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TQM PRACTICES AND REVERSE MENTORING AND THEIR IMPACT IN ADAPTIVE PERFORMANCE

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ABSTRACT:

Purpose: The purpose of this study was to verify the existence of an effect of both total quality management practices and reverse mentoring on adaptive performance in the context of private higher education institutions in Iraq.

Design/Methodology/Approach: The data were collected using a questionnaire tool that was distributed to (196) individuals from the assistant deans and heads of scientific and administrative departments in private universities in the central Euphrates governorates. (163) questionnaires that can be used and analyzed were returned, which resulted in a response rate of (83.16%) . The structural equation modeling method was applied to test the study models, and the study conducted data analysis to reveal the relationship between the variables using the Pearson correlation factor.

Results: The current study theoretically confirms the results of previous studies that considered total quality management a set of practices, and the study proved in practice that the practices of total quality management have a positive impact on adaptive performance, as well as the positive impact caused by reverse mentoring in generating adaptive performance among the employees of the studied universitie .

Research limitations/implications for future research: The study population and sample were limited to a specific group of universities due to health restrictions that accompanied the study's completion period, which made this test biased and may not be appropriate to generalize the results to private universities throughout the country, so it must Future studies choose a

broader sample frame and a different, non-random sample type, whether stratified, intentional, or even a different category, such as workers or all administrative levels, to allow for more generalization of the results.

Practical Implications: The results are useful for university administrations in developing countries such as Iraq, which wish to enhance and develop the provision of education services and strive to reach advanced levels globally through the implementation of total quality management practices and encourage the exchange of experience without being restricted by age, which is manifested through the so-called reverse mentoring, which Supports the crystallization of adaptive performance in their organizations.

Authenticity/Value: The study theoretically contributed to enriching the literature of any of the study variables, especially reverse mentoring and adaptive performance, because these variables did not receive that attention from Arabic studies. The study also practically contributed to studying the correlation relationship as well as the effect between the study variables in practice in a sample of private universities in Iraq.

INTRODUCTION:

Organizations have witnessed in the past few years and to this day a period of great change in their markets and operations. International and local competition has led many organizations to face an increasingly turbulent and hostile environment. In addition, the pace of technological change has accelerated to a large degree, in addition to the tastes and requirements of customers. It became more changeable, which was reflected in the competition, which became more intense and complex. Many organizations have adopted a set of improvement approaches in response to these forces. In the last years of the last century, we witnessed an increasing adoption of a set of standards of quality and management systems, the emergence of total quality management, business process re-engineering, business excellence, performance excellence, and empty thinking . Waste, Six Sigma, Statistical Process Control, etc . This long list of challenges can be mitigated or controlled by following quality offers in general, which share many of the practices and elements found in total quality management. Regardless of the type of organization in which we work these days, a bank, a hospital, a university, an airline, an insurance company, a local government, or a factory, competition is widespread, whether for customers in the market, students, patients, or for financial resources. Any organization competes primarily for its reputation in terms of quality, reliability, price and delivery, and most customers today realize that quality is the key to achieving a sustainable competitive advantage. In addition, in the context of rapid technological change, executives and researchers are beginning to realize that knowledge is not a one-way street, and that it is in everyone's interest to share experiences . Reverse mentoring may be seen as an opportunity for human resource practitioners to facilitate knowledge exchange across generations, as research has proven (Allen et al., 2004; Allen & Eby, 2007; Ragins & Kram, 2007) that mentoring is beneficial for individuals and organizations. Traditionally, mentoring relationships consisted of a senior executive advising a younger colleague, while reverse mentoring turns this formula on its head (Murphy, 2012 : 550 ; Oakland, 2014 : 3) .

On the other hand, when the environment becomes more turbulent, the ability of employees to deal with emergencies, learn quickly and solve new problems is required. Previous perspectives on work performance have not captured the full range of individual behaviors that contribute to job effectiveness in uncertain and interconnected systems, and as a result, adaptive performance has gained significant interest as a way to better understand the dynamic nature of employee performance in today's rapidly changing business environment. Adaptive performance reflects the need to address clearly the ability of employees to adapt to changes in the work environment. Regulatory and keeping pace with changing customer expectations (Park & Park, 2019: 294) .

RESEARCH METHODOLOGY

Research Problem

Modern organizations have witnessed a state of increasing uncertainty and sudden changes, and as a result, their work environments are unstable and unpredictable, as globalization, rapid technological progress and varying age trends increase the complexity of today's work environments. In the midst of this turmoil, the ability of the individual worker to be tactful with meeting the needs of work and the increasing change in the tastes of customers has become a pivotal element for the survival and success of the organization. Researchers in the field of human resources have become interested in the adaptive performance of workers in their work, at the present time job performance requires adaptive performance of the individual worker's task-oriented behavior, which must correspond to changing work situations, as well as interest in improving the ability of workers to deal with fast-paced tasks and deal with situations More uncertain work than ever before (Park et al., 2020: 1) .

Based on the foregoing, the features of the research problem can be clarified by the following question (Is it possible to crystallize adaptive performance through both total quality management practices and reverse mentoring). Several sub-questions emerge from this problem, which can be posed as follows:

1. What is the level of adoption of total quality management practices by the universities in the study community?
2. To what extent is reverse mentoring adopted in the universities of the study population?
3. Is adaptive performance available in its various dimensions in the study community?
4. Is there an effect of total quality management practices on the adaptive performance of the studied universities?
5. Does reverse mentoring affect the adaptive performance of the studied universities?

Research Importance

The study derives its importance from the importance of the variables it dealt with, as the study dealt with three variables whose importance everyone is aware of. The first variable represented the practices of total quality management, which is an administrative entry and a strategic weapon through which organizations can enhance their growth, productivity and profitability. Total quality as offering a magic solution to their problems, and in such cases the main strategic objective behind the application of total quality management practices is to ensure the commitment of employees and their participation in a continuous innovation process for the purpose of improving operational efficiencies and developing a competitive advantage in the ever-expanding dynamic market (Dawson, 1994: 54).

While the reverse mentoring variable provides a special opportunity to build relationships between generations with different roles, as this type of mentoring allows for better and more responsible cooperation, achieving common goals or searching for inspiration, and knowledge is a critical element for the success of any organization, as it gives the ability to transfer knowledge effectively within The organization helps it achieve a competitive advantage and enables it to better understand the consequences of changes in its environment (Tomlinson, 2020: 9) .

With regard to adaptive performance, the ability to adapt to changing task environments is a prerequisite for high performance for individuals and teams because what is required for effective performance in one moment can change in the next. Existing literature on individual performance focuses mostly on tasks, context, and reverse performance. Many scholars have argued that adaptability is a fourth critical dimension of high job performance because adaptability enables individuals to change their behavior to meet the demands of dynamic task environments (Acikgoz & Latham, 2020: 1).

In addition, the study also derives its importance from the importance of the studied organizations, the private universities in the Middle Euphrates (Warith Al-Anbiya University, Al-Ameed University, Ahl Al-Bayt University, peace be upon him, Al-Zahra University, peace be upon him, the Islamic University, and Al-Kafeel University) due to the importance of educational organizations in the progress and development of any A country because it contributes to preparing an educated generation in various scientific disciplines.

Research Model

The study dealt with three variables:

- The first independent variable: Total quality management practices: Total quality management can be defined as a comprehensive management philosophy that strives for continuous improvement in all functions of the organization, and it can only be achieved if the concept of total quality is used from acquiring resources to serve customers after sales (Kaynak, 2003: 406). Total quality management has several practices, researchers differed in

agreeing on a specific set of practices, so the focus will be on a number of practices that fit with the current study community, as it was based on the study of (Dahlgaard et al., 1995; Bayraktar et al. , 2008; Talib et al. , 2012; Karim et al. , 2019) which are (commitment of senior management, strategic planning, focus on beneficiaries, employee engagement, and continuous improvement).

- The second independent variable : Reverse Mentoring: It is about exchanging experiences and skills with the elderly who need such competencies and building a community whose members support each other (Gadomska-Lila, 2020 : 6) . And believes (Murphy, 2012 ; Chen, 2013, 2014) that reverse mentoring consists of three dimensions (career development , psychological support , and role modeling) .
- The dependent variable : Adaptive performance: It is the ability of individuals to modify their behaviors according to the requirements of work situations and new events (Charbonnier-Voirin & Roussel, 2012 : 281) , and it consists of six dimensions (Handling emergencies or crisis situations, Managing work stress, Solving problems creatively, Dealing with Uncertain and Unpredictable Work Situations , Training and Learning effort , Interpersonal / Cultural / Physical Adaptability). Figure (1) shows the hypothesis of the study, and accordingly a set of hypotheses can be formulated, which can be clarified within the hypothesis test .

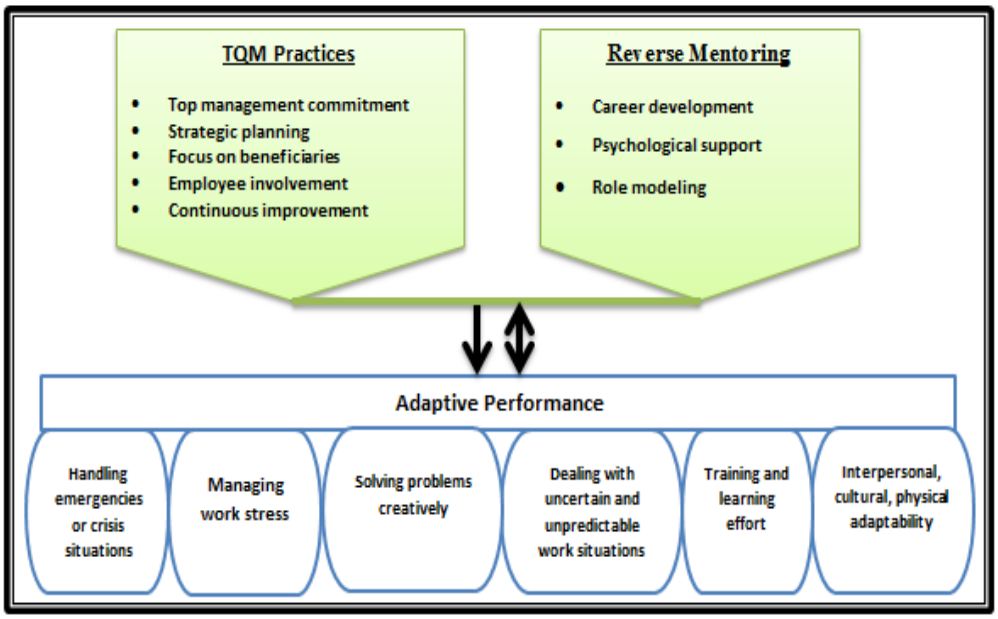

Figure (1) The hypothetical model of the Research
Source: Prepared by the Researcher

LITERATURE REVIEW

TQM

The observer of the total quality management stage finds it difficult to determine its exact origins, as he sees (Cusumano, 1985; Deming & Walton, 1989; Warner, 1996) that the origins of the concept of total quality

management can be traced back to its intellectual roots in the United States, primarily in working on Statistical control, which was expressed in a book published in this regard by (Walter Shewhart) in 1931, entitled Economic Quality of Manufactured Products. (Powell, 1995) credits the Federation of Japanese Scientists and Engineers in 1949 (Martínez-Lorente et al., 1998: 4 ; Dow et al., 1999 : 2 ; Miranda, 2003 : 39). While Dale, who began his research in quality management in 1981, believes that the term TQM originated in the UK from the activities of the National Department of Trade and Industry for the Quality Campaign launched in 1983 and the pioneering work of organizations such as IBM. He talks about a discussion with John MacDonald (one of the pioneers of quality management in the UK and the first managing director of Crosby Associates UK Ltd.) who stated that in mid-1986 he was using the term TQM in his transatlantic communications with Philip Crosby) who answered with the question "What is TQM"? This confirms the already expressed view that the term did not come into use until after the mid-1980s. This can be clearly seen at the beginning of the nineties, when the use of the term was already widespread, and reached its peak in 1993 (Martínez-Lorente et al., 1998: 4-6).

The importance of total quality in education has been highlighted through many aspects, including meeting the needs and requirements of society and beneficiaries, correcting business performance with the least time, effort and cost, developing many values related to teamwork, satisfying students' needs, increasing the feeling of satisfaction for everyone in the educational organization, and improving the reputation of the educational organization. In the eyes of the employees and beneficiaries, developing the spirit of competition among them, and achieving the quality of building the student's personality, whether in terms of knowledge, skill or emotional, achieving good and continuous monitoring of work, and the importance of quality in being a factor of global competition, especially in the classification of universities (Li et al., 2003: 1028; Jameel et al., 2021: 6830). Juran sees quality as conformity to purpose or use (Rashid et al., 2020: 134). Deming defined total quality management as a management philosophy that uses a specific set of principles, practices, and techniques to expand a business and provides benefits to enhance productivity by avoiding rework, rejection, waste, customer complaints, and high costs (Chen et al., 2018: 2).

Based on the foregoing, total quality management can be defined as an integrated administrative framework consisting of a set of practices aimed at improving the work of the organization and producing a product or providing a service that meets or exceeds the expectations of customers by involving all departments of the organization to achieve customer satisfaction or delight.

Reverse Mentoring

The concept of reverse mentoring was first released and formally implemented by (Jack Welsh), president of General Electric (GE) in 1999. (Welsh) asked 500 top level managers in Electric to learn how to use the Internet from young employees, then with the advancement of information technology the reverse mentoring has gained increasing importance as junior employees share

modern concepts and information media technologies with senior employees, and gradually the popularity of this concept has increased among International and multinational organisations. For example, IBM, which is internationally listed among the best training companies, and the public relations firm Burson-Marsteller, have established official reverse mentoring systems in their organizations, and the reverse mentoring practice can , also be found in leading organizations such as (The Hartford, Procter & Gamble, Cisco, General Motors). , Unilever, Deloitte & Touche, Wharton School of Business at the University of Pennsylvania) (Murphy, 2012 : 551 ; DeAngelis, 2013 : 4 ; Chen, 2014 : 205 ; Breck et al., 2018 : 3 ; Tomlinson, 2020 : 6) .

Noe (1988) divided the function of mentoring into two categories : career development and psychological support, as career development revolved around the advancement of junior employees in their careers under the reverse of senior employees, while psychological support referred to the process by which senior employees helped junior employees in building their personality While both Scandura & Ragins (1993), identified the role model as the third reverse function (Chen, 2013 : 201) . Most of the researchers, including (Murphy, 2012 ; Chen, 2013, 2014 ; Gadomska-Lila, 2020) agreed that these functions are the same in Reverse Mentoring, but by changing some aspects of each function .

Adaptive Performance

Early research on adaptive functioning was conducted mostly in the field of psychology. After the term "adaptive performance" was coined (Hesketh & Neal, 1999), a debate emerged about whether adaptive performance is a distinct concept from performance. It was found (Johnson, 2001) that adaptive performance can be considered as part of contextual performance. While many researchers have recently shown (Allworth & Hesketh, 1999 ; Pulakos et al., 2000; John-son, 2001; Han & Williams, 2008) that adaptive performance is an important component of overall performance at work, which can be distinguished from performance on the task. and contextual performance. These studies have evaluated all three types of functioning—task performance, context, and adaptation—and have shown that they are unique and discrete structures (Charbonnier-Voirin & El Akremi, 2011 : 129 ; Park & Park, 2019: 300). Adaptive performance was defined by (Allworth & Hesketh, 1999) as behaviors that show the ability to deal with change and transfer learning from one task to another with different work requirements (Han & Williams, 2008 : 658 ; Acikgoz & Latham, 2020 : 1). While (Johnson, 2001) sees that adaptive performance is the individual's ability to modify his behavior according to the requirements of new environments, situations or events (Charbonnier-Voirin & El Akremi, 2011 : 129 ; Charbonnier-Voirin & Roussel, 2012 : 280 ; Charbonnier-Voirin , 2013 : 18). What is known (Heinze & Heinze, 2020) is the ability of individuals or groups to change perceptions and behaviors to adapt to changing environments (Park et al., 2020 : 4).

Based on the foregoing and based on the point of view of (Allworth & Hesketh, 1999; Johnson, 2001), adaptive performance can be defined as the capabilities possessed by the individual that enable him to respond and deal

with emergency conditions, whether environmental, organizational, functional or personal, and thus fulfill the requirements Work and solve problems in the best way.

The current research will go with what was stated by (Pulakos et al., 2000, 2002) in determining the dimensions of adaptive performance, as the dimensions of adaptation (personal, cultural and physical) were merged into one dimension so that the total dimensions were six dimensions instead of eight dimensions (dealing with cases emergencies or crises, dealing with uncertain or unexpected work situations, creatively solving problems, dealing with work stress, learning new tasks, techniques, and procedures, and demonstrating interpersonal/cultural/physical adaptability) .

RESEARCH DESIGN

Research Sample

The sample of the Research is represented in the middle administrations in private universities in the central Euphrates governorates represented by (deans' assistants, heads of scientific departments, heads of administrative departments) in those universities, which number (196) individuals, as shown in Table (1) .

Table (1) Preparing the Research sample members in each university

Seq	University Name	Location	**The Number**		
			Associate Dean	Head of scientific department	Head of administrative department
1	University of the Prophets	Karbala	8	7	19
2	Al-Ameed University	Karbala	8	15	19
3	Ahl al-Bayt University	Karbala	12	11	8
4	Al-Zahra University for Girls	Karbala	6	8	17
5	Islamic University	Najaf	8	10	22
6	Al-Kafeel University	Najaf	8	6	4
Total			50	57	89
			196		

Source: Prepared by the Researcher based on University Websites

Research Measurement

Several researchers have developed valid metrics for TQM practices (Powell, 1995; Samson & Terziovski, 1999; Brah et al., 2000; Ahire & Ravichandran,

2001; Terziovski, 2006; Bayraktar et al., 2008; Talib et al., 2012; Sadikoglu & Olcay, 2014; Akanmu et al., 2020), reverse mentoring (Murphy, 2012; Chen, 2013, 2014), and adaptive performance (Pulakos et al., 2000; Charbonnier-Voirin & Roussel, 2012). However, most of these metrics have not been experimentally tested and validated in the context of our local environment, and to overcome this limitation, the current research provided an adapted, controlled questionnaire from a group of experts in the field of competence as shown in (Appendix 1). The integrity of the study measures was also tested in order to obtain accurate results, and achieving this goal requires verification of two basic criteria: honesty and reliability (Sekaran & Bougie, 2010: 177), and honesty includes two basic types: apparent honesty and structural honesty. While the stability of the study scale was measured through Cronbach's alpha test, as it is noted from the results that Cronbach's alpha coefficients for the study variables range between (0.783-0.797), which are statistically acceptable in administrative and behavioral research (Nunnaly & Bernstein, 1994: 297), to show that the study tool's standards are characterized by consistency and internal stability.

Descriptive Statistics

The results of Table (2) indicate the interest of the Researched universities in the practice of continuous improvement of total quality management, to show the consistency and consistency of the opinions of the Research sample on developing the skills of workers in order to ensure the improvement of the quality of the services of the Researched universities with an arithmetic mean of (3.92) and a relative importance of (78%) and an equal standard deviation to (0.642) , this matter indicates that the Researched sample did not improve by (18,359), and the results also showed the interest of the Researched sample to focus on the beneficiaries by understanding their requirements and working to satisfy them as much as possible with an arithmetic mean equal to (3.68) and a standard deviation of (0.728) to show The interest of the Researched universities in developing the capabilities, skills and abilities of their employees by (74%) and ensuring that there is no improvement with a value equal to (11.914), which means that the Researched universities require their higher management at the level of departments and colleges to support workers and encourage them to create new ideas that serve universities and develop their bodies and service operations provided.

From the foregoing, it is noted that the general average of the TQM Practices variable amounted to (3.77) and with a standard deviation of (0.475), to show the interest of the Researched universities in developing their capabilities in order to apply the practices of TQM to ensure that improvement is achieved in their internal operations, and this shows a relative interest of (75%).

Table (2) Descriptive Statistics for TQM Practices Variable (n = 163)

Paragraph	**Mean**	**Standard deviation**	**Answer direction**	**Answer level**	**Relative importance**	**Availability level**	**Test T**	**Order of importance**
Top management commitment	**3.68**	**0.634**	Agreed	High	**74%**	Good	**13.668**	4
Strategic Planning	**3.72**	**0.67**	Agreed	High	**74%**	Good	**13.721**	3
Focus on the beneficiaries	**3.68**	**0.728**	Agreed	High	**74%**	Good	**11.914**	5
employee involvement	**3.84**	**0.643**	Agreed	High	**77%**	Good	**16.605**	2
continuous improvement	**3.92**	**0.642**	Agreed	High	**78%**	Good	**18.359**	1
								TQM practices variable
			Mean	**3.77**	Standard deviation	**0.475**	Relative importance	75%
			Mentoring of answer	**Agreed**	Answer level	**High**	Availability level	Good
							Test T	20.649

Source: Prepared by The Researcher

Table (2) shows the results that indicate that psychological support for the Reverse Mentoring came in the first place with an arithmetic mean (3.75) and a standard deviation of (0.84) and a high level, and an answer towards agreement to show a relative interest of (75) to indicate that the Researched universities are interested By addressing the work pressures that the worker faces while performing the tasks assigned to him, the results also showed the interest of the Researched universities in modeling their roles by showing a relative interest equal to (70%) and with a mean of (3.52) and a standard deviation of (0.763) to indicate that the Researched universities Interested in modeling the roles of total quality management.

From the above, it is clear that the general arithmetic mean of the Reverse Mentoring variable is (3.65) with a standard deviation of (0.597) and a relative importance of (73%) to indicate the interest of the Researched universities in showing the behaviors, attitudes and skills necessary to respect workers and take into account their ideas and aspirations.

Table (2) Descriptive Statistics for the Reverse Mentoring Variable (n=163)

Paragraph	Mean	standard deviation	Answer direction	Answer level	Relative importance	Availability level	Test T	Order of importance
Career development	**3.68**	**0.71**	Agreed	High	**74%**	Good	**12.225**	2
Psychological support	**3.75**	**0.84**	Agreed	High	**75%**	Good	**11.379**	1
Role modeling	**3.52**	**0.763**	Agreed	High	**70%**	Good	**8.622**	3
Reverse Mentoring Variable								
Mean	**3.65**	Standard deviation		**0.597**	Relative importance		73%	
Answer direction	**Agreed**	Answer level		**High**	Availability level		Good	
Test T				13.855				

Source: Prepared by The Researcher

The results in Table (3) indicate the interest of the researched universities in dealing with work pressures and using new methods to implement work requirements and discuss them calmly in order to identify the best appropriate solutions to work pressures on workers, and this interest is by (78%) and with an arithmetic mean equal to (3.91) . and a standard deviation of (0.775), while the results indicated the interest of the researched universities to encourage their workers to show the ability to adapt between people, cultural, and material with a relative interest of (76%) to show the contribution of universities striving to adapt between co-workers on the one hand and with the beneficiaries From the service on the other hand, as well as adapting to difficult working conditions with an arithmetic mean of (3.79) and analyzing the weaknesses experienced by it with a standard deviation of (0.671) in order to understand and treat work methods and develop businesses that suffer from reluctance and weakness in providing acceptable productivity .

Table (3) Descriptive Statistics for Adaptive Performance Variable (n = 163)

Paragraph	**Mean**	**Standard deviation**	**Answer direction**	**Answer level**	**Relative importance**	**Availability level**	**Test T**	**Order of importance**
Handling Emergencies and Crises	3.86	0.761	Agreed	High	77%	Good	14.414	4
Managing work stress	3.91	0.775	Agreed	High	78%	Good	14.926	1
Solving Problems Creatively	3.9	0.661	Agreed	High	78%	Good	17.292	2
Dealing with Uncertain and Unpredictable Work Situations	3.82	0.752	Agreed	High	76%	Good	13.991	5

Training and Learning effort	3.88	0.573			78%		19.585	3
Interpersonal, Cultural , Physical Adaptability	3.79	0.671	Agreed	High	76%	Good	15.089	6
								Adaptive Performance variable
			Mean	3.86	Standard deviation	0.491	Relative importance	77%
			Answer direction	Agreed	Answer level	High	Availability level	Good
							Test T	22.329

Source: Prepared by The Researcher

HYPOTHESIS TEST RESULTS

The research relied on testing the hypotheses of correlation and influence between the variables of the study through the use of the statistical package of the program (SPSS.V.26) to measure the hypothesis of the simple correlation (Pearson), and the statistical package of the program (AMOS.V.26) to measure the structural and special equation modeling in the hypothesis of influence by (n=163).

The first main hypothesis states that: There is a positive correlation between the practices of total quality management in its dimensions and the adaptive performance its dimensions.

The Research extracted a matrix of simple correlation coefficients between the dimensions of the TQM Practices variable and the dimensions of the adaptive performance variable, as shown in Table (4), which It was received using the statistical program (SPSS vr.26) .

Table (4) Matrix of the correlation between total quality management practices and adaptive performance and their dimensions[1]

Variables	Top management commitment	Strategic Planning	Focus on the beneficiaries	Employee Involvement	Continuous Improvement	TQM
Handling Emergencies and Crises	.604**	.313**	.319**	.318**	.232**	.497**
Managing work stress	.345**	.351**	.453**	.406**	.433**	.558**
Solving	.334**	.457**	.520**	.394**	.304**	.567**

[1](**) indicates a level of significance less than (0.01), i.e. a confidence level of (0.99)
(*)indicates a level of significance less than (0.05), i.e. a confidence level of (0.95)

Problems Creatively						
Dealing with Uncertain and Unpredictable Work Situations	.255**	.243**	.650**	.452**	.392**	.565**
Training and Learning effort	.384**	.346**	.409**	.483**	.336**	.548**
Interpersonal , Cultural , Physical Adaptability	.428**	.415**	.363**	.454**	.436**	.584**
Adaptive performance	.559**	.499**	.646**	.590**	.506**	.785**

Source: Prepared by The Researcher

The results of Table (4) indicate that the presence of total quality management practices contributed to improving the adaptive performance of the studied universities, as the results showed that the increased interest in the application of total quality management practices by an amount of one unit leads to an improvement in adaptive performance with an amount of (0.785) to indicate the interest of the studied universities By addressing the dimensions of adaptive performance from (0.497) for the dimension of dealing with emergencies and crises to (0.584) for the dimension of showing the ability to adapt between people / cultural / material to show the interest of the studied universities in dealing with crises by showing their ability to adapt with employees and build positive relationships with them in order to motivate them To take responsibility for the performance of the tasks assigned to them.

The Second main hypothesis states that: There is a positive correlation between Reverse Mentoring with its dimensions and adaptive performance with its dimensions.

The current research also extracted a matrix of simple correlation coefficients between the dimensions of the Reverse Mentoring variable and the dimensions of the adaptive performance variable, as shown in Table (5), which was extracted using the statistical program (SPSS vr.26) .

Table (5) Matrix of the correlation between reverse mentoring and adaptive performance and their dimensions

Variables				
Handling Emergencies and Crises	.322**	.293**	.273**	.381**
Managing work stress	.494**	.322**	.424**	.527**
Solving Problems Creatively	.329**	.212**	.488**	.438**
Dealing with Uncertain and Unpredictable Work Situations	.381**	.413**	.414**	.521**
Training and Learning effort	.448**	.186*	.530**	.491**
Interpersonal, Cultural , Physical Adaptability	.454**	.268**	.328**	.446**
Adaptive performance	.574**	.410**	.575**	.665**

Source: Prepared by The Researcher

It is noted from the results of Table (5) that the presence of Reverse Mentoring contributes to urging universities to improve adaptive performance by (0.665) to indicate the interest of the researched universities in the growth and improvement of the dimensions of adaptive performance from (0.381) for the dimension of Handling emergencies or crisis situations to (0.527) for the dimension of dealing with stress Work to show the researched universities' endeavor to address crises by dealing with work pressures and developing the capabilities of workers to suit their adaptive performance.

The Third Main Hypothesis States That: There is a direct, significant effect of the reverse mentoring with its dimensions on the adaptive performance with its dimensions .

To test this hypothesis, a model was built showing the nature of the relationship between the dimensions of the Reverse Mentoring variable and the adaptive performance, as shown in Figure (2) through the use of structural equation modeling in the program (AMOS V.26) . From Table (7) it appears that the final model of the direct effect of the reverse mentoring variable on adaptive performance is compatible with the indicators of conformity quality when compared with Table (6), so it can be relied upon for the purpose of hypothesis testing.

Table (6) Conformance quality indicators of the direct effect of the reverse mentoring variable on adaptive performance

Pointer	Pointer value	Comparison
X^2/ df	2.228	less than 5
GFI	0.926	greater than 0.90
AGFI	0.917	greater than 0.90
RMSEA	0.059	less than .080
CFI	0.933	greater than 0.90
NFI	0.930	greater than 0.90

Source: Prepared by The Researcher

Table (7) shows the results shown in Figure (2), which indicate that there is an effect of the Reverse Mentoring on the adaptive performance, as the Reverse Mentoring contributed to the interpretation of (0.889) of the issues that stand without development and crystallization of the adaptive performance in the surveyed universities, which indicates that Increasing the Reverse Mentoring by one unit leads to an increase in adaptive performance by (0.943) and with a standard error of (0.048) and a critical value of (19.646), which means the interest of the researched universities in improving the Reverse Mentoring contributes to improving its adaptive performance by (0.057).

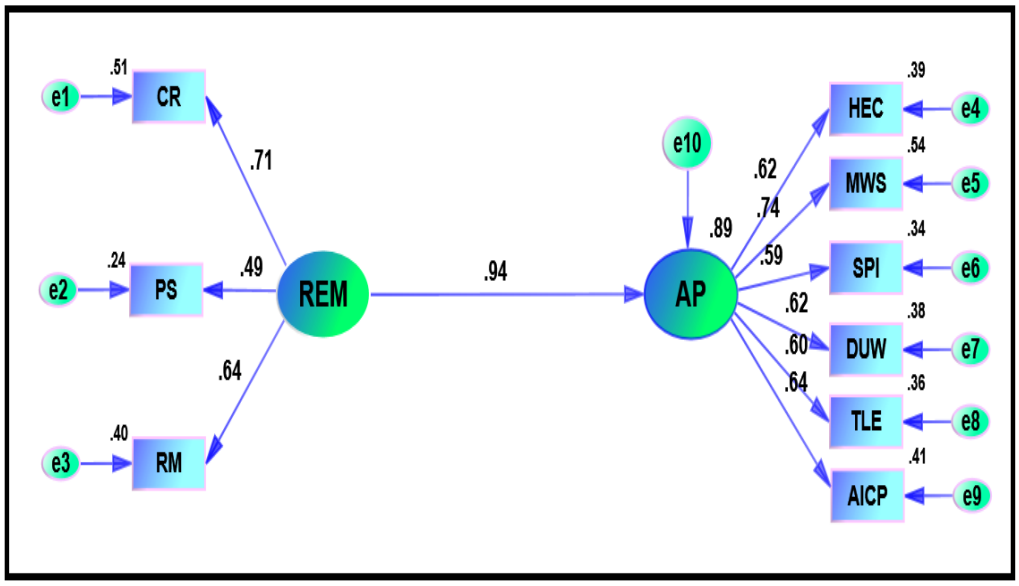

Figure (2) A structural model for the effect of Reverse Mentoring on adaptive performance
Source: Prepared by the researcher

Table (7) Results of analyzing the effect of Reverse Mentoring on Adaptive Performance

Regression			Standard Weights	Standard Error	Critical Ratio	Coefficient of Determination R2	Probability (P)	Effect Type
Reverse Mentoring	- - >	Adaptive Performance	0.943	0.048	19.646	0.889	***	moral

Source: Prepared by The Researcher

Six sub-hypotheses emerge from the second main hypothesis, the corresponding indicators of which are shown in Table (8):

Table (8) Conformance quality indicators of the direct effect relationship of the dimensions of the Reverse Mentoring variable on Adaptive Performance

Pointer	**Pointer value**	**Comparison**
X^2/ df	1.851	less than 5
GFI	0.937	greater than 0.90
AGFI	0.925	greater than 0.90
RMSEA	0.071	less than .080
CFI	0.930	greater than 0.90
NFI	0.904	greater than 0.90

Source: Prepared by The Researcher

It is noted from Table (8) that the search model is identical to the matching quality indicators, so Table (9) shows the results of analyzing the impact of the dimensions of reverse mentoring on the dimensions of adaptive performance, and Figure (3) reflects those results in the form of a structural model.

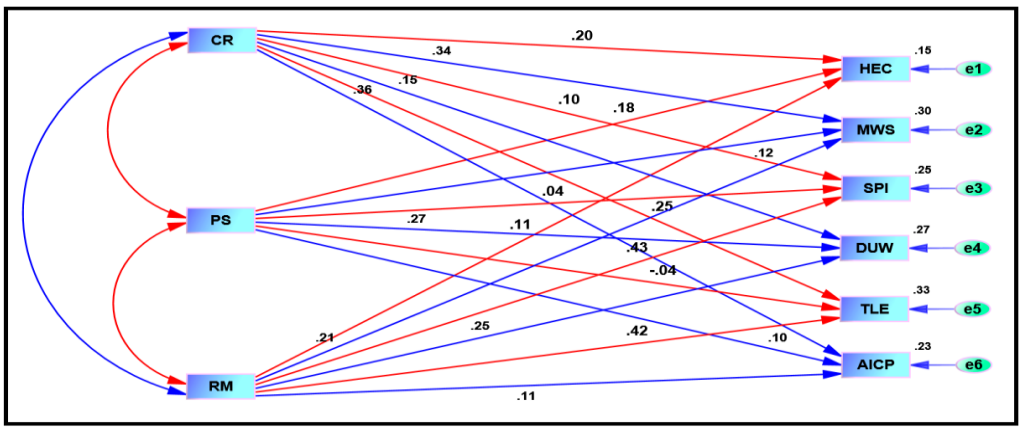

Figure (3) Structural model of the effect of the dimensions of the opposite orientation on the dimensions of adaptive performance
Source: Prepared by the researcher

Table (9) The results of analyzing the effect of the dimensions of the opposite orientation on the dimensions of adaptive performance

Regression			Standard Weights	Standard Error	Critical Ratio	Coefficient of Determination R2	Probability (P)	Effect Type
Career development	→	Handling Emergencies and Crises	0.195	0.093	2.097	0.148	0.025	moral
Psychological support	→		0.182	0.072	2.528		0.022	moral
Role modeling	→		0.115	0.085	1.353		0.179	not moral
Career development	→	Managing work stress	0.341	0.086	3.965	0.298	***	moral
psychological support	→		0.125	0.067	1.866		0.084	not moral
Role modeling	→		0.21	0.079	2.658		0.007	moral
Career development	→	Solving Problems Creatively	0.1	0.076	1.316	0.248	0.219	not moral
Psychological support	→		0.035	0.059	0.593		0.637	not moral
role modeling	→		0.425	0.07	6.071		***	moral
Career development	→	Dealing with Uncertain and Unpredictable Work Situations	0.152	0.085	1.788	0.274	0.059	not moral
psychological support	→		0.275	0.066	4.167		***	moral
Role modeling	→		0.248	0.078	3.179		0.002	moral
Career development	→	training and Learning effort	0.254	0.063	4.032	0.326	0.001	moral
psychological support	→		-0.045	0.048	-0.94		0.525	not moral
Role modeling	→		0.416	0.057	7.298		***	moral
Career development	→	Interpersonal , Cultural , Physical Adaptability	0.36	0.078	4.615	0.227	***	moral
psychological support	→		0.096	0.06	1.6		0.206	not moral
Role modeling	→		0.115	0.071	1.62		0.159	not moral

Source: Prepared by the researcher

Table (9) indicates the results of the impact hypotheses between the dimensions of the inverse orientation in the dimensions of adaptive performance, which are as follows:

There Is a Direct Effect of The Reverse Mentoring Its Dimensions in Handling Emergencies or Crisis Situations.

The results of Table (9) and the data shown in Figure (3) indicate that there is a significant effect between the dimensions of Reverse Mentoring (career development, psychological support, and role modeling) and the dimension of Handling emergencies or crisis situations, and this relationship can be explained as follows:

a. There is a significant effect of the career development dimension in the dimension of Handling emergencies or crisis situations, as the standard weight reached (0.195) with a critical percentage of (2.097).
b. There is a significant effect of the psychological support dimension in the dimension of Handling emergencies or crisis situations, as the value of the standard weight was (0.182) with a critical percentage equal to (2.528).
c. There is no significant effect of the role modeling dimension in the dimension of Handling emergencies or crisis situations.

It is noted from Figure (3) that the dimensions of the Reverse Mentoring explain (0.148) of the variance in Handling emergencies or crisis situations, which means that the remaining value of (0.852) falls outside the limits of the study. These results provide support for the first sub-hypothesis and the second main hypothesis.

There Is a Direct Effect of The Reverse Mentoring in Managing Work Stress.

The results of Table (9) and the data shown in Figure (3) indicate that there is a significant effect between the dimensions of Reverse Mentoring (career development, psychological support, and role modeling) and the dimension of dealing with work stress, and this relationship can be explained as follows:

a. There is a significant effect of the career development dimension in the dimension of dealing with work stress, as the standard weight reached (0.341) with a critical percentage of (3.965).
b. There is no significant effect of the dimension of psychological support in the dimension of dealing with work stress, which means that the surveyed universities have to pay attention to the psychological state of their employees.
c. There is a significant effect of the role modeling dimension in the dimension of dealing with work stress, as the standard weight reached (0.21) with a critical percentage of (2.658).

Figure (3) shows that the dimensions of the Reverse Mentoring explain (0.298) of the variance in dealing with work pressures, which means that the remaining value of (0.702) falls outside the limits of the research. These results provide support for the second sub-hypothesis of the second main hypothesis.

There Is a Direct Effect of The Reverse Mentoring in Solving Problems Creatively.

The results of Table (9) and the data shown in Figure (3) show that there is a significant effect between the dimensions of Reverse Mentoring (career development, psychological support, and role modeling) and the dimension of creative problem solving, and this effect can be explained as follows:

d. There is no significant effect of the career development dimension and psychological support in the dimension of creative problem solving.
e. There is a significant effect of the role modeling dimension in the dimension of problem solving in a creative way, as the standard weight reached (0.425) and a critical percentage of (6.071).

Figure (3) can show that the dimensions of Reverse Mentoring explain (0.248) of the variance in solving problems in a creative way, which means that the remaining value of (0.752) falls outside the limits of the research.

There Is a Direct Effect of The Reverse Mentoring in Dealing with Uncertain and Unpredictable Work Situations.

The results of Table (9) and the data shown in Figure (3) indicate that there is a significant effect between the dimensions of Reverse Mentoring (career development, psychological support, and role modeling) and the dimension of Dealing with Uncertain and Unpredictable Work Situations situations, and this relationship can be explained as follows:

f. There is no significant effect of the career development dimension in the dimension of Dealing with Uncertain and Unpredictable Work Situations situations .
g. There is a significant effect of the psychological support dimension in the dimension of Dealing with Uncertain and Unpredictable Work Situations situations, as the value of the standard weight was (0.275) with a critical percentage equal to (4.167) .
h. There is a significant effect of the role modeling dimension in the dimension of Dealing with Uncertain and Unpredictable Work Situations situations, as the standard weight reached (0.248) with a critical percentage of (3.179) .

It is clear from Figure (3) that the dimensions of the Reverse Mentoring explain (0.274) of the variance in Dealing with Uncertain and Unpredictable Work Situations situations, which means that the remaining value of (0.726) falls outside the limits of the research. These results provide support for the fourth sub-hypothesis of the second main hypothesis.

There Is a Direct Effect of The Reverse Mentoring on Training and Learning Effort.

It is noted from the results of Table (9) and the data shown in Figure (3) that there is a significant effect between the dimensions of Reverse Mentoring

(career development, psychological support, and role modeling) and the Training and Learning effort dimension, and this relationship can be explained as follows:

i. There is a significant effect of the career development dimension in the Training and Learning effort dimension, as the standard weight is (0.254) and a critical percentage of (4.032) .
j. There was no significant effect of the psychological support dimension in the Training and Learning effort dimension.
k. There is a significant effect of the role modeling dimension in the Training and Learning effort dimension, as the standard weight is (0.416) with a critical percentage of (7.298) .

It is clear from Figure (3) that the dimensions of the Reverse Mentoring explain (0.326) of the variance in the training and Learningeffort, which means that the remaining value of (0.674) falls outside the limits of the research. These results provide support for the fifth sub-hypothesis of the second main hypothesis.

There Is a Direct Effect of The Reverse Mentoring on Interpersonal, Cultural, Physical Adaptability.

The results of Table (9) and the data presented in Figure (3) indicate that there is a significant effect between the dimensions of Reverse Mentoring (career development, psychological support, and role modeling) and the dimension of showing adaptability between people/cultural/physical, and this relationship can be explained as follows:

l. There is a significant effect of the career development dimension in the dimension of showing adaptability between people/cultural/material, as the standard weight reached (0.36) and a critical percentage of (4.615).
m. The absence of a significant effect of the dimension of psychological support, and role modeling in the dimension of showing adaptability between people/cultural/material, which makes it imperative for the researched universities to make changes in their university structures in order to address psychological support and job role modeling in order to show the ability to adapt with workers culturally and materially.

Figure (3) shows that the dimensions of the Reverse Mentoring explain (0.227) of the variance in showing the ability to adapt between people / cultural / material, which means that the remaining value of (0.773) is outside the limits of the research. These results provide support for the sixth sub-hypothesis of the second main hypothesis.

CONCLUSIONS, LIMITATIONS AND FUTURE PROPOSALS

By reviewing previous studies, the current study found that there is a lack of agreement among researchers on the practices of total quality management in its general framework, even at the level of a particular sector, and this indicates that defining practices is subject to the environment, work and sector of the organization . The results of the study showed the universities' interest

in continuous improvement as one of the practices of total quality management to a high degree, and this shows the universities' interest in using modern methods of providing education service, as well as using modern technical means in scientific laboratories, using modern sources, and paying attention to the training and development process. While the practice of focusing on the beneficiaries got the least in the middle of my account, and this indicates that the voice of the beneficiaries of the service is weak in the universities studied. The results of the research also showed that psychological support as one of the dimensions of reverse mentoring ranked first as the highest arithmetic mean, and this indicates the interest of the surveyed universities in treating psychological conditions, especially among the elderly. The role modeling came in the last rank, and this indicates that simulating the roles shown by young people may be moderate, and this may be due to age and societal barriers in the elderly. The results of the research also highlighted that young people have technological knowledge and skills that they share with others of different age groups, but the result of this participation may not be at the level required to improve the efficiency of others in the use of information technology, and this may indicate that the elderly do not accept learning from young people or may They face the difficulty of learning modern technology, and the research also found that there is a desire among employees in the surveyed universities to learn and develop talents and in various available ways, whether by joining official training workshops or by exchanging ideas and information with subordinates or colleagues in the workplace, and this indicates their desire to keep pace with Rapid developments. The research faced many limitations through which it can launch future studies. In addition to the health restrictions from the outbreak of the Corona epidemic (COVID-19) that accompanied conducting the research, there was another limitation represented in the research's use of cross-sectional surveys to collect data, meaning that the data were all collected in one time, so any causal inferences are temporary. Therefore, future studies should use a longitudinal or experimental design to verify the causal relationship between the variables. The nature of the questionnaire could be self-reported, i.e. the participants' self-report is a limitation because it is linked to the bias that leads to inflating the research results, so future studies should use objective indicators such as peer assessment for reverse mentoring or adaptive performance, and adaptive performance can also be evaluated through performance evaluations Or through other sources such as supervisors and colleagues.

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