

Knowledge Management Process Capability on Service Quality in Palestinian Universities

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Abstract:- Knowledge is considered as one of the most important resources for surviving in this modern business Environment. It is proved to help organizations improve their service, increase the quality of products, reduce the costs and respond quickly to their customers. However, the success of any organization lies in the ability to perform better processes of knowledge in order to create and maintain a competitive advantage. The main objective of this study is to investigate the relationship between knowledge management process (KMP) capability and service quality (SQ) in universities, specifically in the context of Palestine. Four dimensions of KMP capability are included as follows; acquisition, conversion, the application and protection which are considered as independent variables and service quality as the dependent variable. About (300) academic teaching staff were administered a questionnaire of a five-point Likert's scale which includes questions on KMP (Acquisition, conversion, Application, and protection) and SQ. The respondents were selected randomly and (286) responses were received. (277) Responses were analyzed statistically by smartpls software. Findings showed that there is a significant positive effect of KMP on enhancing SQ in Palestinian Universities. Application Process proved to have no effect on SQ. Results of this study will provide values and implications to the leaders and managers of higher education for the formation of the new knowledge management (KM) strategies or for the enhancing of their existing processes of KM, These meaningful implications will help to create effective knowledge management (KM) programs and strategies which in turn may enhance the quality of services provided in Palestinian universities and achieve a competitive advantage in the market.

Keyword:- Service Quality, Knowledge Management Capability, Knowledge Management Processes, Universities, Palestine.

I. INTRODUCTION

In today's rapidly changing environment, knowledge is viewed by organizations as a key strategic and competitive resource [1]. The knowledge management (KM) concept has gained significant consideration in recent organizational research [2], [3]. KM is important for all organizations, yet its significant influence is witnessed in service sector [4]. Knowledge management is considered as one of the most important and valuable modern intellectual developments which is concerned with the employees who are engaged in knowledge activities and having special competences and abilities to perform the knowledge work in the organization [5],

[6]. In most developing countries, the sector of Higher education faces many challenges in this dynamic environment witnessing a rapid technological change and facing increased demand from communities (Al-Husseini, 2014). During the past decade, higher education sector has been facing many pressures and changes as: globalization, mass education, academic rivalry on large-scale, budget cuts, reforms, competitiveness, need to adapt to new requirements. However, "Higher education institutions have significant opportunities to apply knowledge practices to support every part of their mission" [9]. As KM has an effective influence on the success of business and educational institutions, from the perspective of intellectual capital, because knowledge management establishes the idea that institutions are obliged to exploit the knowledge they have in their field of work [10]. Given the importance that the concepts of Knowledge and quality have become the most two driving forces of competitiveness, with the complexity and increase of the functions and services provided by organizations and the increasing use of information technology within these organizations, this resulted in a large amount of information and knowledge. Thus, it becomes very essential for organizations to master an effective capability in order to manage the existing knowledge to perform successful operations [11].

In accordance, both researchers and organizations are exerting considerable efforts in investigating the exact influence that KM has on the quality of services provided [12]. In this regard, organizations have to attain better performance in their knowledge processes in order to obtain the needed knowledge in order to provide high quality services [13]. Although there is a good amount of literature regarding SQ, but the empirical work that has been conducted to study the relationship between knowledge management process (KMP) capability and SQ in organizations and specifically in education sector is still little. These relationship have been studied in Taiwanese corporations ([14]), and commercial banks in Iraq [15] in banking sector in Kenya [16] and private hospitals in Shiraz [17]. In order to fill this gap, the main aim of this study is to examine the impact of KMP capability on service quality.

II. LITERATURE REVIEW

A. Knowledge Management Capabilities

[18] Define capability as "the ability to implement and integrate resources to achieve corporate goals, as well as results acquired from long-term accumulation of interaction among various resources" [19]. However, [20] defined KM capability as "it is not about the ability to acquire knowledge and

information, but also to the organizational capability to protect knowledge and information” to encourage the staff utilize this ability to perform more efficiently. The definition provided by [21] is seen as general, they defined KMC as “the ability to use the existing resources and capabilities by the organization in order to create and benefit from the existing knowledge within the organization”.

[22] Claimed that the predisposition of an organization to achieve an effective km lies in the infrastructure and processes KMC. Knowledge management process (KMP) capability includes; knowledge acquisition, knowledge conversion, knowledge application and knowledge protection. This study considers only the KMP capability. Furthermore, the essential role of KM is about developing a KMC which aligns the organization’s resources of knowledge with the changing needs of the market [23].

[22] Recognized KMC as the processes that an organization requires in order to develop and use its knowledge. It includes the organizational capabilities of knowledge acquisition, conversion, application, and protection. Knowledge acquisition is the ability of organizations to obtain, seek, generate, create, capture, and collaborate knowledge; knowledge conversion is the ability of the organization to organize, integrate, combine, structure, manage, or distribute the knowledge; on the other hand, knowledge application reflects the ability of organizations to actually utilize the existing knowledge which help organizations in improving the efficiency and effectiveness; and knowledge protection is about the ability of organizations to protect the knowledge they have from the illegal or the inappropriate use or from theft. [24] also indicated that KMC is about how an organization gathers the different resources of knowledge in addition to how to manage assimilation and exploitation of these resources.

B. Knowledge Management Process

KM process capabilities are recognized as implementing knowledge activities for increasing knowledge effectiveness and for the transformation of this knowledge from the form of implicit knowledge to the explicit [25]. The KMP is also defined as the degree of creating, sharing, and utilization of knowledge resources by the organization across its functional boundaries [21]. KMP lifecycle is related to the organizations’ utilization of internal and external resources of knowledge, and make sure that this knowledge is available to the people who need it in the organization [26].

Many researchers identified different main aspects of KMP, which includes; creation, the storage, transfer and the application of knowledge [27] or acquisition, conversion, application as well as protection [22]; or acquisition, conversion and the application of knowledge [28] and the identification, acquisition, storage, sharing and the application of knowledge [29]. Thus, the elements of KMP to be used in this study are adopted from the model presented by [30] which include the acquisition process, the conversion process, the protection process and the application process.

• *Knowledge Acquisition*

Knowledge acquisition is considered both organizational and individual. For instance, [28] define knowledge acquisition from an organizational perspective as the process of collecting knowledge from external environment then molding the gathered knowledge for the benefit of the organization. The term “acquisition” reflects an organization’s ability of identifying, acquiring, and storing the essential knowledge to perform the organizational operations [31]. Knowledge acquisition may involve different aspects including; creating, sharing, and disseminating knowledge [32]. Acquisition also refers to the organization’s ability to identify, access, and collect internal and external knowledge which is essential for performing the activities [22], [31], [33].

Literature related to this area indicates a positive relation between knowledge acquisition and measures of performance. For instance, [34] indicated that knowledge creating is significantly associated with organizational improvements. Additionally, when the obtained knowledge is utilized properly, a significant positive relationship will exist between knowledge acquisition and the organizational performance [35].

• *Knowledge Conversion*

The Knowledge captured from the different resources (either internal or external) have to be converted to an organizational knowledge to be effectively utilized within the organization [36], [37]. The acquired Knowledge from external or internal environments may be ineffective if it is not converted into forms of knowledge that are useful and applicable for improving the productivity and operations of business. Hence, conversion is recognized as a significant factor of process capability [30], [38], [39].

Operationally, knowledge conversion can be defined as “employees are able to achieve, through formal or informal channels, knowledge conversions during conversations and meetings in everyday life. The knowledge internalized/externalized between employees and the organization enables a company to transfer knowledge to the database, so the organization’s IT may remain updated with the business administration process, punctuality and efficiency in organizing knowledge improved all at once.” [40].

• *Knowledge Application*

Application of Knowledge encompasses the use of knowledge in task performing such as; solving problems, making decisions, generating new ideas, and learning [1]. According to [41] applying knowledge is to make knowledge active and more relevant for the organization. [1], [41] recommended for organizations that if they seek creating value, they have to apply knowledge by various ways to the products and services, through repackaging the available knowledge, by training and motivating employees to creative thinking, and perform better utilization of employees’ understanding of the organizations’ processes, products and services. [30]. Knowledge application can be also defined as the response of knowledge made by an organization which reflects the ability of this organization to respond to the different types of information it can access it (Lee, Leong, Hew, & Ooi, 2013). In

addition, [43] indicated that applying knowledge helps in improving the relations with customers, leading to the introduction of new products which meet the needs and desires of the customers. by applying knowledge, there will be an improvement and utilization of the existing knowledge [29], [44] which in turn helps to develop a valuable knowledge [27], [45].

- *Knowledge Protection*

It is indicated that Knowledge protection plays an important role in the effective functions and control within an organization. It means to have KMP that are security-oriented which can be “designed to protect the knowledge within an organization from illegal or inappropriate use or theft” [30]. Some of the mechanisms followed by organizations to protect their knowledge can be in using surveillance cameras to protect it from being leaked within and outside organizations, also by restricting access to some knowledge sources through using passwords. The security of the information systems of organizations’ management is a major concern. And for the Protection of organizational knowledge, clear, accurate and strict policies are required to ensure the knowledge assets security continuously in the organization (Lee & Lan, 2011).

C. Service Quality

Researchers argued that there are various perspectives how the service provided should be defined. [47] define service quality as “meeting or exceeding what customers expect from the service”. [48] also focuses on the expectations and defines service quality as “a measure of the extent to which the service delivered meets the customers’ expectations.” Service quality can also be regarded as the way providers provide quality of service to the customer in addition to the perception and the satisfaction of those customers regarding the service received [49].

Improving service quality is a need for organizations to be able to compete in the market and among their competitors and to achieve customer’s satisfaction. It is clear that poor quality of services provided to customers and the dissatisfaction of those customers are major concerns of organizations [49].

Organizations which seek to reach to the customers, they need services. These services depend on type of products offered and they differ in various organizations. Higher education system applies different KM techniques to achieve an overall development. Areas of application involve; research, curriculum development, academic services (teaching- learning process), alumni services, formulation and development of strategic plan, administrative services (student and alumni), access to potential customers and other stakeholder, library services, development programs etc.

According to Aga and [50], most of the work done to date has used the SERVQUAL model provided by [51] to measure service quality. However, Service quality is studied widely by using different adaptations of SERVQUAL instruments. However, this study will use the model of [51] which is also called the gap model to measure service quality. This model

includes five dimensions; tangibles, empathy, responsiveness, assurance, and reliability.

D. Knowledge Management Process Capability And Service Quality

Knowledge is recognized as an essential success factor that helps to achieve and sustain a competitive advantage for organizations (Lee & Lan, 2011). Knowledge is a main asset for the equipment of personnel in organizations to fulfill the needs of customers. Many case studies, researches, applications, and rich literature ensure that KMC plays a significant role in achieving organizational success [1]. Organizations willing to implement KM, by conduct assessments of KM programs, or identifying the factors that assist them in enhancing their practice, which in turn lead to better performance, increase in their efficiency, are able to provide high levels of services. The success of KM in organizations is seen as a measure of the outcomes, as enhancing the quality of products and services, productivity, innovation, competitiveness, the customer satisfaction, the employee satisfaction, and communication [52].

Researchers and practitioners believed that organizations which effectively use knowledge can achieve the following benefits; better services and products, applications of comments and inventions, better access to industrial action with new methodologies, superiority among competitors in market, reduction of the production costs, presence in the new markets and better communication, high levels of organizational learning, high levels of commitment.

III. OBJECTIVES OF THE STUDY

KM has increasingly gained appreciation and has been widely practiced. The objective of this study is to explain the influence KM has on universities in Palestine and also if it can enhance the quality of services by universities, in terms of teaching, research, administration, and strategic planning. This study will introduce the dimensions of KMP which encourage knowledge management functioning and help institutions to generate new knowledge. Also ways to improve the university staff members’ ability to deliver high quality service will be introduced and ways to enhance the service quality of universities.

In other words, the main purpose of this study is to investigate the relationship between KMP capability and SQ in Universities in Palestine.

A. Conceptual Model and Hypotheses Development

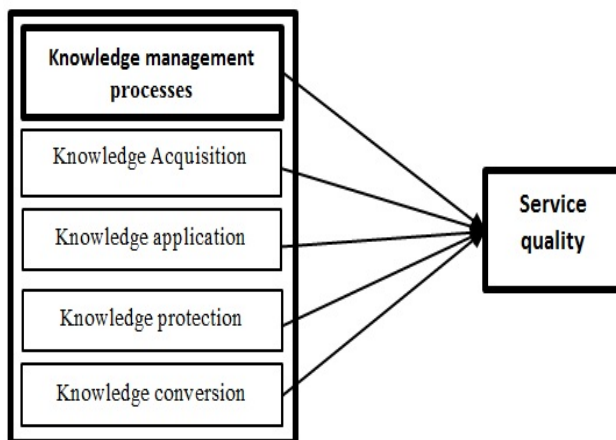


Fig 1:- Conceptual model

Major Research Hypothesis:

Based on the literature discussed previously, the hypotheses of this study can be formed accordingly as follows:

- H1: Knowledge management processes have significant positive effect on service quality in Palestinian Universities.

Secondary Research Hypotheses:

- H1a: Knowledge Acquisition has a significant positive effect on service quality in Palestinian Universities.
- H1b: Knowledge conversion has a significant positive effect on service quality in Palestinian Universities.
- H1c: Knowledge application has a significant positive effect on service quality in Palestinian Universities.
- H1d: Knowledge protection has a significant positive effect on service quality in Palestinian Universities.

IV. RESEARCH METHODOLOGY

In order to achieve the previously assigned research objective, the researcher reasoned that the quantitative research approach is the most appropriate approach to examine the relationship between variables [53]. Therefore, the researcher decided to adopt a quantitative approach through implementing a survey as explained below.

A. Study Population and Sample

The study population is Palestinian Universities located in Gaza Strip. And the study includes (3) Palestinian universities on the basis of category (1 Private, 1 public, and 1 government). The sampling unit and analysis of the study (respondents) based on [54] as the sample required for the population equals (270). The target respondents were teaching staff working in the target institutions for their important role in the implementing knowledge management activities and they are considered frontline employees who provide the service. The researcher found that the most appropriate sampling method in this study is the random sampling.

B. Study Instrument

The instrument used in this study is a questionnaire developed by the researcher through reviewing the literature related to the knowledge management process and the quality of service and was adapted to the context of higher education. The questionnaire consisted of three parts: The first part of questionnaire includes the demographic information of respondents such as gender, years of experience. The second part of the questionnaire includes the items of knowledge management process (Acquisition, conversion, application and protection) which are adopted from [45], [55]. The third part of the questionnaire includes the items related to the quality of service, which were adopted and adapted from SERVQUAL by [51]. The answers on the last two parts of questionnaire rely on a five-point Likert Scale, ranging from strongly disagree (1); disagree (2); Neutral (3); agree (4); and strongly agree (5). For this study, (300) questionnaires were distributed and out of them (286) returned questionnaires, only (277) were used for analysis.

C. Instrument Validity and Reliability

To ensure the validity of the study instrument, the researcher reviewed literature related to the study variables. Some academicians and experts were asked to review the study instrument during the preparation phase of the research, based to their opinions and recommendations the questionnaire was finalized to suit the current study, in addition to that, a pilot test was conducted on a small sample of (35) employees to ensure the clarity of items. To test the instrument's Reliability the Cronbach's alpha coefficients were determined in order to insure the internal consistency among questionnaire items. The Cronbach's alpha values were (0.89) for the knowledge management infrastructure items and (0.85) for the items of service Quality and (0.83) for the whole instrument.

V. RESULTS AND DISCUSSION

A. Analysis on Respondents' Profile

The final dataset after data screening process consists of (277) samples. The respondents are 78.1% males, 40.3% aged between 41 and 50 years, 45.2% have an experience up to 10 years, 49.4% have a qualification of master degree.

B. Validity and Reliability of Constructs

As the study uses PLS analysis, it is essential to perform some validity and reliability tests for the measurement model which involves composite reliability, outer loading, convergent validity, and discriminant validity [56], [57]. As shown in Tables 1, and 2 reliability is tested by composite reliability and the results point out that the values range between 0.815 to 0.929 which are all above the threshold of 0.7. Therefore, the internal consistency is proven and the model is valid. VIF values are between 1.699 and 2.636, which indicates that there is no collinearity between the variables of different levels as all the VIF value is between 0.2 and 5.0, which satisfies the threshold value. In addition, each item must have appropriate loading within its associated construct and has to be more than 0.708 or more than 0.5 if its deletions do not enhance the general construct loading. The results in the table show all loadings are above 0.708 except KPA3 (0.679) and KPC

(0.697) which is accepted based on the described rule of thumb. The average Variance Extracted (AVE) values are above 0.5 with the range between 0.574 to 0.725, therefore convergent validity is achieved. Finally, Table 2 shows the matrix of Fornell-Larcker criterion, which indicates that no discriminate validity issues were found. This study satisfies the rule of thumb proposed by [56].

construct	Item	Loading	AVE	VIF	Composite Reliability
Knowledge Process Capability - Acquisition	KPA3	0.679	0.597	2.636	0.815
	KPA4	0.819			
	KPA5	0.811			
Knowledge Process Capability - Conversion	KPC2	0.808	0.574	2.636	0.801
	KPC3	0.697			
	KPC4	0.763			
Knowledge Process Capability - Application	KPN1	0.734	0.635	2.636	0.838
	KPN3	0.765			
	KPN4	0.883			
Knowledge Process Capability - Protection	KPP1	0.826	0.725	1.699	0.929
	KPP2	0.898			
	KPP3	0.897			
	KPP4	0.882			
	KPP5	0.745			

Table 1. Construct Reliability and Validity of Independent Variables

construct	Item	Loading	AVE	Composite Reliability
Service Quality	SQ2	0.764	0.612	0.904
	SQ4	0.760		
	SQ5	0.719		
	SQ6	0.811		
	SQ7	0.892		
	SQ8	0.737		

Table 2. Construct Reliability and Validity of Dependent Variable

	KPA	KPC	KPN	KPP	SQ
KPA	0.773				
KPC	0.505991	0.758			
KPN	0.527958	0.362975	0.797		
KPP	0.458926	0.390074	0.521263	0.852	
SQ	0.509506	0.378325	0.367096	0.513442	0.783

Table 3. Discriminant validity – Fornell-Larcker criterion

C. Structural Model

To measure the overall power of the mode, predictive power R² and predictive relevance are used [56]. Figure 2 show the structural model based on the PLS algorithm analysis which illustrates the predictive power and the path coefficient values of the paths within the proposed model. It can be recognized that the proposed determinants may explain 36.5% of the variance in the service quality. The results are supported with Predictive relevance Q² of 0.22. The model is considered moderate in terms predictive power and it has a medium predictive relevance. Table 3 presents the path coefficient values associated with the proposed hypotheses based on the PLS bootstrapping analysis. The rule of thumb as presented by [56] says T statistic must have a value of 1.96 or higher in equivalence to the significant value of 5% or less. Three proposed relations H1a, H1b, and H1d are accepted, but one relation H1c is rejected. H1a propose the positive relationship between knowledge acquisition and service quality (Beta = 0.312; T-statistics = 6.90). H1b proposes the positive relationship between knowledge conversion and service quality (Beta = 0.091; T-statistics = 2.19). H1c proposes the rejected relationship between knowledge application and service quality (T-statistics = 183). H1d proposes the positive relationships between knowledge protection and service quality (Beta = 0.338; T-statistics = 6.94).

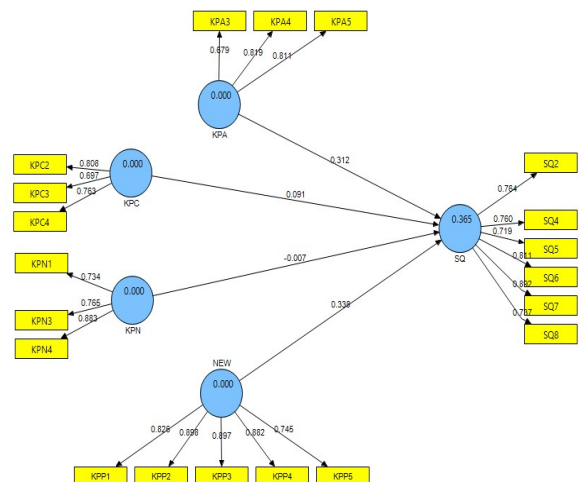


Fig 2:- PLS Algorithm Path Model

Hypothesis No.		Path Coefficient	T Statistics	Sig Value (1 Tailed)	Status
H1a	KPA -> SQ	0.311784	6.897657	0.00001	Accepted
H1b	KPC -> SQ	0.091077	2.193522	0.014463	Accepted
H1c	KPN -> SQ	-0.007011	0.183058	0.427452	Rejected
H1d	KPP -> SQ	0.338484	6.93873	0.00001	Accepted
*t-values: 1.65 (10%); **t-values: 1.96 (5%); ***t-values: 2.58 (1%)					

Table 4. Structural Relationships and Hypothesis Testing

As three-sub hypothesis are accepted and one is rejected based on level of significance at 5%, knowledge management process have significant positive effect on service quality in Palestinian universities. The precedence of the approved determinants of the service quality variance are knowledge protection, followed by knowledge acquisition, then knowledge conversion.

VI. CONCLUSION AND RECOMMENDATIONS

knowledge is considered as one of the most significant intangible assets of organizations. Organizations willing to be more successful in the field of services need to ensure better and more effective use of knowledge. All institutions recognize the importance of quality of services provided in education sector. Nowadays, enhancing the quality of services provided by the universities into higher levels is an utmost aim of Institutions. As by increasing the levels of service quality, the student satisfaction will be increased and finally, institutions will achieve the organizational goals. So it is suggested to managers and decision makers of the universities and may be other higher education institutions to provide the employee a better context of knowledge management in their institutions. Universities needs to adopt policies making knowledge management processes of its first priorities, through turning the efforts of the universities from focusing on increasing the capital and workforce to the focus on ensuring better practicing of knowledge management processes through adopting mechanisms and strategies based on applying knowledge management systems to develop their organizational performance by providing the teaching staff members with scholarships to well-known universities having high international ranks to acquire new knowledge and experiences, as well as encouraging the teaching staff members to participate in advanced scientific courses.

Universities need to ensure better knowledge application by involving the employees and teams to use their knowledge in decision making and problem solving.

For future research, it is recommended to include the process of knowledge sharing to the KMC model as it is lacking the emphasis on knowledge sharing which is proved to contribute to improved performance and innovation as well as achieving a competitive advantage.

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