

Developing the Knowledge Workers Model for Core Competencies Management in Iraqi Higher Education Institutions

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Abstract: This paper aims at developing the knowledge workers model for core competencies management via identifying the dimensions of the knowledge workers that are possibly related to the core competencies management. The primary motivations for the current research lies in those gaps represented of scientific and experimental studies in this scope, as well as for the purpose of increasing knowledge in this field. This theoretical research contributes to the development of the knowledge workers model based on its dimensions for core competencies management in Iraqi higher education Institutions. This research used quantitative approach by questionnaire was taken in collecting the data from the research community represented by some Iraqi higher education institutes samples that reached (256) questionnaires, which is about (80%), distributed to individually. The correlation coefficient (Spearman's) and Regression coefficient was relied on by using spss-ver.24. also the Knowledge-based Institutional theory was depended on explaining the results. The empirical analysis of the results was made using (Cronbach's alpha) to test the scales consistency of the validity of the consistency coefficient. The questionnaire was on a high consistency and validity. The results have largely supported the research model referring to the relationship of the knowledge workers have a good correlation and influence relationship in the core competencies management. Hence, this research could be of great use to the researchers, academics, professionals and policies makers.

Keywords: Knowledge workers, knowledge acquisition, intellectual capabilities, challenge and achievement, excellence, core competencies management.

INTRODUCTION

Relying on the development of the business knowledge is not enough anymore in addition to the crucial role that the basic skills have and the employees competencies that depend on the invention and the human directions. This is applied on the privileged individuals Crucially for the organization development i.e. knowledge workers (Igielski, 2017: 11). The rise in the number of knowledge workers is the distinctive type of work of the 21st century, which calls for a new management approach, with a high level of work autonomy for knowledge workers (Farkas & Torok, 2011: 76). Most of the previous published studies of knowledge workers and abilities came either theoretical or case studies, highlighting that there is scarcity or no research in the literature to identify an ability that leads to strategies for more productive workers versus the rest of the staff (Shukla & Sethi, 2004: 1-2). Despite the competencies of knowledge-workers, organizations face the challenges of creating a knowledge-worker's model for managing their organizations' capabilities. The challenge, on the other hand, is the inevitable key to success. However, competencies management and full commitment to work, and the new management systems require a focus on the knowledge-workers model and provide

them with the opportunity to achieve self-realization and development (Igielski, 2017: 12-15).

Previous researchers have argued that basic competencies can apply to knowledge-workers and that social and complementary competencies are critical of importance especially for knowledge-workers (Farkas & Torok, 2011: 71-72). The knowledge-workers base ability approach ignores core organizational competencies. The development, based on the resources and the company strategy have specified the core human competency of the knowledge workers as a specific resource for the company (Shukla & Sethi, 2004: 3). We strive to present a gap of the research in the study of knowledge workers for core competencies management in organization. Thus, we present a literature review of the core competencies set based on the approach of developing the knowledge worker's model.

Our aim in this research is to seek to developing the knowledge workers model that is related to the core competencies management, specifically by identifying the knowledge workers dimensions that may be associated with core competencies in accordance with the observations made by previous studies on organizations. Such a perspective directs the attention to the problematic questions about the ability on developing the knowledge workers model for core competencies management? How should the Institutions of the higher education invest the

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knowledge workers for core competency management in them? Will they succeed in doing so? This paper is considered a study of conceptual problems of the nature of the relationship of knowledge workers with the core competencies management, It could also be about the cognitive interrelation about the research of these two subjects.

The labor force especially, can no longer be understood only as a factor of production but must be valued as the strategic basic competence of any Institutions (Shukla & Sethi, 2004: 1). Some organizations work on aligning the components of knowledge-workers identified by psychologists with the practical communities elements, of which the increasing core competencies is one of its components (Chu & Khosla, 2012: 2391). The self-directed knowledge worker should think of many core competencies such as the thinking skills and the continuous learning (Awad & Ghaziri, 2007: 438). However, it is but a few who have known about the knowledge workers dimensions associated with the core competencies management in Institutions, the primary motivations for our current research that lie in those gaps that were ignored by previous literatures. The Increased evidences suggest that most of the previous studies neglected the knowledge workers model development for core competencies management. Therefore, from a theoretical perspective and an accurate understanding of the characteristics or dimensions of knowledge workers, for core competencies management is a necessary and important issue. But even some previous rare experimental studies prior to harnessing knowledge workers for core competencies management were built in the core commercial activities context. We, therefore, developed a conceptual model induced from the literatures as the knowledge workers model for core competency management via considering the concepts and dimensions of the knowledge workers and the core competencies in the organization to check and make sure of the their relationship and supporting in the core competencies management. Based on the suggested model, we say that the knowledge workers by (knowledge acquisition, intellectual capabilities, challenge and achievement, and excellence) could be able basically of the core competencies management in their Institutions.

Nevertheless, this theoretical research contributes to the knowledge workers model development based on its dimensions for core competencies management in Iraqi higher education Institutions. Besides giving the

research experimental proofs to support the relationship between the knowledge workers and the he core competencies management. In accordance with that, the current research includes, in the next section, a literature review, methodology, testing the research model, conclusions and recommendations.

LITERATURE REVIEW

Knowledge-Based Institutional Theory

This theory is basically considered a modern expansion for the theory of the Resources-based institutional view. It is a managing systematic theory formulated by the Dutch professor (Wernerfelt Birger) in 1984 (Wernerfelt,1995: 172). This theory is referred to the cause behind the performance differences in the organizations but the organization of a superb performance possess and control its resources till getting the competitive advantages which are not available with the others, also this theory looks at this organization as a bundle of resources (Gaya *et al.*, 2013: 2050). The main idea behind the Knowledge-based Institutional theory is that this organization could continue in its existence due to its ability to managing its knowledge resources with a more efficiency level, In another sense, these organizations are not more than community entities store and use this knowledge, competencies, important and vital abilities for the survival, growth and success of the institution. Hence, its success or failure is determined by the ability of this organization to discover, acquiring and absorb the knowledge resources in the local and external environment (Miles, 2012: 186). Accordingly, the Knowledge-based Institutional theory has explained the importance of the variables of the research (knowledge workers and the core competencies management) which is the field of the study its relation with each other. Hence, the importance of the existence is shown in the specialist administration for the knowledge of the organization that seeks to fully exploit for its knowledge resources and core competencies.

Knowledge Workers Concept

Business organizations have supported in the compound and complex process that particularly apply knowledge and direct core support whether through the formation of new knowledge (the research and development) or the preparation of knowledge workers from their trainees in the various fields. (Liu & Chai, 2011: 3) pointed out that Knowledge workers are the new groups formed in the age of the knowledge

economy that many researchers have conducted studies on such as (Druker Peter) and (Arther Anderson). They are the individuals who develop, use and circulate the knowledge (Stair & Reynolds, 2010: 444). In the dictionary, they are those who collect, analyze and deal with information for the production of goods and services (Mishra, 2011: 4). From a similar vivid perspective (Liu & Chai, 2011: 3) explained that knowledge workers are those individuals who use professional knowledge acquired by their own self-experiences and outstanding achievements, skills associated with production and management, the knowledge application activities in a particular project and, generally, they have strong knowledge, capability or talent.

(Kreitner & Kinicki, 2007: 12), on the other hand, see that the knowledge workers are those individuals who add value by using their brains rather than exhausting themselves with the muscle effort. Or they are the individuals who develop, use and circulate knowledge to add value and they are usually professionals in science, engineering, business, working in the offices and belong to professional organizations (Stair & Reynolds, 2010: 444). (Lei & Lan, 2013: 61) describe knowledge workers as the individuals who have the ability to accomplish the goals and excel in the production of knowledge, creativity and innovation and applied them in organization. Finally, (Grainne *et al.*, 2011: 610) preferred the definition of (Swart, 2007: 452) who sees the Knowledge workers

as the workers who apply their required knowledge and valuable skills via practical experiences with complex and innovative problems in the environments that provide rich collective knowledge and relational resources. As a result, this concept ranged from a simple narrow to a broad and complex one.

Knowledge Workers Dimensions

Researcher's opinions have differed in determining the dimensions and characteristics of knowledge workers and Table 1 summarizes these dimensions.

Due to the purposes of this research, the following dimensions have been relied on as a scale of knowledge-workers for an implicit the presence and agreement between most of the researchers on them: knowledge acquisition, intellectual capabilities, challenge and achievement, and excellence.

Core Competencies Concept

The core competencies are considered the real resources for the competitive advantage and interest in intangible assets as well as the interest in the tangible assets and aptitudes. (Spendlove, 2007: 409). The scholars, the researchers and the writers, of the strategic management and human resource management, have addressed the term of the core competencies in many concepts but all of these different concepts share an intellectual thread that they are originated from within the organization and rely on

Table 1: Knowledge Workers Dimensions

Dimensions	Researcher
Understand the knowledge impact, Recognizes the auxiliary impact, Understand individuals and information and Resources, Having the act authority	Klock <i>et al.</i> , 2003: 21
Operational Flexibility, Developing thoughts and increasing experience, Challenge and Achievement, Excellence of objectives achieving, Building high reputation	MacDougall & Hurst, 2005: 61
knowledge acquisition, Find and get information, Capability to apply information, Communication skills, intellectual capabilities	Mohanta <i>et al.</i> , 2006: 78
Technological skills, Organizational capabilities, Social capabilities, Distinctive trust	Scholes, 2007: 27
Challenge and Achievement, individual growth, Independence, Excellence, Directed objectives	Cheng & Zhang, 2008: 3-4
New problems solve, Supreme education, High degree of Independence, Work to Learning organization, Emotional stimulation and commitment, High toleration of ambiguity	Pyörä <i>et al.</i> , 2008: 90
Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness to experience	Chu & Khosla, 2012: 2391
Individual Excellence, Self-realization and independence, individual work, Achievement of directed objectives	Fie & Bing, 2012: 127
Innovative work, Desire and self-competence, High individual characteristics, Difficulty of measuring work results	Lie & Lan, 2013: 61
High independence, Loyalty of job instead to the work owners, Difficulty supervised, Pursuing goals and targeted plans, capabilities Development, Challenge and Achievement	Zhan <i>et al.</i> , 2013: 560

its resources. They also represent strength points that enable business organizations to compete and survive. However, the researchers did not agree to give a unified definition of the core competencies being a concept having many interpretations coming from the various knowledge disciplines that use this concept. Some competencies are called core because each one of them is the tool that the knowledge worker certainly needs to use in the work (Awad & Ghaziri, 2007: 438).

(Nobre & Walker, 2011: 337) points out in determining the core competence concept that the question should be whether this competence gives the organization a unique advantage over competitors and helps it to make profits? This concept, then, can be identified. (Daft, 2010: 80) sees what the organization accomplishes distinctly and individually compared to its competitors. This is confirmed by (Silber & Kearny, 2010: 112) that organizational skills and knowledge that without them the organization does not exist, make an organization work better than any other organization and thus makes it unique. (Hitt *et al.*, 2003: 81) and (Hill & Jones 2008: 67) agree that the basis of the core competencies and the distinctive capabilities are the unique resources of the organization but believe that distinctive capabilities are embodied in the complementarity of these resources and once these resources have achieved the sustainable competitive characteristic, they become core competencies.

From a wider perspective (Coulter, 2010: 77), the attainment of distinctive aptitudes comes as an advanced stage that is achieved when the organization possesses core competencies as the basis on which it is based and such competencies of their arising role through the availability of the accumulated learning in the organization that such core competencies will make the superiority. The first case is represented by the long-term benefits that distinguish the organization and give it greater potentials than its competitors by achieving sustainable competitive advantage over its competitors (Silber & Kearay, 2010: 112). This will enable it to achieve a prestigious competitive position and gain a large market share. While in the short term the core competencies add value to organization customers via increasing the quality of its products and reducing its costs which will help it retain customers with the possibility of gaining new customers (Barringer & Ireland, 2008: 175).

Criteria for Core Competencies

The organizations attempt to determine what they need to possess of core competencies in order to rely

on in developing their competitive characteristics (David, 2011: 120). The organizations usually have diverse resources and capabilities, but not all of have achieved competitive advantages. The competitive advantages need unique resources that are not available to other competitors in addition to the core competencies possessed by the organization only (Johnson *et al.*, 2005: 118).

Although organizations have a huge amount of resources and capabilities, it has become difficult for them to determine precisely where their competencies lie in that amount of resources and capabilities and whether these competencies are core or not? To answer this question, some writers and researchers in the field of strategic management cite a number of criteria which, in turn, the organizations use in determining what they already have of the core competencies: valuable, rare, non-imitable, non-substitutability, exploitability, durability, dynamic, extendibility, Non-transferable and Appropriability.

Core competencies Dimensions

The core competencies dimensions are many according to the writers and the researchers in the field of strategic management and the organization. Table 2 summarizes these dimensions.

The current research adopts four main dimensions: resources, shared vision, teamwork and Empowerment that were the focus of the most writers and researchers.

The Role of Knowledge Workers in the Core Competencies Management

Researcher's opinions have differed about the nature of the relationship between the knowledge workers and the core competencies and is still a controversial issue. So, we presented the views of researchers on the role of knowledge workers with the core competencies as indicated by (Macmillan & Tampoe, 2000: 122) that the core competencies are generated by the accumulated knowledge, skills of the individuals and their self-potential (task skills, common skills, specialized knowledge and mentality) that these resources relate exclusively to the individuals especially in the service organizations due to the nature of the organization work that it needs. (Jingfang *et al.*, 2009: 2) points out that the knowledge-workers should possess the competencies and capabilities that contribute to productivity of their works that add the value to the organization. Through the views of (Chu &

Table 2: Core Competencies Dimensions

Dimensions	Researcher
Shared vision, Cognitive skills, Innovation	Higgins, 1996: 27
Shared vision, Cooperative, Empowerment	Javidan, 1998: 60
Shared vision, Cooperative, Empowerment	King & Zeithaml, 2001: 76
Organizational learning, Technology Management, Human Capital, Strategic Flexibility	Kak & Sushil, 2002: 26
Organizational Resources, Human Resources	Proviuce, 2003: 3
Shared vision, Cooperative, Empowerment	Sanchez, 2004: 520
Organizational Resources, Human Resources	Tinto, 2005: 5
Teamwork and Leadership, Employees Empowerment, The extent of Personal effectiveness, Communication, Problems solving and decision Making, delivery of results	Merton, 2005: 15
Shared vision, Cooperative, Empowerment	Hafeez & Essmail, 2007: 533
Capabilities, Teamwork, Employees Empowerment	Agha <i>et al.</i> , 2012: 194

Khosla, 2012: 2391) on the adaptation of the knowledge-workers' elements identified by the psychologists to those of the practice communities which is the increasing of the core competencies is one of them. Via unifying the knowledge workers components with the practice communities it show as the vivid role of the knowledge workers role in these communities and their role in increasing the core competencies. there is a clear indication of the knowledge workers in the core competencies management of the organizations and the first signs of this relationship existence. Figure 1 shows this role.

These arguments and others, mentioned above, support the current research model development of the

knowledge workers for core competencies management in higher education Institutions.

RESEARCH METHOD

a. Research Model

The methodological treatment of the study problem, in the light of its theoretical framework and its field implications, requires a design of a research model in Figure 2, which refers to the logical relationships between the research variables expressing the solutions proposed by researchers to answer the problematic research questions raised. The research model represents a set of hypotheses built on the

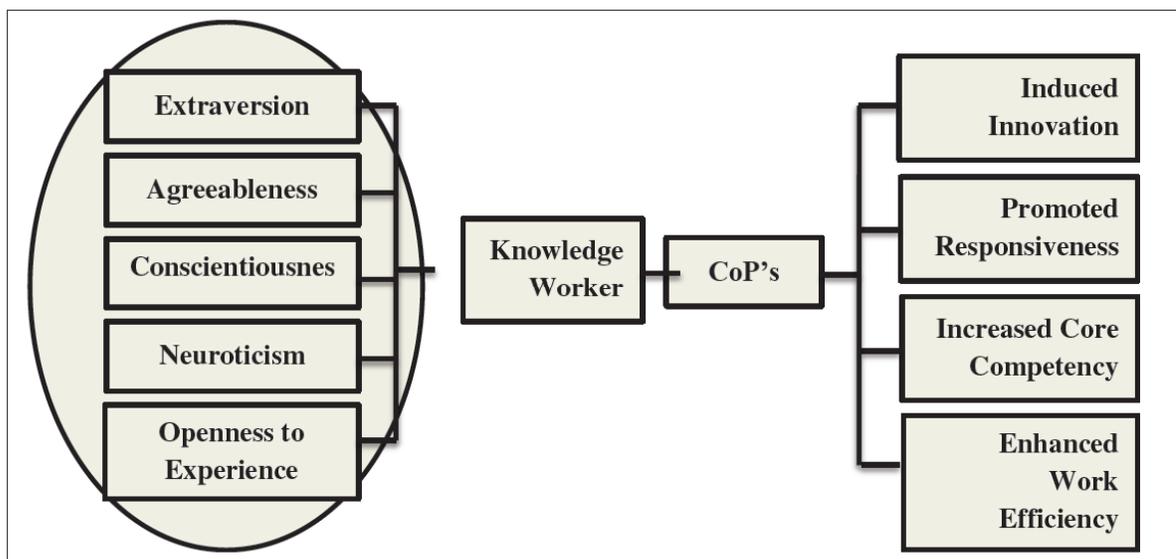


Figure 1: Aligning knowledge workers and practice communities.

Source: Chu, Mei-Tai & Khosla, Rajiv, (2012)," Strategic Knowledge Worker Features in the Context of Communities of Practice", Journal of Software, Vol. 7, No. 11, November.

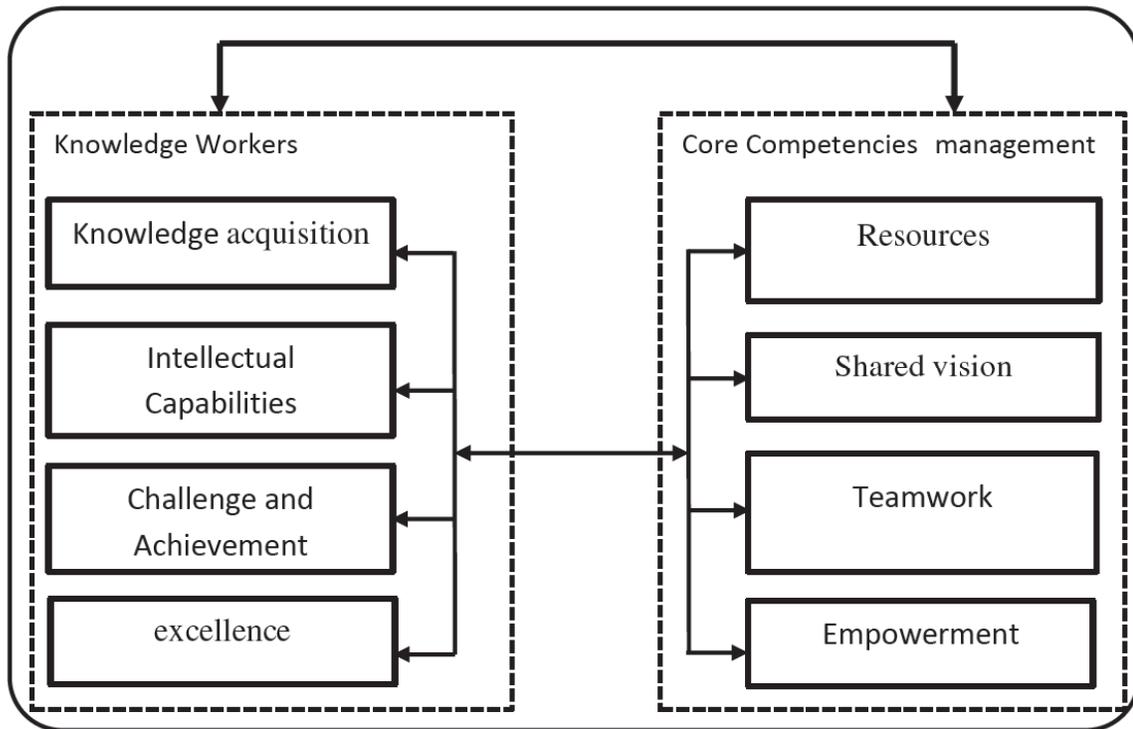


Figure 2: Research model.

possibility of measuring each of the research variables, the comprehensiveness of the model and the possibility of its testing, the consistency of the variables with the characteristics of the researched organization. The research model is developed to include all its main and sub-variables that are of great importance to the research field Institutions as follows:

- The independent variable: Knowledge workers include (knowledge acquisition, intellectual capabilities, challenge and achievement and excellence).
- The dependent variable: Core competencies management including (Resources, shared vision, Teamwork and Empowerment).

b. Method of Data Collection

The questionnaire is considered main tool for data collection in the current research. It was prepared based on studies (Mohanta *et al.*, 2006) and (Cheng & Zhang, 2008) concerning the independent variable knowledge workers and on studies (Hafeez & Essmail, 2007) and (Agha *et al.*, 2012) regarding the dependent variable of the core competencies management. The tool was adapted in accordance with the objectives and directions of the current research using (Likert) scale of five-grade (1-5) i.e. (strongly agreed - agreed - neutral -

disagree - strongly disagree). The questionnaire was made of two sections: the first includes the knowledge workers that has (knowledge acquisition, intellectual abilities, challenge and achievement, excellence) and assigned (28) items by seven items for each dimension, while the second section management of core competencies includes (resources, shared vision, teamwork, and empowerment) and allocated (16) items by four items for each dimension. In order to confirm the validity of the questionnaire in measuring the research variables, it was subjected to the validity and the consistency tests using (Cronbach's alpha) scale and it was found that the alpha coefficient was (0.921) on the overall level of the variables and was (0.854) at the level of sub-variables for knowledge workers management of the core competencies. While the coefficient of alpha was (0.793) at the level of the two main variables. Such these ratios are acceptable in the management studies and the scale used has a good degree of consistency. As for validity, it is equal to the square root of consistency (0.891), which indicates a great degree of validity for the used scale.

c. Community and Sample

The current research community was represented by five Iraqi universities (Mustansiriya, Iraqi, Kufa, Anbar, Fallujah), and the sample consisted of the university leaders (the dean's assistants, heads of

scientific departments, the directors of the support departments) in those mentioned universities as a suitable intentional sample due to the possibility of dealing with the used scale and the extent of their evaluation of it. The sample of this research reached (256) officials.

TESTING THE SEARCH MODEL

For the purpose of identifying the nature of the relationship between the independent variable knowledge workers and the dependent variable of the core competencies management in the research Institutions, we will verify the validity of the research model according to the grade correlation coefficient (Spearman's) and the regression coefficient chosen to perform an analysis on the research variables. To complete the descriptive and diagnostic processes based on the descriptive analysis data, the correlation relationships between study variables were identified as shown in Table 3.

- Correlation relations have emerged between knowledge acquisition and core competencies management dimensions of represented by (resources, shared vision, teamwork, and empowerment). The correlation coefficients were (0.445 **, 0.448 **, 0.384 **, 0.316 **) respectively at the level (0.01). This indicates a significant correlation between knowledge acquisition and core competencies management dimensions. The correlation coefficient between knowledge acquisition and total core competencies management was (0.502 **) that shows the positive relationship between knowledge acquisition and core competencies management.

- A correlation relationship was found between the intellectual capabilities and core competencies management dimensions, the correlation coefficients were (0.536 **, 0.493 **, 0.624 **, 0.239 **), respectively, indicating the available correlation between the intellectual capabilities and core competencies management dimensions. Also, the correlation coefficient between the intellectual capabilities and the total core competencies management was (0.635 **) confirming a correlation relationship between the intellectual capabilities and the core competencies management.
- A correlation relationship has emerged between challenge and achievement dimension and dimensions of the aforementioned core competencies management dimensions. The correlation coefficients were (0.368 **, 0.521 **, 0.312 **, 0.410 **) serially indicating a positive correlation between the challenge and achievement and core competencies management dimensions. It was also seen that the correlation coefficient between the challenge and achievement and the total core competencies management was (0.523 **) confirming the existence of a strong correlation relationship between them.
- A correlation relationships were shown between the excellence dimension and core competencies management dimensions of each of (resources, shared vision, teamwork, and empowerment). The correlation coefficients were (0.207 **, 0.315 **, 0.433 **, 0.339 **) serially at the level of significant (0.01), indicating a significant correlation coefficient between the

Table 3: Results of Correlation Analysis

Core Competencies Management / Knowledge Workers	Resources	Shared vision	Teamwork	Empowerment	Variable Total
Knowledge acquisition	0.445**	0.448**	0.384**	0.316**	0.502**
Intellectual Capabilities	0.536**	0.493**	0.624**	0.239**	0.635**
Challenge and Achievement	0.368**	0.521**	0.312**	0.410**	0.523**
Excellence	0.207**	0.315**	0.433**	0.339**	0.496**
Variable Total	0.572**	0.586**	0.601**	0.503**	0.671**

** 0.01.

excellence and core competencies management dimensions. The correlation coefficient also was found between the excellence and the total core competencies management (0.496 **) confirming the existence of a significant correlation relationship between the excellence and core competencies management but it was the weakest.

- A correlation relationships were found between the total knowledge workers and core competencies management dimensions mentioned before. The correlation coefficients were (0.572 **, 0.586 **, 0.601 **, 0.503 **), serially, indicating a strong positive correlation between the total knowledge workers and the core competencies management dimensions.
- The correlation relationships , between the total knowledge workers and the total core competencies management were significantly shown. The relationship was significant. This is proved by the correlation coefficient value (0.671 **) at the significant level (0.01) indicating a vivid and strong correlation between the two variables.

The results of the regression analysis of the research variables combined and individually and presented in Table 4 below enhance the results of the correlation mentioned above, As the calculated value of (F) reached (41.396) which is greater than the tabular value of (F) of (6.630). This indicates the significant influence of knowledge workers in the core competencies management. The explanation the value of the coefficient (R^2) of (0.439), which means that knowledge workers explains what percentage (43.9%) of the changes in the core competencies management, while the remaining percentage rated (56.1%) is due to the effect of other variables that do not exist in the model.

Table 4: Regression Analysis Results

independent variable \ dependent variable	Core Competencies Management			
	R^2	(F) value		Sig.
		Calculated	Tabular	
Knowledge acquisition	0.214	14.960	6.630	0.01
Intellectual Capabilities	0.320	28.987	6.630	0.01
Challenge and Achievement	0.294	24.071	6.630	0.01
Excellence	0.173	12.147	6.630	0.01
Knowledge Workers	0.439	41.396	6.630	0.01

df (1, 255).

These results reflect the fact that usefully proposed the acceptance of the research model with its hypotheses and questions expressed through the model with a confidence level at (99%).

IMPLICATION

The research results proved a good statistically significant relationship to knowledge workers and its dimensions combined and individually with its core competencies management at the level of the researched universities reflected by the significant correlation and regression coefficients . Therefore, this study would be useful for supporting and encouraging Iraqi universities to pay extraordinary attention to the knowledge workers dimensions to create great opportunities for their core competencies management in favor of work. As well as, to enhancing the universities managements of the variables that have shown good and clear results such as intellectual capabilities, challenge and achievement, acquisition knowledge in favor of the secretions core competencies management and their sub-dimensions to ensure superiority in performance levels.

CONCLUSIONS

1. Employing the knowledge workers dimensions for core competencies management in the higher education Institutions, in particular, and the service Institutions in general to show the ability of the knowledge workers for managing their core competencies.
2. The contribution of the scientific research in stimulating the interest of the searched Institutions for the importance of the current research variables and their role in raising the level of readiness in providing educational services with high quality and entering the field of the competition.

3. It was shown that the researched universities were able to employ the knowledge workers dimensions in activating the core competencies management that was clearly shown in teamwork, shared vision and then resources in a weaker level after empowerment. This is due to actual circumstances identified in the Iraqi universities.
4. The results showed that the employment of universities for excellence dimension was modest in spite of its importance and did not rise to other knowledge workers dimensions, and this may be due to the exceptional circumstances experienced by Iraqi universities.
5. The research results proved that there is a good statistically significant relationship to knowledge workers and its dimensions combined and individually with its core competencies management at the level of the researched universities reflected by the significant correlation and influence coefficients.

RECOMMENDATIONS

1. Enhancing the universities managements of the variables that have shown good and clear results such as intellectual capabilities, challenge and achievement, acquisition knowledge in favor of the secretions core competencies management and their sub-dimensions to ensure superiority in performance levels.
2. The necessity to increase more the interest of the universities of their core competencies management, specifically to raise the level of attention to the empowerment dimension, and work to connect them with the strategic performance to increase the level of achieving the sustainability of competitive advantage.
3. The necessity of the universities to pay more attention to the excellence dimension through the adoption of the programs and models that distinguish university performance to achieve the desired success of their core competencies management.
4. The necessity for supporting and encouraging the Iraqi universities to pay extraordinary attention of the knowledge workers dimensions to create great opportunities of their core competencies management in favor of work.

5. The possibility of conducting the research in other sectors and adding other variables to support the results achieved by the current research and work on generalizing them.

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