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The role of knowledge management strategies in improving the quality of educational service – University of Anbar as a model

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ABSTRACT

The current research aims at demonstrating the extent of the role of knowledge management strategies as an independent variable and the quality of educational service as a responsive variable. This research is applied at University of Anbar. It tries to come up with a set of recommendations that contribute to strengthening the practice and adoption of the variables in the organizations under study. For the purpose of the search, a sample of (320 members of the teaching staff) from University of Anbar is adopted. The basic questionnaire was relied upon to collect data and information that were processed and analyzed using basic methods such as the arithmetic mean, standard deviation, correlation coefficient and coefficient, difference, importance, and multiple regression. The researchers reach several results that show that University of Anbar is able to use the possibility of the coding dimension of classifying and storing knowledge in databases to be easily entered and used by the individuals in enhancing the quality of educational service at the university. As for the most important recommendations, the administration of University of Anbar should take advantage of the strong relationship between knowledge management strategies to bring about more positive changes in the quality of educational service in general through the exchange of ideas and information between individuals.

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1. Introduction

The researchers focus on knowledge management strategies. They explore important issues when designing action plans to better manage knowledge in the organization of the research. One of the objectives of the research is to determine the knowledge that the representatives believe may benefit from its management. Then clarifying the gap in the literature covered by this paper. It indicates that "some studies dealt with knowledge strategies for a short period. They can be described as personal views and opinions because they lack theoretical and practical rigor, but they aim to shed light on the relevant theory. They should include the strategy that provides different types of knowledge (formal or informal) in different forms (written, verbal, electronic), and have different effects to support the cooperation of their owners. It has different impacts to support the co-operation of the owners. At the forefront of what organizations aspire to is access to quality through optimal employment of knowledge management strategies within the internal and external environment of the organization.

Service has come to occupy an important role in social life and contribute to the welfare and stability of society because recent years have witnessed a great development in the field of providing services and activities. Another motivation is the government's interest in supervising and controlling services that has become great because of its effective impact on the well-being of the individual and society. The quality of service system has a distinct importance in the modern administrative system all over the world. This is due to the rapid development in terms of social, political, technological and economic aspects because of the competition that increases and organizations compete in order to gain and retain the largest number of customers. The interest in the quality of service appeared which requires the participation of everyone, starting with the preparation stages through the delivery stage. Not only that, but also concerned with follow-up.

1.1. The problem of the study

The problem of the research is evident compared with previous theoretical studies. The problem of the research in its general framework is related to the limited awareness of the relationship between knowledge management strategies and the quality of

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educational service and the extent to which public organizations apply knowledge management strategies as an investment resource that affects the quality of service. So the problem of the study is manifested through the title of the research (the Role of the Strategies of Knowledge Management in Improving the Quality of Educational Service). The research problem comes to answer a main question which is (Is there a role for the strategies of knowledge management in improving the quality of educational service?). The problem can be represented by the following questions:

- (1) What is the level of university administration's possession of knowledge management strategies? What is the quality of educational service, and the dimensions of research variables and their relationship with the responsibilities entrusted to the university?
- (2) What is the level of application and interest of the departments in knowledge management strategies and their dimensions?
- (3) What are the interrelationships between the research variables (knowledge management strategies, educational service quality)?
- (4) To what extent are the surveyed departments able to diagnose their level of performance and their role in improving the quality of educational service?
- (5) How can the dimensions of knowledge management strategies (coding strategy and personalization strategy) improve service quality at the university?

1.2. Significance of the study

The following items are the most important points that indicate the importance of the research:

- (1) Attempting to benefit the organizations in the question by providing a contemporary vision by presenting a topic which many organizations aspire to access through knowledge frameworks.
- (2) Standing on the latest developments in the field of variables of the study with showing the essential ideas related to the topics (knowledge management strategies, quality of educational service) to find the interconnection between their variables according to the impact and interdependence relationships.
- (3) Scientific and logical interpretation of the intellectual and educational aspects of knowledge management strategies, the quality of educational service.
- (4) Benefiting from the nature and importance of the relationship existing between the topics (knowledge management strategies, educational service quality) in developing organizations and increasing awareness in a manner that is positively reflected on the quality of their outputs within the scope of their environment.
- (5) Identifying the university administration's level of application of the quality of educational service and knowledge management strategies.
- (6) Diagnosing the relationship and impact of knowledge management strategies on the quality of educational service, as well as identifying the most prominent dimensions of knowledge management strategies in application.

1.3. Objectives of the study

The main objective of the study is defining the role of knowledge management strategies in improving the quality of educational service for the administration of University of Anbar. The following are sub-objectives:

Identifying the level of knowledge management strategies, and the level of adoption of the orientation towards the quality of educational service.

Determining the role of knowledge management strategies in adopting the orientation towards quality educational service for the management of University of Anbar.

Determining the role of adopting the orientation towards quality of educational service for the management of University of Anbar.

Identifying the effect of adopting knowledge management strategies as an independent variable towards the quality of educational service as a dependent variable for Anbar University administration.

1.4. The hypothetical outline of the research

The research outline was built to provide an expressive picture of its idea and clarify the nature of the relationship and influence between the variables of the research. The proposed dimensions and the questionnaire were compiled by the researchers [21] study of knowledge management strategies. It was based on the study (Nor al-Din, 2007: 71) and the study ([5]: 308) to exclude the quality of educational service. Fig. 1 illustrates the hypothesis plan for the research.

1.5. Hypotheses of the study

The hypotheses are a process of testing based on the findings of the research, and in principle, whether we obtain results or not, Multiple regression models are employed according to direct relationships to test research hypotheses using the (24 SPSS) program. The research relied on two hypotheses, main and secondary, and they were formulated as follows:

The first main hypothesis: Knowledge management strategies are related to its dimensions (coding and personalization) with a statistically significant correlation in the dimensions of educational service quality, including testing that link.

Secondary hypothesis: Knowledge management strategies in its dimensions (coding and personalization) have a statistically significant effect on the quality of educational service dimensions, including testing that link.

1.6. The Methodology

An exploratory, descriptive analytical method will be purchased. This approach was determined based on the variables of the study and the desired goals. As well as the information and data that are obtained and studied. It determines the characteristics of the phenomenon and describes its nature and the quality

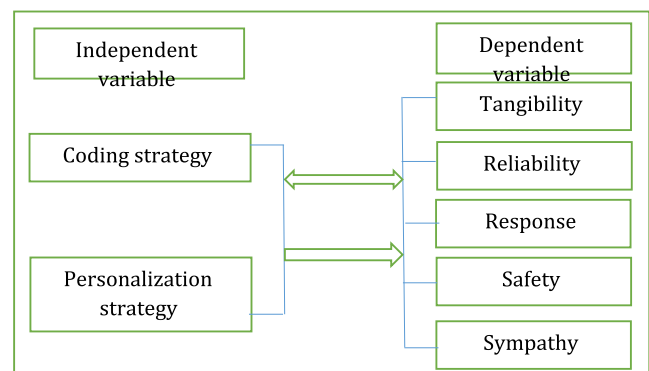


Fig. 1. The hypothetical outline of the research.

of the relationship between its variables, trends and causes, And it works to give explanations for the results obtained and shows the importance of the relationship and influence between the variables of the study.

1.7. Participants

The participants of the study are the teaching staff of University of Anbar, whose number is (1670) due to their practical and scientific experience in the field of their professional specialization. The research sample was chosen by the researchers, According to the law ([22]: 30), (320) questionnaires have been distributed, As the number of retrieved questionnaires reached (314) questionnaires suitable for statistical analysis, As for the non-retrieved questionnaires, their number was (6), Appropriate statistical treatments were conducted for the title of the research.

2. Knowledge management strategies

Knowledge management (KM) has been the subject of much debate over the past decade. Organizations are being told that they will not live in the modern era of knowledge unless they have a strategy to manage and utilize the value from their intellectual assets. This generates the need to find a suitable definition. Many different definitions of (KM) have been published. Several of them will be discussed in this paper to avoid preempting discussion about the best definition of knowledge management in a given situation. A very broad definition of KM is used for current purposes: knowledge management can be thought of as the intentional design of processes, tools, structures, etc. with the intention of increasing, renewing, sharing, or improving the use of knowledge represented in any of the three (structural, human and social) elements of capital. The Intellectual ([19]: 1). Despite the difficulties in defining the concept of knowledge management, there is an agreement that knowledge is an organized mixture of ideas, rules, procedures and information ([13]: 32).

Knowledge emerged as a key concept within the business debate and organizations began to view knowledge as one of their most valuable strategic resources which must be managed effectively to generate sustainable competitive advantage. Perhaps the most important response has been the proliferation of knowledge management initiatives: Infrastructures and processes for locating, capturing, and sharing knowledge possessed by members of an organization. Other scholars believe that the most valuable knowledge is the tacit knowledge inside people's heads which is reinforced or shared through interpersonal interaction and social relationships. Knowledge management initiatives have had to engage with new cultures, shapes, and organizational reward systems to reinforce those social relationships ([11]: 616).

Knowledge management is defined as the systematic management of an organization's knowledge assets for creating value and meeting tactical and strategic requirements. It comprises of initiatives, processes, strategies, and systems that support and enhance storage, assessment, engagement, refinement and knowledge creation ([20]: 16). Knowledge management can also be defined as identifying, improving, and effectively managing intellectual assets to create value, increase productivity, and gain and maintain competitive advantage ([15]: 2). Knowledge management is defined as a set of organized processes through which value is created by mixing elements of knowledge to create an appropriate knowledge combination ([2]: 11). As defined by the ([16]: 110) as a set of strategic options for the creation of knowledge in the organization, and the organization provides guidance lines to create a competitive advantage. Knowledge management is a strategy used to create, organize, exchange and share climate

information towards sustainable development, adaptation to climate change and its resilience ([18]: 17). While the knowledge management strategy is defined as the process of transforming the intellectual assets of the organization represented in the recorded information and the talents of its members into greater productivity, new values and increased competition (Murray, 2001: 5).

The knowledge management strategy plays an important role in formulating the general strategy of the general organization. Technical developments in the field of information and communication, Databases, data warehouses, and decision-making support systems have contributed to increase the organization's knowledge of the competitive environment, focus on factors related to the market, and enable us to develop its competitive strategies to reduce costs and differentiate more efficiently ([25]: 2). Thus, the knowledge management strategy is defined as a review of the company's competitive strategy to enhance the dynamic ability of the organization to create and transfer knowledge with the aim of providing superior value and meeting the evolving expectations of its clients. Knowledge management strategy includes allocating large resources to knowledge management and developing a variety of knowledge management tools. It works to effectively create and transfer knowledge, quickly gain new knowledge and make significant contributions to the institution's knowledge base by creating a knowledge-oriented environment, supporting and encouraging innovation ([27]: 216). For further studies refer to [28–39].

2.1. Importance of knowledge management strategies

The importance of knowledge management strategy (KM) is highlighted through a resource-based view of management as a comprehensive change process and a form of organizational renewal. It focuses on innovation through the creation, transfer and application of new knowledge. The implementation of KM strategy allows improving learning ability and its ability to combine knowledge-based capabilities and thus make better use of them. It is difficult to simulate new resources and generate capabilities to become the core of a competitive advantage which leads to increased efficiency ([17]: 162). Knowledge management strategies are among the modern ideas and have an effective impact on the success of organizations. Its importance stems from being one of the essential components for the success and distinction of organizations and ensuring its survival through its ability to contribute to the maintenance and development of the organization's long-term vision. Depending on it, the organization can get its objectives in the future. This comes by determining what the market needs? What does the customer want? What is the level of competition? (Pollock, 2001: 74).

Knowledge management strategy should be based on the organization's strategy and its objective is to manage, share and create relevant knowledge assets that will help meet tactical and strategic requirements ([20]: 5). Then the values of knowledge resources are used to improve the performance of organizations and employees, through their ability to facilitate the process of obtaining data and information at the required time, to improve the strategic and tactical operational activities necessary to achieve organizational goals ([1]: 207).

In this regard ([7]: 156) classifies the importance of knowledge management strategies in:

- 1- The active role of the organization's competitive strategy and how it generates value for the customer.
- 2- Using, acquiring, and sharing tacit knowledge assets among workers, and then coding them to preserve.
- 3- Transforming tacit knowledge into outward knowledge through the concept of sharing strategic thinking.

2.2. Dimensions of the knowledge management strategy

Knowledge management focus is one of the most common considerations for creating knowledge management strategies. Knowledge management strategies can be described on the basis of two dimensions that reflect their focus [21]. One dimension refers to explicit knowledge and emphasizes the ability to help create, store, share and use knowledge that is explicitly documented for an organization. A strategy according to this dimension emphasizes codifying and storing organizational knowledge. This strategy stresses specific sets of rules about what should be done under each possible set of circumstances. Another dimension refers to tacit knowledge and emphasizes knowledge sharing through interpersonal interaction. The strategy according to this dimension emphasizes dialogue through social networks, including professional groups and teams. Knowledge can be obtained with expertise and skill in this strategy. This strategy can be referred to as a human strategy ([16]: 109).

Two distinct types of knowledge management strategies identified by ([21]: 107) are the most prevalent:

Coding Strategy: This strategy includes the methods that are used to classify, store and reuse knowledge, extract knowledge from individuals and reuse it for other purposes, and build an electronic system to document, store, publish and reuse knowledge. This strategy requires a large investment in the field of information technology. It relies on decision support systems, and cognitive maps.

Diagnostic Strategy: This strategy includes the tacit knowledge that exists through the development of work networks closely related to the individual who developed it to obtain innovative proposals to solve strategic problems and does not require huge investments in the field of information technology, and this strategy is used such as groups, conferences, and discussion forums.

Consequently, there is an agreement by a number of researchers such as [7], (Najm, 2008, Ajlan, 2008, Al-Sheikhly, 2011, Al-Taher, 2012) with the dimensions established by [21], which are all From (Coding Strategy, Personalization Strategy).

2.2.1. Coding strategy

Knowledge codification involves transforming knowledge (cognitive, emotional and spiritual), into messages that can be understood through all the employment processes of a particular organization. It occurs within the organization but its sequences must be observed in both the internal and external environment. Knowledge coding enables cognitive communication, use and reuse of knowledge ([14]: 12). Coding is defined as the process of transforming an idea into an object, using a symbol that can range from an abstract idea or information to a figurative model. Based on this assumption, knowledge coding is presented as a process that supports the 'inscription of knowledge into symbolic forms (Cacciatoriet, 2012: 6). It relies on the technology-based ability of individuals to store, retrieve and reuse the organization's clear knowledge. A computer-centered strategy whereby knowledge is coded and stored in accessible rules ([7]: 159). Blogging is closely related to investment learning. The investment learning tends to improve existing capabilities and technologies, which leads to standardization and rules, re-use and it represents the formal aspect of the organization (Nadizadeh et al., 2011: 699).

2.2.2. Personalization strategy

The personalization strategy refers to the personal development of tacit knowledge that is based on ideas, intuition, and interpersonal skills to solve complex problems. Personalization and exploratory learning are closely related. The exploratory learning is closely related to complex research, basic research, innovation, and risk taking (Nadizadeh et al., 2011: 690). While personalization

refers to the type of knowledge that an individual develops, stores and shares with individuals, and their direct communication with each other, especially in organizations that follow fixed organizational structures ([24]: 88). Encouraging individuals to exchange ideas and experiences is the main principle, and therefore individuals continually build and improve their social network within the organization which they use to localize knowledge or required experts in case of goal-oriented need). This approach is called a personal knowledge management strategy or personalization ([23]: 1235). It focuses on the dialogue between individuals and not the cognitive issues found in the rules, as they follow the organizational perspective of the coding strategy. The personalization strategy stems from the human perspective and focuses on direct dialogue between individuals and the transfer of knowledge through brainstorming sessions and using electronic networks (Al-Sheikhly and Al-Kubaisi, 2011: 49).

3. The quality of educational service

Acquiring new clients and retaining existing ones are considered two major approaches in service organizations, the customer's expectation of service can differ significantly depending on a combination of factors such as past experience and personal needs. Customer expectations and perceptions ([10]: 5285. Important for growth, competitiveness and success and is organized as an effective and comprehensive strategy in management. Display techniques have been widely applied as a means of enhancing competitiveness and quality in organizations ([12]: 1059). Service quality is defined as "a position that the customer shows during his evaluation of the offered service, and this position is often based on a series of previous evaluation experiences" ([6]: 47). It was also known as "the organization's ability to meet clients' requirements and meet them, exceeding their expectations" ([10]: 2). Based on the above information, researchers define service quality as "the customer's awareness of the credibility and efficiency of the organization's work through the commodity or service provided to him that exceeds the ceiling of what was expected of it."

3.1. The concept of educational service quality

The quality of educational service is one of the vital issues that have become of interest to researchers in order to prepare scientific competencies. It should play an important role in order to meet the needs of the labor market for the advancement of society. Those needs have become an important requirement. They correspond to the scientific and technological revolution based on the knowledge and scientific flow until they were able to occupy an important place in the strategic plans of educational organizations ([8]: 2). As the university is one of the organizations that seeks to achieve distinction and quality in what it offers, the quality of educational service is one of the most important goals that universities seek to achieve. This may only be achieved through participation in decision-making. As well as giving the necessary freedom to carry out various tasks with the aim of making them succeed and achieve them. Consequently, the university has functions like other organizations, and if it diversified or multiplied, it can be summarized by three functions. They are education, scientific research and community service, as the university's performance depends on three main categories, namely professors, students, and the organizational structure (Rizkallah, 2010: 149).

Thus, learning resources and other support mechanisms should be accessible to all researchers and students, taking into account their needs and responding to their requirements, and improving the educational services provided as they are consumers of educational services. As there is a need to link the needs of educational

personnel and students with educational service functions within the framework of the educational environment, which would stimulate further studies and research, which is crucial for the successful performance of an educational organization ([26]: 85). The concept of educational service quality is defined as "a multi-dimensional concept whose scope includes quality inputs in the form (students, professors, and infrastructure) as for its operations, it includes (learning and teaching activities). The outputs take the form of (high-quality graduate students) [9]: 145. It was also defined as "a strategic management process based on a set of values that derives its dynamic energies from data and information through which we can employ the talents of the educational staff and work on creatively investing their intellectual capabilities for the various levels of organization in order to achieve a continuous improvement of the organization" ([8]: 7). From the aforementioned, researchers define the quality of educational service as "a set of mechanisms that the educational organization uses in order to provide the best services distinctive for its inputs in order to obtain effective outputs that enhance the reputation and position of the educational organization."

3.2. Dimensions of educational service quality

There emerged a clear diversity in the opinions of writers and researchers regarding the dimensions of educational service quality. As these dimensions are the most prominent pillars on which the quality of educational service is based. This diversity and difference is a result of the intellectual and philosophical differences that the writers and researchers base on. However, our current research and the place in which it was applied, the researchers agree with the dimensions set by both ([5]: 308) and (Nour Al-Din, 2007: 71), and they will talk about these dimensions through the following:

- (1) Tangible: It means those facilities available to the service organization, represented by the equipment and appearance of service providers, tools and means of communication with them, In many cases, the client resorts to judge the quality of the service by the formal characteristics accompanying the services, such as the physical and technological facilities used in providing the service.
- (2) Reliability: It is intended to provide a service to the customer according to what the institution promised. It should be reliable and with a high degree of accuracy and efficiency. The customer expects to provide him with accurate service in terms of commitment to time as well as performance based on the promise made by the institution.
- (3) Response: It is represented by the ability of the service provider to be constantly prepared to provide the service to the consumer in a manner and at the specified time that he needs. In addition to the service provider's feeling of happiness and enthusiasm when providing the service to the consumer and his readiness for that. An example of this is a restaurant operator who is willing, ready, and willing to serve the customer.
- (4) Safety: It expresses the degree of a consumer's sense of security from the service and whoever provides it. As it relates to the perceived risk of the results of receiving the service from the organization or its provider or both. An example is the degree of safety involved in renting an apartment or hotel room.
- (5) Empathy (emotion): - It refers to the service provider's ability to understand consumer needs, define them and include them with care and care. In other words, how much time

and effort does the service provider need to know the customer's needs, understand his feelings and sympathize with him.

4. Presentation and analysis of the research sample

4.1. Presentation and analysis of the research sample results for the knowledge management strategy variable

This variable will display the frequency distribution, the weighted mean, standard deviation, coefficient of variation, and the relative importance of the main dimensions of the independent variable represented by the two dimensions (coding and personalization).

It is clear from Table 1 that shows the results of the descriptive statistics that the variable (knowledge management strategies) achieved a total arithmetic mean of (3.38), which is less than the hypothetical mean of (3). This result reflects the reality of Anbar University's interest in the research topic. The answer dispersion ratio was acceptable, indicating the homogeneity of the proportion of the sample answers if its standard deviation was (0.95) and the coefficient of variation was (28.43) and with a moderate relative importance of (67.51). The following is an explanation of the dimensions of the first variable: -

- a. The first dimension (coding) of the variable (knowledge management strategy) achieved an arithmetic mean (3.38) with a standard deviation (0.96) and a coefficient of variation (28.49) with a relative importance of (67.59).
- b. The second dimension (personalization) of the variable (knowledge management strategy) achieved an arithmetic mean (3.57) with a standard deviation (0.95) and a coefficient of variation (28.38) with a relative importance of (67.43).

4.2. Presentation and analysis of the results for the educational service quality variable

This variable will display the frequency distribution, the weighted mean, standard deviation, coefficient of variation, and the relative importance of the five main dimensions (tangibility, reliability, response, safety, and emotion). It is clear from Table 2 that shows the results of the descriptive statistics that the variable (educational service quality) achieved a total arithmetic mean of (3.6) which is greater than the hypothetical mean of (3). This result reflects the reality of Anbar University's interest in the research topic, the answer dispersion ratio was acceptable to some extent, with a weak degree of consistency. The following is an explanation of the dimensions of the second variable:

- a) Table 2 shows that the tangibility dimension is less than the hypothetical mean of (3) and this indicates the lack of consistency or agreement in the answers of the sample members, as it achieved an arithmetic mean (2.99), a standard deviation (1.06) and a difference coefficient (35.49), and then the relative importance decreased, reaching (59.89).
- b) The second dimension (reliability) of the variable (quality of educational service) achieved an arithmetic mean (3.69), a standard deviation (0.89) and a coefficient of variation (24.53), with a relative importance of (73.72).
- c) The third dimension (response) of the variable (quality of educational service) achieved an arithmetic mean (3.69) with a standard deviation (0.86) and a coefficient of variation (23.29) with a relative importance of (73.84).

Table 1

Results of descriptive statistics for the dimensions of knowledge management strategies.

T	Descriptive statisticsDimensions	Arithmetic mean	standard deviation	Coefficient of variation	Relative importance
1.	Coding strategy dimension	3.38	0.96	28.49	67,59
2.	After a strategy of personalization	3.57	0.95	28.38	67,43
3.	Total independent variable	3.38	0.95	28.43	67,51

Table 2

Results of descriptive statistics for the dimensions of educational service quality.

T	Descriptive statistics Dimensions	Arithmetic mean	standard deviation	Coefficient of variation	Relative importance
1	The tangibility dimension	2.99	1.06	35.49	59,89
2	Reliability dimension	3.69	0.89	24.53	73,72
3	The response dimension	3.69	0.86	23.29	73,84
4	Safety dimension	3.71	0.89	24.12	74,1
5	The dimension of emotion	3.94	0.85	21.81	78,76
6	The total variable	3,6	0,91	25,85	72,06

- d) The fourth dimension (safety) of the variable (quality of educational service) achieved an arithmetic mean (3.71) with a standard deviation (0.89) and a coefficient of variation (24.12) with a relative importance of (74.1).
- e) The fifth dimension (emotion) of the variable (quality of educational service) achieved an arithmetic mean (3.94), a standard deviation (0.85), a coefficient of variation (21.81), and a relative importance of (78.76).

4.3. Testing hypotheses of correlation

This research started from a main hypothesis that there is a direct correlation relationship with significance between the first variable with its dimensions and the second variable with its dimensions. From this main hypothesis, two sub-hypotheses branched out to demonstrate the relationship with the second variable, which was illustrated in [Table 3](#) that expresses the correlation matrix between the two variables. The results are as follows:

- a) It is clear from [Table 3](#) for the interpretation of the results of the correlation hypothesis test that the coding dimension achieved one of the dimensions of (knowledge management strategies) six significant correlations with the educational service quality variable, and this relationship was at a significance level (0.01).
- b) As is also clear to us from [Table 3](#) for the interpretation of the results of the correlation hypothesis test that the personalization dimension achieved one of the dimensions of (knowledge management strategies) six significant correlations with the educational service quality variable, and this relationship was also at a significance level (0.01).
- c) The knowledge management strategies variable achieved six significant correlations with the educational service quality variable, and all of this relationship was significant and at a significance level (0.01).

The results above show us accepting the main hypothesis that there is a correlation relationship between a variable (knowledge management strategies) and a variable (educational service quality).

5. Discussing

Based on the results that presented in [Table 4](#).

The value of (F) computed at the level of significance (0.05) and the degree of freedom (1.309) = The sub-matrix represents

Sig B	F R2
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The value of (F) computed at the level of significance (0.01) and the degree of freedom = (1.309)

In this topic, the researchers focus on verifying the impact hypotheses of the research variables at the individual and total levels according to the simple linear regression model. This step is done to find out the significance of the effect if there is by comparing the (F) peak calculated with ((F) tabular at the level of significance (0.01) and according to the regression equation $Y = a + B(X_i)$

This part will focus on verifying the impact hypotheses between the two research variables using simple linear regression, as the second main hypothesis of the research is shown (there is a positive effect of significant significance between the variable of knowledge management strategies and the variable of educational service quality).

Table 3

Matrix of correlation between research variables.

Total quality of educational service	Sympathy	Safety	Response	Reliability	Tangibility	Quality of educational Service Knowledge Management Strategies
0.743**	0.650**	0.678**	0.571**	0.595**	0.593**	After encoding
0.775**	0.666**	0.694**	0.601**	0.662**	0.602**	After personalization
0.788**	0.683**	0.712**	0.609**	0.652**	0.620**	Total knowledge management strategies

Table 4

The value of (B), (F) and (R2).

Knowledge management	Educational service											
	Tangibility		Response		Sympathy		Safety		Reliability		Total quality of service	
Coding	0.000	168.576	0.000	150.712	0.000	227.238	0.000	236.869	0.000	170.002	0.000	382.689
	0.457	0.349	1.999	0.324	1.841	0.420	1.268	0.457	1.723	0.351	1.458	0.550
Personalization	0.000	176.916	0.000	176.163	0.000	248.447	0.000	288.167	0.000	242.131	0.000	466.823
	0.478	0.361	1.952	0.360	1.387	0.442	1.269	0.479	1.553	0.436	1.418	0.559
Total knowledge management	0.000	194.550	0.000	183.197	0.000	272.312	0.000	319.422	0.000	230.423	0.000	508.848
	0.271	0.383	1.841	0.369	1.676	0.465	1.079	0.505	1.476	0.424	1.269	0.619

- a) Table 4 shows that the coding dimension as one of the dimensions of the knowledge management strategy variable achieved six significant impact models with the educational service quality variable and all of these models were at a significance level (0.01) if the value of the total determination coefficient reached ($R^2 = 0.550$). The value indicates that the coding dimension explained (55%) of the total educational service quality while the beta value was ($1.458 = \beta$). This indicates that the change in the coding dimension will lead by one unit, and then it will lead to a change in the variable related to the quality of educational service by (145.8%).
- b) Table 4 shows that the dimension of personalization as one of the dimensions of the variable of knowledge management strategies in six significant impact models with the variable of educational service quality. All these models were at a level of significance (0.01) if the value of the total determination coefficient reached ($=0.559 R^2$) and this value indicates the fact that the dimension of personalization explained (55.9%) of the total educational service quality, while the value of beta was ($\beta = 1.418$). This also indicates that the change in the dimension of personalization will lead by one unit and thus will lead to a change in the variable related to the quality of educational service by (141.8%).
- c) It is clear from Table 4 that the main variable for knowledge management strategies achieved six significant impact models with the variable related to the quality of educational service with its dimensions was at the level of majesty (0.01) if the value of the total determination coefficient reached ($=0.619 R^2$). This value indicates that after Personalization interpreted (61.9%) of the total educational service quality, while the beta value was ($1.269 = \beta$). This indicates that the change in the personalization dimension will lead by one unit and thus will lead to a change in the variable related to the quality of educational service by (126.9%).

The results above showed the readers acceptance of the main hypothesis that (there is an influence relationship between the variable of knowledge management strategies and the variable of educational service quality). The internal consistency test is a test of stability in terms of the value of the Cronbach Alpha correlation coefficients, and as shown in Table 5, as the results confirm the existence of internal consistency for the scale paragraphs expressing the variable (knowledge management strategies) and the vari-

able (educational service quality) in all. Because the correlation coefficients rise above the acceptable standard value (0.70), and hence the stability of the scale when trying to repeat the test again.

6. Conclusions and recommendations

6.1. Conclusions

1. The administration of University of Anbar is able to use the possibility of the coding dimension of classifying and storing knowledge in databases to be easily entered and used by the individual to enhance the quality of educational service at the university.
2. It was found that the administration of University of Anbar is closely related to the individual because he develops that knowledge through direct contact and formally through the dimension of personalization to know the strengths and weaknesses in the quality of educational service.
3. The administration of University of Anbar is able to use the knowledge management strategies it possesses for the purpose of enhancing the quality of educational service and upgrading the scientific side of students.
4. It becomes clear to readers that the administration of University of Anbar has employed the positive changes that it brought about through the coding dimension in order to bring about more positive changes that brought by the quality of educational service.
5. The administration of University of Anbar is able to employ the knowledge of the individual through the dimension of personalization to bring about new and positive changes to enhance the quality of educational service.
6. The administration has employed the knowledge management strategies it possesses (coding and personalization) well in order to bring about more positive changes in the quality of educational service in general.

6.2. Recommendations

- (1) The administration of University of Anbar must take advantage of the nature of the relationship between knowledge management strategies and the quality of educational service through the coding dimension by opening horizons and developing training centers and the availability of infrastructures that are more appropriate for the era of technological development. And the creation of an electronic system that helps in storing and documenting information and easy reference to it. As well as providing unlimited moral support to talented teachers with reward programs commensurate with their efforts.
- (2) The administration of University of Anbar must take advantage of the nature of the positive relationship between the dimension of personalization and the total and the quality

Table 5

Results of the internal consistency test of the search scale

T	Paragraphs variables	Alpha Cronbach coefficient dimensions
1	Paragraphs of the independent variable	0.936
2	Paragraphs of the dependent variable	0.915
3	All paragraphs of the two variables	0.956

of educational service by developing the capabilities of the individual through specialized consultants to train them in the sustainability of knowledge, encouraging them to learn online and acquire knowledge of computers and algorithms more accurately. It should depend on the allocation of knowledge work teams to deal with urgent problems.

- (3) The administration of University of Anbar must take advantage of the nature of the strong relationship between knowledge management strategies and the quality of educational service in general through the exchange of ideas and information between individuals.
- (4) The administration of University of Anbar must work continuously to introduce more positive changes to the dimension of personalization in order to bring about more positive changes in the quality of the educational service it provides.
- (5) The administration of University of Anbar must work continuously to introduce more positive changes to the coding dimension in order to bring about more positive changes in the quality of the educational service it provides.

The administration of University of Anbar must work continuously to introduce more positive changes to the variable of knowledge management strategies in general in order to bring about more positive changes in the quality of the educational service it provides.

CRedit authorship contribution statement

Mohammed Qahtan Hamid: Conceptualization, Methodology, Software, Data curation, Writing - original draft. **Saad Ali Mahmood:** Visualization, Investigation, Supervision, Software. **Bassam Mohammed Khalaf:** Validation, Writing - review & editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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