

The Effect of Using Information Technology as a Mediating Variable on the Relationship between Transformational Leadership and the Organization Performance of Education Sector

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Abstract

This paper aims to examine the transformational leadership of educational organizations. In addition, the use of information technology affects non-statistically significant as an intermediate variable between transformational leadership represented by exemplary influence, inspiring motivation, and the performance of educational organizations. Data was collected using questioner; this paper also used SPSS and Smart PLS to analyze the data and hypotheses testing. This paper contributes to providing indicators and measures of action that guide researchers and those interested in the subject of the current study, and to show the impact of the ideal impact and inspiring motivation on the performance of Libyan organizations. This paper can contribute to guiding decision-makers in Libyan educational organizations.

Keywords: accident theories; oil industry; safety awareness program.

1. Introduction

Organizations in developing countries have been suffering from self-weakness, low performance, and their lack of a comprehensive and integrated vision and the level of their performance has remained without progress, breakthrough and renaissance in many developing countries and their ability to achieve their goals and achieve the desired results for all, especially in light of the rapid and successive developments and changes, and analysis the external environment of the organization has become an important component of its performance; working in a risky environment puts the organization in front of a difficult challenge, which is attracting customers in light of these challenges and increasing competition, in addition to that organizations face many challenges, including those related to technological developments and the external environment in all its forms such as privatization, competition for resources and markets, economic openness, information revolution and what is related with clients and customers (Al-Siddiq and Ibrahim, 2018).

Performance is an essential and important concept for organizations in general, and it represents the common denominator of the interest of business administration scholars, and it is almost the holistic phenomenon of all branches and fields of administrative knowledge, as well as being the most important dimension of the various institutions around which the existence of the organization revolves around or not (A. Ameen, Almari, & Isaac, 2019; A. Ameen, Al-Ali, et al., 2020; A. Ameen, Al-ali, et al., 2021; A. Ameen, Alshamsi, et al., 2021; A. Ameen, Alfalasi, et al., 2020; A. Ameen & Ahmad, 2011). Performance is a broad concept and its contents are renewed with the renewal, change and development of any of the various components of the institution, and the higher management in organizations continues to think about the issue of performance as long as it is present in addition to the preoccupation with discussing performance as a technical term, and discussing the levels at which it is analyzed and the basic rules for measuring it still continuing (Suhaimi, 2017).

Since the environment is constantly changing with the emergence of many variables in different aspects, it has formed great pressures on workers and institutions, the need for leadership has increased significantly, and leadership has a fundamental role in the development and development of organizations, and in the approval, formation and implementation of appropriate strategies and programs for the development of organizations and the achievement of their different goals (A. Ameen, Almari, Isaac, et al., 2019; A. Ameen, Rahmah, et al., 2020; A. A. Ameen & Ahmad, 2012; A. Ameen & Ahmad, 2017, 2013, 2014; A. B. Ameen & Ahmad, 2013; Ghannam, 2017). Hence this paper aims to investigate the effect of using information technology as a mediating variable on the relationship between transformational leadership and the performance of education sector organizations

As a result of the urgent need to introduce technology to educational methods and procedures, in order to achieve high levels of performance of educational organizations and raise the quality of education, the importance of disclosing the extent of the success of technology use and its impact on the performance of these organizations has emerged, as this is related to the efficient management of this technology and its optimal use (Alkatheeri, Ameen, Isaac, Al-Shibami, et al., 2020; Alkatheeri, Ameen, Isaac, Duraisamy, Nusari, & Gamal, S Khalifa, 2020; Alkatheeri, Ameen, Isaac, Duraisamy, Nusari, Gamal, S Khalifa, et al., 2020). This requires leadership capable of bringing about fundamental changes in the structural basis of education, hence the need for transformative leadership in the educational sector, as it is flexible, effective and influential leadership, especially in light of the era in which we live, which is the age of speed and technology, which calls for the need for those who are proficient in the process. Change without comparison and problems affecting educational goals. Accordingly, the study problem focused on answering the following main question: What is the effect of using information technology as a mediating variable on the relationship between transformational leadership and the performance of educational sector institutions?

2. Literature Review

2.1 Transformational Leadership

Transformational leadership is one of the important modern issues in management, as it emerged with the intensification of the urgent need for leadership development and activation. However, Transformational leadership is one of the theories of managerial leadership, which is the result of the constant and continuous efforts by thinkers, scholars and students in the field of developing and modernizing administration in general and leadership (Haddad et al., 2020). In particular, as it is one of the most important and modern leadership theories as well as combining the advantages of leadership theories and avoiding what was deficient in it the best and most appropriate leadership practices in response to the givens of this era and the most efficient of them has the ability to face its challenges (Al-Rabiah, 2010).

Mungonge (2007) defining the transformational leadership as a type of leadership through which the leader seeks to reach the underlying and apparent motives of his individuals at work and then works to satisfy their needs and invest their maximum energies in order to achieve an intended and rewarding change. According to this definition, it becomes clear that transformational leadership is a type of leadership through which the leader wants to satisfy the needs and desires of individuals in order to invest their energies based on identifying their implicit and apparent requirements for a change. As for Conger, transformational leadership is seen as: "That leadership by which it exceeds incentives in exchange for the desired performance to develop, develop and encourage subordinates intellectually and creatively and transforming all their self-concerns to be an essential part of the higher mission of the organization" (Al-Ghazali, 2012; A. Ameen, Almari, & Isaac, 2019; A. Ameen, Almari, Isaac, et al., 2019; A. Ameen & Ahmad, 2014; Isaac et al., 2019; Sudhana et al., 2020). Through the definition of Conger, it shows that transformational leadership does not pay attention to incentives in exchange for performance. Rather, it transcends this perspective and elevated and marked the transformation of individuals' self-interests to be part of the mission and goal of the organization by encouraging them and training them mentally and creatively.

It was also known as: "The process by which each of the leader and subordinates seeks to rise from the other to the highest levels of motivation and morals" (Al-Otaibi, 2005), which means that through appealing to moral ideas and values such as freedom, justice, equality, peace and humanity, the behavior of transformational leadership It starts from the personal values and beliefs of the leader and not on the exchange of interests with the subordinates. Through the previous definitions, we note that there are those who considered transformational leadership to be the process of developing and encouraging subordinates, and it was also considered as the one that uses shared visions, and as the advancement of both the leader and the group to the highest levels of motivation and ethics.

The ideal effect is one of the dimensions of transformational leadership. Bass and Avolio (1997) indicated that the ideal effect occurs when the subordinates are admired, respected and appreciated by the leader, and this requires participation in all forms of risk by the leader, and the needs of all the followers are presented before the needs (Fahad Al-Obthani & Ameen, 2019a, 2019b; Albreiki et al.,

2019b, 2019a; O. Alshamsi, Ameen, Nusari, Abuelhassan, Bhaumic, et al., 2019). Personality has an ethical character, and a leader who shows the qualities of an ideal influence, represents the highest levels of transformational leadership, because he obtains high confidence from his followers, and transformational leaders often follow the style of symbolism and stories as an effective and influential way to convey their message and vision to the followers.

As for the second dimension of transformational leadership, it is inspirational motivation, which means the ability of leaders to encourage and motivate followers and their inspiration in building confidence, and arouse enthusiasm in the group through the inspirational dimension, and the transformational leader seeks to motivate and encourage followers, to become more committed to common goals and visions for the future growth of the organization and uses this, the type of leader also metaphors, symbols, and emotional appeals that affect and simplify to increase mutual understanding and awareness of desired goals (Bass and Avolio, 1997).

2.2 Organizational performance

The concept of performance means all the outputs and goals that the organization seeks to achieve through its employees, and therefore it is a concept that reflects both the goals and the means necessary to achieve them, that is, it is a concept based on the link between the aspects of activity and the goals that the organizations seek to achieve through the tasks and duties that it performs workers within these organizations (O. Alshamsi, Ameen, Isaac, et al., 2019; R. Alshamsi et al., 2020; A. Ameen, Al-Ali, et al., 2020; A. Ameen, Alfalasi, et al., 2020; Yukl, 2006).

The concept of performance also refers to the specific results of behavior, and accordingly, positive performance is the desired results and outputs that determine the behavior, while negative performance is the undesirable outcomes and outputs that determine the behavior (Edwards & Gill, 2011).

The concept of performance includes other criteria in addition to the criteria for efficiency and effectiveness, such as employee turnover rates, delays, accidents, and absenteeism from work as a good worker is one who has high productivity, and his performance also contributes to reducing work-related problems such as regularity in work and the lack of accidents, so we can say that satisfactory performance includes a set of variables in terms of work efficiency with a minimum of problems, obstacles and negatives resulting from his behavior at work and his performance to work effectively (F. Al-Obthani & Ameen, 2019; Albreki et al., 2019; Alghawi et al., 2019; O. Alshamsi, Ameen, Nusari, Abuelhassan, & Bhaumic, 2019) (Kanaan, 1999).

Transformational leadership relationship with performance

Specialized studies indicate that transformational leadership is closely related to performance and also with improving the quality of outputs, and also with achieving job satisfaction among employees, and there is also a large group of studies that dealt with the relationship between transformational leadership and performance, and concluded that there is a positive and direct positive relationship between transformational leadership behavior between Improving the level of performance, achieving employee satisfaction and the organization's efficiency in general (Akila et al., 2020; R. Alshamsi et al., 2020; A. Ameen, Al-ali, et al., 2021; A. Ameen, Alshamsi, et al., 2021; A. Ameen, Rahmah, et al., 2020; Sudhana et al., 2020). Research and studies that have been conducted assume a strong relationship between transformational leadership and the level of performance in the organization, where transformational leadership plays a prominent and pivotal role in shaping the values and attitudes of subordinates, achieving their aspirations and defining their goals by following their example in their leaders and with their beliefs. Working with him to exert effort, and to provide the best performance for him and theirs, and encourages them to excel and excel, each within the scope of his role and work entrusted to him and assigned to him, and shows them a clear and comprehensive vision of what the work should be in the future, and inspires, motivates, motivates and encourages everyone to collaborative, collective and participatory work and care also, by supporting the personal interests of subordinates, serving their opinions and accepting them all, and encouraging work outside the scope of the specific roles of workers, it must also be flexible, granting powers and delegating partial powers, in order to achieve the aspirations of the institution leaders and individuals to achieve

the highest level of trust, cooperation and mutual respect (Aldhaheri et al., 2020; Jeyalakshmi et al., 2020; Rajassekharan et al., 2020; Sulistyowati et al., 2020; Smirat and Magableh, 2014).

2.3 Information technology

At the outset, we must point out that the definition of information technology leads us to the definition of the word "technology", which naturally belongs to the Greeks and is a complex of two parts: techno, which means art and skill in performing a work, and the word logy means study or science, and thus the word technology. As for its broad, comprehensive meaning, it is the aspect of culture and means practical scientific treatment in the performance of technical skills (Khamis, 2003), which includes both knowledge and tools that affect the person in the outside world and control the material to achieve all the desired scientific results (Mahmoud, 1990).

Information technology components are a complex mixture of individuals and technology that depends on the sharing of information, which in turn is reflected in some aspects in the form of special applications that enable increased capabilities and is difficult to imitate easily. Al-Hawassi and Al-Barzanji (2017) referred to these components as follows:

The physical components are all the tools that participate together in processing data, such as computers of all kinds, as well as all the devices attached to them, work stations, communication networks, transmission tools, and data storage.

Human Resources People are one of the most important building blocks of an information technology system. They can be divided into two categories, the first, which constitutes the majority and who are called end-users, who deal with application programs as beneficiaries of them and their applications without going into the precise details of their programming and preparation processes, and the second category are specialists in the field of computer and computing who design computers and develop various programs, Whether those programs are application or system programs.

Communication networks, which are the means used in the process of sending and receiving data and information, as it consists of a group of multiple stations that are located in different locations and linked with each other with means that allow the beneficiaries to conduct the process of sending and receiving.

Databases, which are the repository that contains all the data, topics and files organized and interrelated with each other, which describe all the processes and events occurring in the organization in all its merits, and the work is organized in the form of files and kept in computer containers that are clearly magnetic and independent of the programs that operate and use this data.

3. Method

The descriptive and analytical approach was relied on in this study. The study population consists of all workers in educational institutions, and a random sample was taken from 409 of the study population, and the study was limited to the year 2019-2020, this study deals with the topic of transformational leadership and its role in improving the Organizational performance, in addition to the mediating role of using technology. The study indicators and measures of action guides researchers and those interested in the subject of the current study through the adoption and application of transformational leadership, which in turn has a positive impact on the Organizational performance. The questionnaire was adopted as a main tool for collecting data in the current study for quantitative analysis. Variables were measured using a Likert Scale which recommended in the previous studies (Isaac, Aldholay, Abdullah, & Ramayah, 2019; Isaac, Abdullah, Ramayah, & Mutahar, 2018) (Alrajawy et al., 2016) (Alrajawy et al., 2018) (Alrajawy et al., 2017). The questionnaire was distributed among the sample members, but approximately 345 individuals were collected from the study sample and after the initial analyzes, the analysis was performed on 201 sample individuals. The Cronbach alpha coefficient for the instrument as a whole reached 0.970, which is considered acceptable if it exceeds (0.70). SPSS and AMOS were used to answer the study questions. The main reasons for choosing SEM as a statistical method for this study is that SEM offers a simultaneous analysis which

leads to more accurate estimates (Isaac, Abdullah, Aldholay, & Ameen, 2019; Isaac, Abdullah, Ramayah, & Mutahar, 2017; Mutahar, Daud, Thurasamy, Isaac, & Abdulsalam, 2018) (A. Aldholay et al., 2019) (A. H. Aldholay et al., 2018).

4. Findings

A total of 201 respondents participated in this study. The majority of respondents (74.8%) are males who have experience of more than 6 years (55.1%). As for employees in educational institutions between the ages of (36-45 years), they are the most frequent, reaching (88) with a percentage (41.1%). The most frequent in the job title variable were the academic staff and it amounted to (75), with a percentage (35.0%). Finally, most of the sample were married (72.4%) of the sample.

Hypotheses testing

To test the study hypotheses, multiple regression analysis was used to reveal the role of transformational leadership in improving the Organizational performance in educational institutions and the mediating role of using technology in improving the Organizational performance. Table No. (1) Shows the result of the direct impact hypotheses.

Table (1): Result of direct hypothesis

Independent variable	T-value	Sig.	β	STDEV
Moving idealism	0.48	0.62	0.42	1.03
Inspiring motivation	-0.49	0.62	-0.74	1.78

From table (1), there is no statistical significance at the level of significance ($\alpha \leq 0.05$) of the role of Moving idealism and Inspiring motivation in the Organizational performance, where the values of (T) were (0.48, -0.49) respectively, and statistically significant (0.62, 0.62) respectively; thus the null hypotheses are accepted.

Table (2): Moderating effect of using technology

Path	β	STDEV	T-Values	P-Values
Moving idealism -> using technology	0.93	2.02	0.67	0.49
Moving idealism -> using technology -> organizational performance	0.52	0.13	3.14	0.0016
Inspiring motivation -> using technology	-0.74	1.78	-0.49	0.62
Inspiring motivation -> using technology -> organizational performance	-1.52	3.51	-0.63	0.52

The results of hypothesis testing in Table (2) indicate that (using technology) mediates the relationship between Moving idealism and organizational performance, and therefore the type of mediation here is (null mediation) because the effect of Moving idealism on the use of technology is statistically insignificant.

The results of hypothesis testing in Table (2) indicate that (using technology) mediates the relationship between inspiring motivation and organizations performance, and therefore the type of mediation here is (null mediation) because the effect of inspired stimulation on technology use is not statistically significant.

One of the limitations of this study is that the data gathered was cross-sectional rather than longitudinal in nature. The longitudinal method might improve the understanding of the associations and the causality between variables (Isaac, Abdullah, Ramayah, Mutahar, & Alrajawy, 2017; Isaac, Abdullah, Ramayah, & Mutahar Ahmed, 2017). Future research should be conducted to investigate the relationship between variables by conducting cross-cultural studies as recommended by previous studies (Isaac, Abdullah, Ramayah, & Mutahar, 2017a; Isaac, Masoud, Samad, & Abdullah, 2016).

5. Conclusion

This study examined the transformational leadership of educational organizations. The results indicated that the transformational domains of leadership (influencing idealism, and inspiring motivation) have an impact on the performance of organizations. In addition, the use of information technology affects non-statistically significant as an intermediate variable between transformational leadership represented by exemplary influence, inspiring motivation, and the performance of educational organizations. The results of this paper contribute to providing indicators and measures of action that guide researchers and those interested in the subject of the current study. It also contributes to providing information on the reality of using information technology, and also contributes to raising awareness of the importance of the education sector.

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