

# IDENTIFYING CRITICAL SUCCESS FACTORS FOR KNOWLEDGE MANAGEMENT IMPLEMENTATION IN HIGHER EDUCATION INSTITUTIONS: A STUDY OF THE USE OF THE DELPHI METHOD AT KING FAHD SECURITY COLLEGE (KFSC) IN SAUDI ARABIA

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**Abstract-** The study investigates the expected critical success factors for knowledge management at King Fahd Security College (KFSC) in Saudi Arabia. The population of this study consisted of a group of experts at KFSC. Delphi method was applied to collect data through two rounds. An open questionnaire was distributed in the first round and was answered by 35 experts. Their answers were analysed and formulated into tables. Then the second-round questionnaire was designed and distributed, of which 33 experts responded and by which the study ended. According to the experts the critical success factors of applying (KM) are the supportive leadership, the availability of modern techniques, the small size of the college, applying e-government, the availability of e-learning facilities, and the scientific experiences at the College.

**Keywords-** Knowledge, Knowledge Management, Critical Success Factors.

## I. INTRODUCTION

Effective knowledge management plays an important role in the organisational improvement in educational sector through achieving better decision making, sharing of best practices, better process handling, faster response to key institutional issues, and improved people skills. Kidwell and colleagues (2000) asserted that Knowledge is the centre of higher education, which makes creating, disseminating, and learning it as the key activities. When applied to education institutions, knowledge management can promote learning processes, save time and enrich the educational and administrative services provided. Knowledge management can enhance the performance of higher educational institutions. It can improve knowledge-sharing and overall performance (Hossain, Ouedraogo & Rezania 2013). The objective of this study is to how effectively manage knowledge in higher education institutions and identify the main critical success factors of knowledge management by using Delphi Technique.

### Approaching Key Terms

For the purpose of this study, the definitions of the research variables will be adopted as follows:

#### Knowledge:

Knowledge definition in the literature review is challenging due various conceptual origins of this field. Obviously definition of knowledge is that knowledge is divided into three complementary elements. First, knowledge is reasonable true belief. Creatures justify the truthfulness of their beliefs based on their communication with the world. Second, knowledge is the actuality experience obtained from performance and knowledge allows individuals to describe, arrange, shape and learn to solve a task or problem. Third, knowledge is situated

on a continuum from explicit to tacit knowledge (Nonaka, I & Von Krogh, G 2009).

#### Knowledge Management:

There are challenges in definition of knowledge management due to the diverse of conceptual understanding of knowledge and how organisations describe its management. One obviously definition of knowledge management is that organisation has capability to build a set of activities or processes to continuously create an environment within an organisation that facilitates the creation, transfer and sharing of knowledge (Berraies, Chaher & Yahia 2014 & Bratianu 2011 & Moghaddam, A., Morteza Mosakhani, and Mojgan Aalabeiki 2013).

#### Critical Success Factors:

This study defines critical success factors as major elements for organisation success and performance in numerous activity areas. These factors relate to the limited number of themes will ensure successful performing for the individual, sector, or the organisation (Conley, 2011; Sedighi & Zand 2012). Following chapter will illustrate the literature review, concepts and theories of knowledge management.

## II. METHODOLOGY

The applied research design was the Delphi method, which involves the use of a structured approach in collecting and distilling knowledge from a number of experts. It provides standard deviations and applies measures of dispersion for appropriate decision-making in research scenarios and related cases. From the previous studies analysed, there is sufficient and highly comprehensive information obtained would be added to the current information available in the sector of institutional knowledge management (Holsapple & Joshi 2002).

**2.1. Procedures of the Study**

The research uses the Delphi Technique which depends on certain procedures as follow (Miller, L 2006):

1. Select the experts' participants who have related experience and/or backgrounds relating the target issue, willingness to revise initial or previous judgments and the capability of contributing helpful inputs for the intention of attaining or reaching consensus.
2. Obtain the expert perspective in manner independent to ensure that there is no effect from other experts on his opinion.
3. Commence the first round of Delphi method with an open ended questionnaire. This serves as the foundation stone for seeking particular information concerning a content area from the Delphi subjects.
4. Distribute the first round (questionnaire) to the panel of experts.
5. Collect the responses in first round questionnaire and analyse it. Then, the researcher transforms the solicited information into a well close ended or structured questionnaire (Custer, R. L., Scarcella & Stewart 1999).
6. Distribute the second round questionnaire and the researcher asks them to review the summarised items on the basis of the provided information in the preceding round.
7. The number of Delphi iterations is affected to a big extent by the degree of consensus the investigator or the researcher is seeking. This can normally sway from three to five.
8. Analyse data which obtain from experts consensus.

**2.2. Applying the Study**

The first round of Delphi method was distributed to 35 experts at KFSC. All the experts responded in the first round during a month.

Expert's opinions in the first round were analysed as a qualitative data. After that, the researcher built the second round of Delphi method and distributed to the participants. 33 of panelists responded in this round. In this stage showed substantial agreement. Therefore, there is no need for more rounds.

**2.3. Participant experts Characteristics in This Study**

**2.3.1. Qualification of the Experts**

30.3% of participants have Doctorate degree, 39.4 of experts have Master degree and 30.3 of participants have Bachelor degree. (As shown in Table 1)

**Table.1. Participant experts Characteristics**

Qualification	No of Experts	Percentage
Doctorate	10	30.3%
Master	13	39.4%
Bachelor	10	30.3%

**2.3.2. Experience of the Experts**

Most of the participants have more than 10 experiences years at KFSC. It means that data was obtained from these experts was very informative. Table 2 shows the experiences for participants.

**Table.2. Experiences of Experts**

Experiences Years	No	Percentage
From 10 to 15 years	16	48.4%
From 16 to 20 years	5	15.2%
From 21 to 25 years	5	15.2%
From 26 to 30 years	4	12.1%
From 31 to 35 years	3	9.1%

**III. RESULTS AND DISCUSSION**

The results are illustrated based on the agreement percentage of the participants towards critical success factors. In addition, these show the frequencies (F), mean (M) and standard deviation (S).

There are 10 critical success factors for knowledge management implementation that mentioned by experts in this study. These critical success factors can be classified into three main categories based on the mean of experts' opinions as following:

9. Leadership plays a highly critical role in knowledge management success. This critical Success Factor exceeded Putman Test and the Mean of Experts Opinions is (9.21) and the standard deviation is (1.29).

10. The availability of information technology and the small size of KFSC; supports communication between the departments are considered as critical factors for knowledge management by panelists' opinions. As Shown in table 2.

**Table.3. Critical Success Factor exceeded Putman Test and Occurred the Mean of Experts Opinions between (8.87) to (8.75)**

Critical Success Factor	F	M	S
Availability Information Technology	33	8.87	1.72
Small Size KFSC Support Communication between its Department	33	8.75	1.22

11. Experts reach to consensus that there are 7 critical success factors which exceeded Putman Test and Occurred the Mean of Experts Opinions between (8.45) to (8.15) as show in table 4.

Critical Success Factor	F	M	S
Applying E- government	33	8.45	1.66
Availability E- learning	33	8.39	1.90
Adoption the Knowledge Management System	32	8.31	2.91
Financial Support for Knowledge Management System	32	8.28	2.59
Support Knowledge Management Experts to obtained the Benefits from Their Experience	33	8.18	2.20
Availability of Human Resources in the Area of Knowledge Management	33	8.15	2.80
Qualificationsof Employees at KFSC	33	8.15	1.92

**Table.4. Critical Success Factor exceeded Putman Test and Occurred the Mean of Experts Opinions between (8.45) to (8.15)**

## CONCLUSION

This Delphi study gives to KFSC a future picture for knowledge management application and the main critical success factors (Okoli&Pawlowski, 2004).

. The experts identified 10 critical success factors for implementation of knowledge management. These are leadership,availability information technology, small size KFSC support communication between its department, applying e-government, availability e-learning, adoption the knowledge management system,financial support for knowledge management system,support knowledge management experts to obtained the Benefits from Their Experience,availability of human resources in the area of knowledge management and qualifications of employees at KFSC.

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