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### The Explanatory Effect of Cognitive Human Resources Skills in Supporting Quality Requirements: An Exploratory Study of the Board of Directors at Al-Nisour University College

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**Abstract:** This research discusses the explanatory impact of cognitive human resources skills in supporting quality requirements, by conducting an exploratory study of the opinions of the Board of Directors at University Al-Nisour College. As the research problem confirmed the existence of a significant deficiency in investing in cognitive skills and employing them in meeting quality requirements, which is considered one of the most important Indicators of success in the contemporary environment. Therefore, the importance of the research is to provide a set of recommendations that contribute to addressing this problem. The goal of the research is to identify the level of application of cognitive skills for human resources and total quality management, and then to identify the nature of the relationship of influence and connection that brings them together. The descriptive analytical method was used to complete the research. The research community was represented by employees at Al-Nisour University College, while the research sample consisted of members of the college council only, who numbered (23) individuals. The researchers also designed a questionnaire using a set of ready-made indicators and criteria, which was distributed to a sample of (23) individuals who were selected using a purposive sampling method. The scientific value of the research is to provide a modest addition to the Iraqi library. After processing the data using a set of central tendency measures available in the statistical program (SPSS-Ver.23), several results were produced that confirmed the importance of the role played by cognitive human resources skills in enhancing the organization's ability to support quality requirements. These results confirm the validity of the hypothesis included in the research. Therefore, the researchers recommended the need to look at successful experiences in developed countries that have invested in cognitive human resources skills in meeting and supporting their quality requirements and programmers.

## الآثر التفسيري للمهارات الإدراكية للموارد البشرية في دعم متطلبات الجودة: دراسة استطلاعية لمجلس الإدارة في كلية النور الجامعة

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وزارة التعليم العالي والبحث العلمي

### المستخلص

يناقش هذا البحث الأثر التفسيري لمهارات الموارد البشرية الإدراكية في دعم متطلبات الجودة، وذلك من خلال إجراء دراسة استطلاعية لآراء مجلس إدارة جامعة كلية النور، إذ أكدت مشكلة البحث وجود قصور كبير في الاستثمار في المهارات البشرية الإدراكية وتوظيفها في تلبية متطلبات الجودة والتي تعتبر من أهم مؤشرات النجاح في البيئة المعاصرة. ولذلك تكمن أهمية البحث في تقديم مجموعة من التوصيات التي تساهم في معالجة هذه المشكلة، أما هدف البحث التعرف على مستوى تطبيق المهارات المعرفية للموارد البشرية وإدارة الجودة الشاملة، ومن ثم التعرف على طبيعة علاقة التأثير والارتباط التي تجمعهما. وتم استخدام المنهج الوصفي التحليلي لاستكمال البحث. إذ تمثل مجتمع البحث بالموظفين في كلية النور الجامعة، بينما تكونت عينة البحث من أعضاء مجلس الكلية فقط والذين بلغ عددهم (23) فرداً. كما قام الباحثون بتصميم استبانة باستخدام مجموعة من المؤشرات والمعايير الجاهزة، تم توزيعها على عينة مكونة من (23) فرداً تم اختيارهم بطريقة العينة القصدية. وتتمثل القيمة العلمية للبحث في تقديم إضافة متواضعة للمكتبة العراقية، وبعد معالجة البيانات باستخدام مجموعة مقاييس الاتجاه المركزي المتوفرة في البرنامج الإحصائي (SPSS-V23) تم التوصل إلى عدة نتائج أكدت أهمية الدور الذي لعبته من خلال مهارات الموارد البشرية المعرفية في تعزيز قدرة المنظمة على دعم متطلبات الجودة. وتؤكد هذه النتائج صحة الفرضية التي تضمنها البحث. ولذلك أوصى الباحثون بضرورة النظر إلى التجارب الناجحة في الدول المتقدمة التي استثمرت في مهارات الموارد البشرية المعرفية في تلبية ودعم متطلبات الجودة والمبرمجين لديها.

**الكلمات المفتاحية:** المهارات الإدراكية، الموارد البشرية، الجودة، الإدارة العليا.

### Introduction

Through cognitive human resources skills, it is possible to understand, interpret, and absorb the most important events taking place around them. Whether they are in the internal or external environment surrounding the organization, which helps them analyze the strategic situation surrounding them and then make the necessary decisions to deal with them, in a way that helps them carry out tasks. And the duties assigned to them, and then achieve the most important plans and goals that their organization seeks. Perhaps one of the most important of these plans and goals is meeting quality requirements, as quality constitutes one of the two most important keys to the process upon which the organization relies in achieving the satisfaction of its customers, through the characteristics of the product or service that it

provides to them. In addition to its role in enhancing the participation process. All its human resources in achieving its goals, by focusing on continuous improvement programs to keep pace with all the developments it faces. Accordingly, the main idea that this research attempts to prove is that cognitive human resources skills explain the organization's ability to meet quality requirements and the cooperative form of work that depends on the capabilities and talents of both human resources and management to improve quality and productivity rate on an ongoing basis. The research consists of four main axes. The first axis focuses on the methodological lines of the research, while the second axis focuses on discussions and cognitive developments. The third axis focuses on interpreting and discussing field data, and finally the fourth axis is devoted to conclusions and recommendations.

### **The first Axis: Methodological Lines of Research**

**Research Problem** As for the research problem, which the researchers were able to identify during the field experience within the organization in the field of application. It was represented by asking the following main question: Does the administration within University Al-Nisour College realize the importance of the role played by human resources cognitive skills (attention, comprehension, and interpretation) in supporting quality requirements in the framework of the contemporary environment within which it operates?

**Research Importance:** The importance of the research was represented in light of the variables investigated, as the cognitive human resources skills represent the main source of innovations carried out by the organization, and their importance has increased recently, which required attention to marketing them and how to maintain them. The researcher also attempts to diagnose the reality of the variables researched in the organization. The research sample uses several ready-made standards that have been adapted to suit the Iraqi environment, in a way that allows the researcher to provide a set of solutions to address the problems facing the organization under investigation as far as the cognitive human resources skills and their role in meeting quality requirements are concerned.

**Research Goals:** One of the most important goals that the research seeks to achieve is to discuss and present the theoretical philosophical orientations of previous researchers to come up with a modest addition as far as the variables investigated are concerned. Determining the relative importance of the dimensions of cognitive human resources skills and diagnosing their reality within University Al-Nisour College. As well as determining the relative importance of the dimensions of meeting quality management and diagnosing their reality at University Al-Nisour College. And identifying the degree to which cognitive human resources skills contribute to meeting quality requirements within the framework of relationships of correlation and influence, to achieve Its basis is to present some conclusions and suggest several recommendations that represent mechanisms to enhance knowledge in the field under investigation.

**Hypothesis Research Scheme:** The main research idea can be embodied in the hypothesis diagram, which explains the nature of the influence exerted by the cognitive human resources skills (the explanatory variable) in supporting quality requirements (the response variable). Figure (1) illustrates the hypothesis research diagram.



**Research Hypothesis:** Within the framework of the hypothetical scheme above:

1. The main hypothesis (H1) that the research attempts to prove can be formulated as follows (cognitive human resources skills have a significant effect at a statistical level (0.01) in enhancing the ability of University Al-Nisour College to support its quality requirements).
2. While it indicated the null hypothesis (H0) states, (cognitive human resources skills do not have a significant effect at a statistical level (0.01) in enhancing the ability of University Al-Nisour College to support its quality requirements).

**Tools for Collecting and Processing Research Data:** Note that the researcher used the descriptive analytical method in testing it and ensuring the validity of the research hypothesis. The researchers also relied on the questionnaire in collecting its data, which is defined as a set of questions that are related to the nature of the variables that the researcher wishes to study. A five-point Likert scale was adopted in preparing it. A set of ideas from previous researchers was also used in formulating its paragraphs, and it was presented to several (11) teaching specialists in the field of business administration for arbitration. After processing their opinions and comments, the validity of the questionnaire was calculated, reaching a rate of (93%), and after it was repeated. Rephrasing some paragraphs and deleting others. The researchers distributed it to a random sample of (10) individuals, and after (14) days it was redistributed to them, using the (Cronbach-Alpha) analysis factor, its reliability value was calculated, as it reached (87%), which reflects that the questionnaire items can reflect the same Results if redistributed to the same sample members over separate periods. To test the validity of the research hypothesis and the accuracy of its hypothetical plan, and thus ensure the structural validity of the research standards, the researcher conducted goodness-of-fit tests, and since the results are greater than (0.05), it confirms with statistical significance that the data is consistent with the objectives. Research is valid for conducting statistical tests for this research and using the tools referred to below. In other words, to ascertain the nature of the distribution followed by the research data and to determine the statistical tools that can be adopted in analyzing the data, the researcher conducted the necessary tests using (Shapiro-Wilk & Kolmogorov-Smirnova). And since the size of the research sample was less than (30) individuals, it was Most results of normal data analysis are greater than (0.05), and therefore the data has met sufficient conditions to follow a normal distribution. Accordingly, the researcher relied on the value of (arithmetic mean, standard deviation, percentage of agreement, and coefficient of variation) to identify the reality of the variables investigated, so that he could test the main hypothesis of the research, using the Spearman correlation coefficient and the simple linear regression coefficient, using (SPSS.Ver.23) programs in Analysis.

**Research Population and Sample:** The private educational sector was chosen as a field of application, as University Al-Nisour College was chosen

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as a research community. And the main reason for its selection is that it is one of the pioneering private colleges that has been able to achieve many successes within a short period, and this gives a clear indication of the administration's interest in developing the cognitive skills of its human resources., and invest in meeting its quality requirements. The research sample consisted of (23) members of the College Council who were selected using the purposive sampling method because it was compatible with the research objectives. The percentage of holders of a university degree and doctorate reached 100%. As for the percentage of males, it reached (92%), while the percentage of females reached (8%). About years of service, all members of the researched sample had more than five years of service in the college. Accordingly, these indicators enhance the conviction and knowledge of the sample studied when answering the paragraphs. The questionnaire.

### **The Second Axis: Theoretical and Cognitive Propositions**

**Cognitive Human Resources Skills:** The trends and approaches that researchers and specialists in human resources management have relied upon when studying human resources cognitive skills have varied and multiplied. Human resources need a variety of skills to carry out the tasks and duties assigned to them by their organizer. Therefore, researchers and those interested have tried to study these skills and identify their most important intellectual implications. (Asmaa & Ali, 2022) Invest it in a way that contributes to its use when defining cognitive human resources skills, the most prominent of which we will try to discuss within the framework of this paragraph. It is defined as the skill of human resources to process ideas in an advanced manner, following advanced knowledge, which contributes to helping the organization achieve organizational superiority compared to its competitors (LaMonica et al., 2023). This definition emphasizes the importance of the role we play in human resources cognitive skills while enhancing the organizational excellence of organizations. On the other hand, it is defined as a set of actual activities carried out by human resources to analyze facts and derive a set of information that can be used when making decisions and solving problems (Nunoo et al, 2023). This definition emphasizes the nature of the relationship that combines the cognitive human resources skills and the accuracy of the decisions that are taken by them when confronting challenges and problems at work (Naji & Iman, 2018).

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According to the behavioral approach, cognitive human resources skills are defined as a set of mental abilities that are used to analyze the variables given by human resources to determine the method on which to recognize and adopt certain behaviors with others (Pace et al, 2023). Here it becomes clear to us that the cognitive human resources skills are the main driver of the behaviors that are followed by them when dealing with others. It has also been defined as the skill of human resources in understanding the nature of developments that occur in the two variables of the given internal and external environments in which they work within the limits (Zhang & Zhang, 2023). Here it becomes clear to us that cognitive skills help human resources understand the developments that occur within the given environment. In almost the same direction, it is known as one of the types of intellectual skills on which human resources relies in devising a set of ideas that can be used to achieve the strategic goals of the organization (Sargent & Winton, 2023). Therefore, cognitive skills are one of the main drivers that can be used to achieve the organization's goals (Amal, 2024). It has also been pointed out that the skill determines the type of motivators and drivers that must be taken into consideration when making crucial decisions for human resources working within contemporary organizations (Başaran & Bay, 2023). The researchers have confirmed (Kroesbergen et al, 2023) That cognitive human resources skills play an important role in rationalizing brainstorming processes, which contribute to generating new and unusual ideas that can be used to extract ideas of high value for them and their organization. On the other hand, cognitive human resources skills have been referred to as the skills that can be used to simplify their memory, provide it with information, and retrieve it when needed to invest it in carrying out their tasks (Ahmed, 2023). It is necessary to point out that cognitive human resources skills include a special degree of attention to all aspects of the variables given to them, their memory of information, as well as self-reflection in a manner that is compatible with their knowledge and the nature of the goals they seek to achieve (Benvenuti et al, 2023). After discussing the previous concepts, researchers can define the cognitive human resources skills procedurally for the current research as the skill of human resources in using their mental capabilities to change the facts and developments that occur in their environment. And then paying attention to the important ones, absorbing them and employing their results in carrying out the activities and tasks

assigned to them. Reliance on the dimensions represents the three (attention, comprehension, and interpretation) in diagnosing the degree of interest of the organization in the field of employment in investing in the cognitive human resources skills, which are (Parthasarathy et al., 2023 & Cankaya et al., 2023):

1. The first dimension (attention), which constitutes one of the components of human resources' cognitive skills, refers to the skill of human resources in focusing on things that are of high value to them and their organization, to rationalize their behaviors. In other words, attention refers to the continuous focus of human resources on tasks that contribute to achieving their role in serving their organization (Romer et al, 2023). Here, it can be said that attention reflects the skill of human resources, focusing on the main stimuli in the organization and society. Which can be used to build their initial impression of these stimuli.
2. The second dimension (comprehension): is one of the components of cognitive human resources skills. Which refers to the skill of human resources in understanding, analyzing, and synthesizing knowledge in a way that can be used in carrying out the tasks and duties assigned to it, or on the other hand, in defining comprehension as the skill of human resources in understanding developments. That occur in their given environment, and absorb them while updating their knowledge and benefiting from it in the future (Driessens et al, 2023). Researchers can define comprehension as the skill of human resources in understanding the nature of developments that occur in the environment given to them. And using it to update their knowledge and invest it in the future.
3. The third dimension (interpretation), which represents one of the components of human resources' cognitive skills, refers to the skill of human resources in interpreting the events they face in their personal and professional lives to find out the most important reasons behind them. In other words, interpretation refers to how human resources analyze and handle the various situations that arise. It affects their ability to carry out the tasks and duties assigned to them (Weiss et al, 2023). Researchers can define the explanatory variable as the skill of human resources in analyzing the reasons behind the various situations they face to build a conceptual framework around them to rely on in making future decisions.



**Quality Requirements:** Contemporary organizations also seek to meet quality to keep pace with contemporary developments, and thus ensure that there is no obsolescence or decline in the work environment (Essam & Abbas, 2023). Therefore, the approaches that can be relied upon in studying quality management and the most important requirements related to it have been numerous and varied. Quality refers to the organization's ability to meet a set of standards and indicators necessary to meet the requirements of the customers with whom it deals (Riaz et al., 2023). This definition emphasizes the importance of the role played by quality in strengthening the relationship between the organization and its customers. Quality is also known as one of the standards that can be relied upon to determine the extent of the organization's distinction and superiority over its competitors in the sector within which we work (Cubo et al., 2023). This definition confirms that quality plays an important role in enhancing the competitive capabilities of the organization, compared to other competing organizations in the environment (Zainab, 2020). Quality has also been referred to as the organization's ability to provide a range of products to its customers that are free of defects or discrepancies with its management level (Alawag et al., 2023). As for quality management, it has been defined as a set of main principles that the organization follows to organize continuous improvement programs and then achieve the desired success (Lin et al., 2023). It becomes clear to us that the organization's success in implementing continuous improvement programs, achieving goals, and implementing the organization's plans can be achieved through quality management programs. On the other hand, it is known as one of the contemporary trends that focuses on customers when planning to implement its activities and operations (Carvalho et al., 2023). It is also defined as the organization's interest in studying, analyzing, designing, and preparing quality management guides and models to implement its activities and tasks (Zhao et al., 2023). As for Quality management requirements, they are defined as a set of material, informational, and financial requirements necessary to implement the quality management applications that the organization seeks (Ho et al., 2023). Accordingly, quality management requirements can be defined by researchers as the requirements necessary to implement quality programs that require the support of senior management, leadership, human resources skills, and programs for continuous improvement, and then setting the

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necessary management standards to meet the desires and conclusions of the customers who deal with them. There is a set of requirements that must be met for the success of quality management programs, which we will try to study within the organization in the research field (Clougherty & Grajek, 2023 & Prashar, 2023 & Agrawal et al., 2023).

1. It is the first dimension (leadership support). This dimension reflects the interest of senior management in creating a positive organizational climate that supports the application of comprehensive quality principles within the organization and spreading its culture among its human resources.
2. The second dimension represents (human resources): This dimension refers to the experiences, knowledge, and capabilities of human resources necessary to meet the requirements of comprehensive quality management. It is necessary to point out the necessity of human resources having the ability to employ their capabilities in the structure of this requirement in the required manner.
3. The third dimension (performance measurement): This dimension refers to a set of indicators and standards that the organization adopts to measure the extent of its success in meeting the requirements of total quality management in the manner intended and as planned.
4. The fourth dimension (focus on the customer): emphasizes that the organization can identify the most important current and future needs and desires of the current and targeted customers with whom we deal. To achieve parity between the products that it provides to them in a way that seeks to achieve satisfaction and loyalty towards it and ensure their continued dealings with it.
5. The fifth dimension (continuous improvement) represents the ability of the organization to have a clear-cut plan capable of making quality changes in its resources and activities, in a manner that is consistent with the successive documents it provides at work, to ensure no decline or regression compared to the requirements of contemporary comprehensive quality management.

### **The Third Axis: Data Processing and Interpretation of Results**

In this section, we will try to explain the most important results obtained, after processing the data statistically, as it is possible, through Table (1), to clarify the most important results of the descriptive analysis of the variables investigated.

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Table (1): Descriptive analysis of the research variables

Variables	Agreement rate	Arithmetic mean	standard deviation	Coefficient of variation	Relative importance
attention	%92	3.9	0.61	0.16	0.84
comprehension	%90	3.7	0.71	0.19	0.81
interpretation	%94	4.2	0.56	0.13	0.87
Cognitive human resources skills	%92	3.9	0.63	0.16	0.84
leadership support	%86	3.6	0.71	0.20	0.80
human resources	%84	3.4	0.74	0.22	0.78
performance measurement	%92	3.8	0.61	0.16	0.84
focus on the customer	%94	4.2	0.52	0.13	0.87
continuous improvement	%87	3.7	0.64	0.18	0.82
Quality Requirements	%89	3.7	0.64	0.17	0.83

It is clear from Table (1) that the cognitive human resources skills included three dimensions, and it achieved an agreement rate of (92%), which is an excellent rate and higher than the standard rate (66.7%). Therefore, these results reflect the possession of the skills by the human resources working within University Al-Nisour College. The cognitive skills are necessary to interpret, assimilate, and understand the nature of the variables surrounding them, in a way that helps them keep pace with successive developments in the environment surrounding them, and then carry out their tasks and duties in the best possible way. What confirms this result is the value of the arithmetic mean of (3.9), which confirms that human resources possess administrative skills at a high level within University Al-Nisour College. There is also excellent harmony and a decrease between the answers of the members of the research sample towards the paragraphs on human resources' cognitive skills, as reflected in the value of the standard deviation and the coefficient of variation that reached (0.63) and (0.16) respectively.

It is also clear from Table (1) that quality management requirements include five sub-dimensions. And it achieved a percentage of agreement (89%), which is higher than the standard percentage, and confirms that there is a clear interest on the part of the University Al-Nisour College to provide all the material, human and financial requirements necessary to implement The quality management requirements you need. The value of the arithmetic mean came to confirm the interest in quality management requirements at a

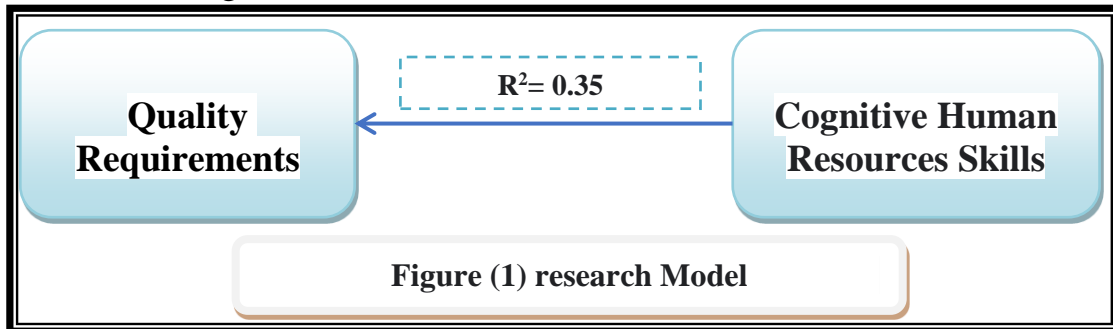
high level within University Al-Nisour College, as it reached (3.7), which is higher than the hypothetical mean. The value of the standard deviation also confirmed the presence of very good harmony between the answers of the members of the research sample towards these items, as its value reached (0.64). This result confirmed the value of the coefficient of variation as it reached (0.17). After completing the interpretation of the results of the descriptive analysis, it is possible, through Table (2), to clarify the most important results that the researchers relied on in testing the main hypothesis of the research, as follows:

Table (2): Results of Hypothesis Testing

Evaluation	Moral	f	R2	r	B	a	explanatory variable
Positive effect	0.01	31.9	0.35	**0.59	0.84	0.89	Cognitive human resources skills

It is clear from Table (2) that the values of the correlation between cognitive human resources skills and quality management requirements amounted to (0.59\*\*), which is a direct, statistically significant relationship (0.01) and confirms the mutual relationship between these two variables. It is also clear (2) that the calculated value of (f) was (31.9), which is greater than its tabulated value with a significance level of (0.01) and with confidence limits (99%). This result reflects the presence of an effect of cognitive human resources skills on the response variable (quality management requirements). It is also clear from the same table that the value of the constant is (a = 0.89), which means that University Al-Nisour College is interested in meeting the requirements of quality management by (0.89) even if the cognitive human resources skills are equal to zero. As for the value of (B=0.84), it indicates that changing one unit in the dimension of cognitive human resources skills will lead to a change in the ability of University Al-Nisour College to meet the requirements of quality management by an amount of (0.84). The value of the coefficient of determination (R2) was (0.35), which confirms that (35%) of the variance occurring in quality management requirements is explained by the cognitive human resources skills that entered the model, and that (65%) is explained by other factors that did not enter the model. This gives a clear indication that cognitive human resources skills contribute to enhancing the ability of University Al-Nisour College to meet quality management requirements.

Accordingly, there is justification for not rejecting the research hypothesis H1, which states that cognitive human resources skills have a significant effect at a statistical level (0.01) in enhancing the ability of University Al-Nisour College to support its quality requirements. The H0 hypothesis was rejected, which stated that cognitive human resources skills do not have a significant effect at a statistical level (0.01) in enhancing the ability of University Al-Nisour College to support its quality requirements. After testing the research hypothesis, researchers can write the model for this research, as in Figure (2).



#### Fourth Axis: Conclusions And Recommendations

##### Conclusions

1. It became clear from the results of the analysis that the human resources within University Al-Nisour College possess cognitive skills, which enable them to think innovatively and propose the necessary alternatives to develop their various operations, by assimilating and understanding the variables surrounding them, and paying attention to any developments that they may encounter at work.
2. The results of the analysis also confirmed that University Al-Nisour College is interested in meeting quality requirements, by providing the financial, material, and organizational support and requirements necessary for their implementation. In addition to focusing on organizational performance and meeting the requirements and desires of customers, and implementing a set of continuous improvement programs necessary to keep pace with successive developments in the field of quality management.
3. The cognitive human resources skills contribute to supporting the ability of University Al-Nisour College to meet the requirements of quality management.

## Recommendations

1. The researchers also recommend spreading team spirit and collective work within University Al-Nisour College, to ensure that knowledge accumulation is achieved within it in a way that ensures that it does not lose its wealth of knowledge due to the departure of its human resources.
2. The researchers recommend the need to pay attention to attracting human resources specialized in the field of quality management. And to seek the assistance of those with experience and specialization to spread the culture of quality within it. As well as enhance its ability to provide high-quality services that are compatible with the desires and needs of its customers.
3. However, it is recommended that it be necessary to review the experiences of implementing the use of cognitive human resources skills in enhancing their ability to meet the requirements of quality management.

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