in Saudi universities in the light of the National Center for E-Learning's indicators has its justifications. This includes the necessity of having policies that help develop and modernize the university institution; So that its outputs become capable of creativity, innovation and keeping pace with scientific and technological developments.

Problem of the Study

In its vision 2030, the Kingdom of Saudi Arabia directed the transformation of e-government, and has drawn up all policies and strategies to ensure the success of this transformation in all sectors. However, and despite the superiority of ten Saudi universities in the (QS World University Rankings) and the Times Higher Education 2021 rankings (Brankovic et al, 2018), leadership in universities is still traditional, not virtual.

One of the justifications for the transformation of universities to virtual leadership is UNESCO's survey of universities currently facing to verify their ability to meet the requirements of sustainability and competitiveness (Loucks & Ozogul, 2020). Here, McCaffery (2018) pointed out the lack of modern practical applications of technology transfer from theoretical description to practical application, in addition to the lack of future studies that produced an applied model for virtual leadership. Since Saudi public universities have to flourish and expand their foundation that complies with the current advancements in science in the world to keep up with everything that is emerging on the international scene in relation to modern leadership patterns; only by developing its systems, programmes, and policies in line with these advances can this be possible.

Hence, the foregoing calls the researcher to consider the reality of the application of virtual leadership requirements in Saudi universities considering the indicators of the National Center for E-Learning, as part of the process of assessing and

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comprehending the situation of Saudi universities towards the application of virtual leadership. Accordingly, the study is exemplified by the below major question:

What is the effectiveness of virtual leadership requirements in Saudi universities considering the indicators of the National Center for E-Learning?

Questions

1. What are the requirements for applying virtual leadership in Saudi universities considering the indicators of the National Center for E-Learning according to the faculty members' perspective?
2. What are the obstacles to applying virtual leadership in Saudi universities in light of the indicators of the National Center for E-Learning according to the faculty members' perspective?

Objective

The aim of this research is to identify the requirements for the application of virtual leadership in Saudi universities considering the indicators of the National Center for E-Learning, in addition to revealing the obstacles to the application of virtual leadership in Saudi universities considering the indicators of the National Center for E-Learning.

Significance

The theoretical study's significance can be attributed to the way it addresses the problem of virtual leadership, which is one of the important topics as it is one of the main entrances that achieve digital transformation for higher education and keep pace with the spirit of the age, competitive advantage and the requirements of Vision 2030. This study will also contribute to linking the two variables of applying virtual leadership in Saudi universities and the variable indicators of the National Center for E-Learning. Moreover, the study will attempt to provide an avenue for researchers to discover new research gaps related to the application of virtual leadership. The practical importance is also represented in its contribution to the formulation of a proposed scientific methodology for the application of virtual leadership in Saudi universities, in addition to an attempt to achieve the objectives of the human capacity development program to qualify university leaders to keep pace with the changes of the era related to the virtual world.

Terms of the Study

The concept of leadership: Societies have been interested in leadership since ancient times, as it is, as Allaq (2019) sees it, "the process of influencing the behavior of others to reach the achievement of common and desirable goals."

Virtual Leadership: defined by Dincer & Yuksel (2019) as a social process led by information technology, with the aim of changing the intent of individuals, groups, and organizations. Newman et al (2020) defined it as "the process of social impact, which includes all the distant and proximal courses, mediated by information

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technology and which changes attitudes, behaviour, thinking and performance, and thus is the ability to use technology effectively for personal organizational purposes.

University: The Saudi university system defines it in its third article as "a public academic institution with a legal personality that is financially and administratively independent, contributes to the implementation of the state's educational policy in accordance with the provisions of the system, and does not aim for profit (Ministry of Education, 2020).

National E-Learning Center: An independent center established by Cabinet Decision No. (35) in 2019, aims to increase digital transformation in education, invest in new technologies, and facilitate participation in creating additional value for innovation-based education (National Center for E-Learning, 2021).

Delimitations

The study was conducted in University of Hail in Saudi Arabia. This university was chosen for its relevance to the subject of the study. In 2022, the University of Hail teaching staff each received a copy of the study's instrument, with the aim to recognize the reality of the application of virtual leadership in Saudi universities, and determining the basic dimensions of the reality of the application of virtual leadership in the light of the indicators of the National Center for E-Learning.

Field Study

Methodology

Due to its applicability to the context of the this study, the descriptive analytical approach was used to meet the study's aims. This approach is also applied on a large or small geographical scale, and it may be a comprehensive survey or a sampling method, and in most cases large samples are used in order to help the researcher obtain accurate results with low error rates, and thus enable him to generalize his results to the study population (Bauer et al. al, 2021).

Sample of the Study

The term "study population" is used to refer to "all phenomena subjects researched by the researcher's, therefore, the study community consists of all people or objects that are the focus of a study. (Roni & Djajadikerta, 2021). Accordingly, the current study community consists of all (109) teaching staff at Hail University. A deliberate selection of the sample was made using the proportional random sampling method, which amounted to (33) working faculty members distributed among the directorates, and represented approximately (30.28%) for the total community, the features of the sample are shown in the table below:

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Table (1) study sample

Sample characteristics	%	Sample
Professor	% 21.22	7
Co-professor	% 36.37	12
Assistant Professor	% 42.41	14
Total	100 %	33

Instrument

The researcher developed a questionnaire with three dimensions to accomplish the study's goals (ideal influence, inspirational motivation, and empowerment).

Validity

The survey was administered to a pilot sample of 12 faculty members, and their responses were inputted onto a computer to check the internal consistency of the questionnaire using (SPSS 22) program. The significance levels of the correlation coefficient values were then used to calculate the correlation coefficients among the total scores for each research dimension, as shown below:

Table (2) Pearson Coefficients of Correlation

Dimension	Coefficients of Correlation	Sig. Value
Virtual Leadership		
Ideal Influence	**0.70	0.000
Inspirational Motivation	**0.73	0.000
Empowerment	**0.81	0.000

Table (2) shows that the correlation coefficients of the virtual leadership dimensions scores are high, and they are statistically significant at the level of significance (0.01), and this indicates that the study instrument has internal consistency validity.

Reliability of the Questionnaire

The following table demonstrates that the researcher used the Cronbach's Alpha method for the study's dimensions to assess the reliability of the questionnaire. This method involves figuring out how closely related items are to one another.

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Table (3) Cronbach's Alpha

Dimension	Cronbach's Alpha
Virtual Leadership	
Ideal Influence	0.71
Inspirational Motivation	0.82
Empowerment	0.86
Total Reliability	0.91

The overall reliability coefficient for the dimensions, which can be shown in Table No. 3, was (0.91), a high reliability coefficient that shows the questionnaire has a high level of dependability and can be trusted in the study's field application.

Instrument Correction Key

After being evaluated for validity and reliability, the questionnaire's final form included (15) items. The sample members' replies to these 15 items will be rated on a five Likert scale (Very high, high, medium, low, and very low), the following scores are given to them, respectively: (5, 4, 3, 2, and 1). According to the following correction key, an evaluative judgment was made regarding the level of influence for each of the questionnaire's items:

Table (4) Instrument Correction Key

Cell Length	Relative Weight	Degree
1-1.8	20%-36%	Very Low
1.8-2.60	36%-52%	Low
2.60-3.40	52%-68%	Medium
3.40-4.20	68%-84%	High
4.20-5	84%- 100%	Very High

Results and Discussion

Q1: What are the requirements for applying virtual leadership in Saudi universities considering the indicators of the National Center for E-Learning according to the faculty members' perspective?

The sample responses on the (ideal influence, inspirational motivation, and empowerment) dimensions were analyzed to determine their arithmetic means and standard deviations in order to provide an answer for this question.

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The First Dimension: Ideal Influence

The following table shows the results of the calculations made for the arithmetic means and standard deviations of the sample responses to the ideal influence dimension items:

Table (5) Ideal Influence Items

No.	Items	Means	Standard Deviation	Rank	Degree
3	The virtual leadership focuses on the latent needs of the administrative staff at the university and invests them, and seeks to satisfy their higher needs	3.59	0.871	1	High
2	Virtual leadership is concerned with the outcomes of decisions that affect the ethical aspects and values of university work.	3.54	0.900	2	High
1	Virtual leadership focuses on knowledge, skills, abilities and a strong sense of the university's higher mission.	3.50	1.038	3	High
5	The virtual leadership seeks to achieve the general interest of the university in achieving its vision	3.47	0.960	4	High
4	Virtual leadership selects employees on the basis of collective decision-making mechanisms.	3.43	1.033	5	High
Weighted Mean		3.51	1.231	-	High

The sample responses to the ideal influence dimension items had an arithmetic mean of 3.51 and a standard deviation of 1.231, which is a high degree, as can be shown in Table 5. The study participants' replies fell within the range of (68%) to (84%), and the arithmetic means of the items on this dimension ranged between (3.43) and (3.59), the lowest and highest arithmetic means.

The researcher attributes this result to the supervisors' awareness of the importance of compatibility of digital management applications with all regulations and systems by choosing the appropriate application methods and standards. This naturally increases the need to re-update and develop programs and design programs that serve all the requirements of the regulations at the University of Hail, and thus the virtual leadership contributes to the development and simplification of procedures and work steps and getting rid of the daily routine.

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The Second Dimension: Inspirational Motivation

The following table shows the results of the calculations made for the arithmetic means and standard deviations of the sample responses to the inspirational motivation dimension items:

Table (6) Inspirational Motivation Items

No.	Items	Means	Standard Deviation	Rank	Degree
5	Virtual leadership focuses on building the university's vision as well as the performance expected of them	3.51	1.209	1	High
2	Virtual leadership focuses on important issues to be accomplished at the university.	3.49	1.377	2	High
1	The virtual leadership seeks to pay attention to the desired future of the university in achieving its mission	3.44	1.172	3	High
3	Virtual leadership enhances the administrative staff's sense of the university's goals and objectives.	3.42	1.159	4	High
4	The virtual leadership seeks to achieve the goals of the university and its future vision in the success of the educational process.	3.41	1.271	5	High
Weighted Mean		3.45	1.435	-	High

The sample responses to the inspirational motivation dimension items had an arithmetic mean of 3.45 and a standard deviation of 1.435, which is a high degree, as can be shown in Table 6. The study participants' replies fell within the range of (68%) to (84%), and the arithmetic means of the items on this dimension ranged between (3.41) and (3.51), the lowest and highest arithmetic means.

This is due to the fact that faculty members at the University of Hail realize the importance of virtual leadership requirements through inspirational motivation. As the application of virtual leadership requires special skills in dealing with the computer, methods of data entry, retrieval, preservation, transfer and archiving, dealing with programs and methods of data protection and follow-up, and methods of implementing electronic control.

The Third Dimension: Empowerment

The following table shows the results of the calculations made for the arithmetic means and standard deviations of the sample responses to the empowerment dimension items:

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Table (7) Empowerment Dimension Items

No.	Items	Means	Standard Deviation	Rank	Degree
2	The virtual leadership seeks to constantly empower and develop human competencies in the university with the aim of improving the university system	3.55	1.185	1	High
5	Virtual leadership focuses on enabling programs in line with the goals and mission of the university	3.53	1.059	2	High
1	Virtual leadership encourages initiatives that express new cultural values on all occasions	3.47	1.086	3	High
3	The virtual leadership seeks to provide the administrative staff with the necessary skills to carry out the process of improvement in the university system	3.45	1.172	4	High
4	Employing virtual leadership as a model for teamwork and collective cooperation within the university	3.43	1.280	5	High
Weighted Mean		3.49	1.209	-	High

The sample responses to the empowerment dimension items had an arithmetic mean of 3.49 and a standard deviation of 1.209, which is a high degree, as can be shown in Table 7. The study participants' replies fell within the range of (68%) to (84%), and the arithmetic means of the items on this dimension ranged between (3.43) and (3.55), the lowest and highest arithmetic means.

The researcher believes that this result is likely due to the fact that the teaching staff are fully convinced and to a high degree that the University of Hail activates the central programs and internal systems to provide the best services and technical solutions and rely on them in entering data, obtaining information and exchanging it with other universities. All this in order to abandon paperwork as much as possible, in addition to employing some of these programs as the Noor program to respond to inquiries and communications and solve problems electronically.

Q2: What are the obstacles to applying virtual leadership in Saudi universities in light of the indicators of the National Center for E-Learning according to the faculty members' perspective?

The sample responses on the obstacles were analyzed to determine their arithmetic means and standard deviations in order to provide an answer for this question.

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Volume (18) December 2022 العدد (18) ديسمبر 2022

Table (8) Obstacles to Implementing Virtual Leadership

No.	Items	Means	Standard Deviation	Rank	Degree
5	Weak infrastructure for virtual leadership systems.	2.57	0.942	1	Low
2	Digital communication systems are not employed with the required efficiency in the university system to commensurate with the virtual leadership.	2.51	0.839	2	Low
7	Poor communication and interaction among faculty members at the university.	2.47	1.234	3	Low
4	The presence of some negative attitudes among faculty members towards the use of virtual leadership applications.	2.44	1.173	4	Low
1	The faculty members do not have the skills to use computers or smart devices.	2.37	1.155	5	Low
6	The University of Hail lacks in-service training programs on employing virtual driving applications.	2.32	1.187	6	Low
3	Existence of emergency technical and technical malfunctions on digital platforms and digital communication systems.	2.29	1.149	7	Low
Weighted Mean		2.42	1.286	-	Low

The sample responses to the obstacles items had an arithmetic mean of 2.42 and a standard deviation of 1.286, which is a high degree, as can be shown in Table 8. The study participants' replies fell within the range of (36%) to (52%), and the arithmetic means of the items on this dimension ranged between (2.29) and (2.57), the lowest and highest arithmetic means.

This result is due to the fact that there are no obstacles in trying to implement virtual leadership at the University of Hail because the results gave responses with weak means towards those obstacles. This is due to the fact that the university employs virtual leadership applications in accordance with digital management systems and technologies, so that laws are not a stumbling block in ways to activate electronic management work and give legitimacy to it. From this point of view, the transition to virtual leadership requires not only reviewing and revising current regulations and systems, but also devising completely new rules through feedback to keep pace with the development in concepts, procedures for providing services and completing transactions. This, in turn, leads to the availability of the necessary information via the Internet, in the light of a policy according to which all documents and information are available to be dealt with electronically via the Internet.

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www.jeahs.com
Volume (18) December 2022 العدد (18) ديسمبر 2022

Recommendations

1. Developing administrative processes to activate the requirements of virtual leadership at the University of Hail.
2. Developing and approving virtual leadership applications in various transactions at the university.
3. Adopting practical procedures that facilitate the application of virtual leadership at the University of Hail and linking it with universities in the Kingdom of Saudi Arabia.
4. Improving the level of infrastructure necessary for digital management in accordance with the requirements of virtual leadership.
5. Enhancing the presence of interactive leadership to build and develop capabilities and skills within work teams by employing the requirements of virtual leadership.

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