

# **Knowledge Management Practices in New Public Universities in Saudi Arabia**

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### Abstract

Knowledge management (KM) is the creation, sharing, and application of information. KM is a leading strategy among business organisations that is relatively new to the educational fields, including higher education. We argue that KM assists new public universities in reforming their leadership and pedagogical activities and overcoming social economic challenges. This study explores KM in a 10-year-old public university in Saudi Arabia by analysing 212 survey responses to assess the university's readiness for KM, including acquiring a skilled workforce, strengthening the organisational structure and culture, and providing technological support. The responses indicated significant relationships between KM practices and all three-readiness areas, as well as between KM and education and gender. The findings suggest that successful implementation of KM requires support in many areas.

**Keywords:** Self-education, knowledge, higher education, public university, knowledge management, educational management, Saudi Arabia

## تطبيقات إدارة المعرفة في الجامعات الحكومية الحديثة في المملكة العربية السعودية

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### الملخص

تركز إدارة المعرفة على عملية خلق ومشاركة وتطبيق المعلومات داخل المنظمة. يعد هذا النمط من الأنماط الحديثة على المنظمات التعليمية مقارنة بتطبيقاته المتقدمة في منظمات الأعمال والاقتصاد. لذا فإننا نجادل عن أن إدارة المعرفة يمكن أن توفر للجامعات الحكومية الحديثة مجموعة من الاستراتيجيات التي تعينها في توجيه استراتيجياتها القيادية والإدارية كما تساهم في توجيه نشاطاتها التعليمية، إضافة إلى إسهامها في دعم هذه الجامعات على تجاوز التحديات الاجتماعية والاقتصادية. هذه الدراسة تستكشف استراتيجيات إدارة المعرفة في جامعة حكومية ناشئة ( لم تتجاوز ١٠ سنوات منذ تأسيسها ) في المملكة العربية السعودية وذلك من خلال تحليل استطلاع تم الإجابة عليه من قبل ٢١٢ مشارك يعملون في هذه الجامعة. حيث تم استطلاع استراتيجيات المؤسسة في ثلاثة جوانب تتضمن اكتساب القوى العاملة الماهرة، بناء الهيكل والثقافة التنظيمية و الدعم التكنولوجي. يشير الاستطلاع إلى أن هناك علاقة بارزة بين ممارسات إدارة المعرفة وبين الجوانب الثلاثة التي تمت دراستها. كما كشفت الدراسة عن أن ممارسة إدارة المعرفة ترتبط بالتغيير التعليمي الجندري.

الكلمات المفتاحية: تعليم، المعرفة، تعليم عالي، الجامعة الحكومية، إدارة المعرفة، إدارة التعليم ، المملكة العربية السعودية.

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### 1. Introduction

Education and business disciplines are intertwined in that business practices influence how educational organisations are managed. As part of the “knowledge business,” universities regularly produce and exchange ideas and information (Goddard, 1998; Rowley, 2000). This knowledge management (KM) encourages social and economic development. There are differences between the concepts of knowledge, information and data as many research suggested. According to Bellinger, Castro and Mills (2004), Data is more about symbols, while information is the processed that becomes useful for decisions, and knowledge is putting information into context to answer “how” questions. Moreover, Knowledge management is defined by Business Dictionary (Knowledge Management, 2018) as strategies and processes designed to identify, capture, structure, value, leverage and share an organization’s intellectual asset to enhance its performance and competitiveness (Bhatt 2001).

Thus, KM is a leading strategy in business but is relatively new to the educational fields. For example, in Saudi Arabia, the government has focused heavily on improving the higher education system by establishing new public universities (NPUs) to meet social and economic development needs. This study examined how NPUs have exercised KM to promote their development.

Several challenges can prevent NPUs from engaging effectively in this new knowledge era. According to Barber, Donnelly, and Rizvi (2013), “the next 50 years could see a golden age for higher education, but only if all the players in the system, from students to governments, seize the initiative

and act ambitiously. If not, an avalanche of change will sweep the system away” (p. 5). Such ambition requires reviewing and reforming institutional policies in parallel with managerial and pedagogical practices. Investing in intellectual capital and enhancing knowledge and learning organisation practices can be affective approaches to KM. From educational perspectives we could argue that by reforming leadership and pedagogy, higher education institutions can navigate new social and economic challenges that cast a shadow over the educational future (Goddard, 1998; Robertson, 2005; Rowley, 2000).

In business and leadership fields, KM is gaining credibility and popularity as a management strategy (Roth, Singhal, Singhal, & Tang, 2016). Stankosky (2005) predicts that KM will have a long-term impact on research direction. Ponzi and Koenig (2002) and Boahene and Ditsa (2003) note that KM is a relatively new phenomenon in management practice that will continue attracting attention. Increased interconnectedness has led to a focus on innovation and creativity, particularly among educational institutions. Birgeneau (2005) suggests that higher education institutions face challenges related to global economic change. Thus, investigating KM in these institutions may reveal important dynamics. Dawson (2000) finds that KM is important for higher education because professionals depend on creation, application, and uniqueness of the knowledge base. The main source of knowledge in these organisations is educational and managerial activities, which help to create and distribute new concepts and knowledge (Abu Naser, Al Shobaki, & Abu Amuna, 2016; Arsenijevic, 2011; Dhamdhere, 2015).

According to Kayworth and Leidner (2004), knowledge creation is “developing new content or replacing existing content within the organisation’s tacit and explicit knowledge” (p. 242). Model of knowledge creation is based on converting between tacit knowledge and explicit knowledge (Nonaka & Takeuchi, Umemoto 1996). This converting has four essential phases (e.g. Nonaka, Toyama, & Konno, 2000): Socialization (i.e. tacit knowledge to tacit knowledge); Externalization (i.e. tacit knowledge to explicit knowledge), Combination (i.e. explicit knowledge to explicit knowledge), and Internalization (i.e. explicit knowledge to tacit knowledge).

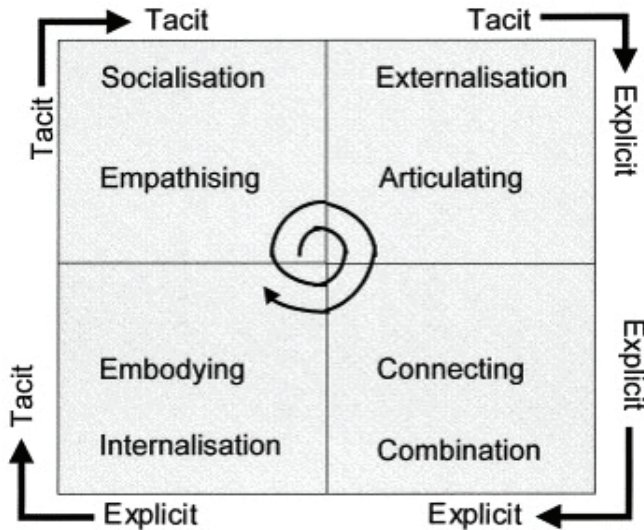


Figure 1

**Knowledge-Conversion Process (adopted from Nonaka, et al., 2000, p. 12)**

Knowledge creation is the most visible aspect of KM in business operations (Roth et al., 2016). Each organisation has its own knowledge creation, storage, and delivery methods, which add value to the services and products they deliver. For example, universities typically manage their knowledge creation processes explicitly, because these processes are valuable assets (King, 2007; Stankosky, 2005). Higher education organisations usually avoid activities that are irrelevant to knowledge and remain responsive to their changing role in society (Stankosky, 2005). As such, they face several challenges in addition to producing high-quality graduates. They must create knowledge bases that facilitate social and economic renewal and help people to develop skills and engage in production across industries.

Knowledge sharing involves exchanging information between individuals and groups (Birgeneau, 2005). Liaw, Chen, & Huang. (2008) defines it as a critical objective of organisations, because experts are valuable assets who can transfer and maintain knowledge. Awad and Gahziri (2004) state that knowledge sharing is enhancing the readiness and responsiveness for the unknown. Effective knowledge sharing can occur between individuals, between individuals and groups, and between

groups. Such sharing involves social interactions and collaboration that results in effective KM (King, 2007, 2009). Explicit and tacit knowledge can be shared, and both can be shared formally and informally (Alavi & Leidner, 2001).

Knowledge application, which is the main objective of KM, is crucial for transforming societies (Sedziuviene & Vveinhardt, 2009). The literature defines two aspects of KM: "knowledge as a practical information, and knowledge as production, as a product of selling and buying" (Sedziuviene & Vveinhardt, 2009, p.80). The first aspect analyses the application of knowledge as solutions to problems and tasks. In this context, KM means creating systematic and renewable processes. Knowledge can be anything that helps strengthen actions and understandings. KM formalises these practical experiences and information to stimulate innovation. The second aspect is knowledge as a product that organisations produce, buy, and sell. This knowledge must be effectively used to create new and innovative services and products (Mezghani, Exposito & Drira, 2016; Dhamdhare, 2015; Sedziuviene & Vveinhardt, 2009). As universities are the main instruments for the continuous pursuit of knowledge, KM in universities must provide materials that connect people to processes (Dhamdhare, 2015).

Readiness of higher education organisations for KM involves organisational structure, organisational culture, and information technology. Organisational structure is the hierarchy of organisational management and information flows between organisational units. Readiness for transfer of knowledge in the management process thus includes top-to-bottom or bottom-to-top level transfers. The key focus here is how management supports KM. Knowledge transfer through action sustains the organisation's competitive advantage in using effective tools for creating a KM strategy (Dhamdhare, 2015). A significant element of organisational structure is the level of centralisation in decision making. According to Allameh, Zare & Davoodi (2011), centralisation is "the hierarchical level that has the authority to make a decision within an organization." (p. 1216). A high level of centralisation usually hinders knowledge sharing, because top management controls information and

decisions. Decentralisation gives people responsibility for their tasks and decisions and encourages interactions with others to obtain information and apply it accordingly (Hurley & Green, 2005).

Allameh et al. (2011) define organisational culture as shared beliefs, values, norms, and meanings. It is a “social consciousness” that shapes individual behaviour towards innovation and therefore supports innovation (Kao, Wu, & Su, 2011). Culture interacts with knowledge sharing in many ways (King, 2007). Encouraging individuals to share tacit personal knowledge is a critical component of organisational culture to sustain and create knowledge (King, 2007). Organisational culture is thus a significant component of KM (King, 2009). Gottschalk and Karlsen (2009) further argue that organisational culture influences the effectiveness of KM. A significant aspect of organisational culture is a supportive learning environment in which motivating employees are encouraged to acquire new knowledge and apply it in their tasks. Rewards systems and other incentives can be established to show the organisation’s support of a learning culture (Wu & Lee, 2007).

Information technology is a significant part of today’s learning environments, and it promotes information sharing and communication (Chow & Chan, 2008, Chow, Herold, Choo & Chan, 2012; Jain, 2009). IT supports communication, knowledge seeking, collaboration, and collaborative learning. IT can be a crucial component of KM for several reasons (Gold, Malhotra, & Segars, 2001). It facilitates speedy data collection and storage, knowledge generation and exchange, and information flow, and it minimizes communication barriers (Jain, 2009). For these reasons, higher education organisations often invest in technology (Gold et al., 2001).

Shafique (2015) conducted a research on Saudi Universities and knowledge management and concluded that the awareness of significant role for knowledge management exists. He also proposed a model for knowledge management implementation among universities. However, his research was theory based with no empirical or practical implementation.

It can be concluded that the previous research on KM are confirming the relationship between the organisational readiness and KM practices.

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However, there are very limited research on this regards in Universities, in general and in developing countries in particular. Thus, this research is continuing the efforts to expand the KM literature by examining these practices and relationship in young public university.

## **2. Problem of the study**

This study examined KM in higher education organisations. KM guides higher education organisations in several ways. It increases the efficiency of education, and thus attracts the best academics. It aids in developing new curricula. It improves cost efficiency. Finally, KM utilises technologies effectively to meet student expectations (Kidwell, Vander Linde & Johnson 2000; Rowley, 2000). Such advantages are important for new universities to compete with established universities, which often do not have the same resource limitations, infrastructure challenges, and priorities. Theoretical and empirical research has examined KM in the context of higher education (e.g., Guzman, & Trivelato, 2011; Tan, 2016; Metcalfe, 2006). In this study, we explored how KM is applied in a 10-year-old university in Saudi Arabia by assessing its readiness for KM in three areas: organisational structure, organisational culture, and information technology. We sought to determine the extent to which higher education institutes knowledge creation, knowledge sharing, and knowledge application.

### **2.1 Question and Importance of the study**

In terms of KM, mature universities might have better policies, guidelines, and support, whereas new universities might practice KM informally with no proper strategy or infrastructure. This study therefore can improve understanding of KM, particularly in new universities. It is significant, as it identifies emerging dimensions in higher education by investigating KM in a developing country (i.e., Saudi Arabia), where there is a lack of research in this area. New public University can gain many advantages of adopting knowledge management practices such as better utilisation of limited resources, disseminating the best practices among its units and increase its competitiveness locally and internationally.

Due to lack of research in evaluating and examining the current situation

of knowledge management adoption among new public university, this research is an attempt in these regards. The main question of this research is: to what extent organisational readiness is influencing the practices of KM in educational institutes.

## 2.2 Implications

The results of this research will establish a base for researchers and practitioners to obtain better understand the reality of knowledge management practices and organisational readiness among Saudi university.

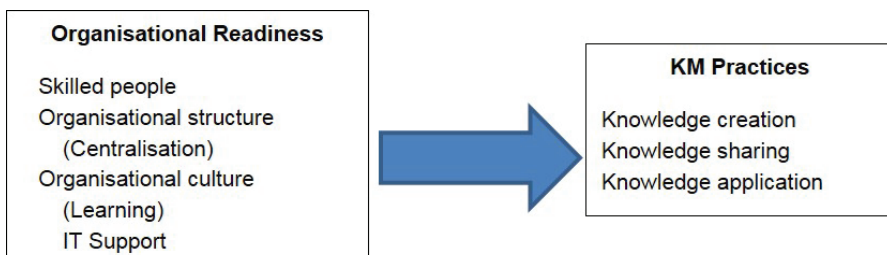
The followings are the practical implications of this research:

- The findings of this research can help Saudi universities to consider the most crucial factors that affecting knowledge management practices such as organisational structure, culture and IT support. Thus, they can enhance these elements towards facilitating better knowledge management.
- Due to the lack of resources that most of new public universities are suffering of, this situation may alert the decision makers to review the regulation and support to minimise the bureaucratic procedures.

## 3. Research Method and Hypotheses

### 3.1 Research Model and Hypotheses

Figure 1 illustrates the model created from the literature review and examined in this study. It shows how KM (knowledge creation, knowledge sharing, and knowledge application) influences organisations' readiness.



**Figure 2: Conceptual Model of Study**

In light of the above-discussed literature and model, the following hypotheses were proposed:

- H1: Overall, organisational readiness positively influence knowledge management practices in new public universities.
- H2: Skilled people positively influence knowledge management practices in new public universities.
- H3: Organisational structure positively influence knowledge management practices in new public universities.
- H4: Organisational culture positively influence knowledge management practices in new public universities.
- H5: IT Support positively influence knowledge management practices in new public universities.

### **3.2 Research Approach and Instrument Design**

Based on the literature reviewed in the previous section, this research sought to explore the current situation of KM practices and readiness in higher education and verify the research hypotheses and questions. This research design uses subjective strategies and quantitative procedures to gather and analyse data about information accumulation (Hair, Wolfenbarger, Money, Samouel & Page, 2011).

This research can be a theory building study due to its nature in confirming the influence of organisational readiness on KM practices. Moreover, the type of research questions is " (to what extent) and there is no "how" or "why" questions. Therefore, a survey is adopted as the most suitable way of collecting data.

The questionnaire is designed by reviewing the related literature (e.g., Wu & Lee, 2007; Allameh et al., 2011). The questionnaire consists of three main sections: demographic data, KM section and organisational readiness section. In terms of KM section, there are 14 items distributed based on knowledge processes (5 items for knowledge creation, 4 items for knowledge sharing and 5 items for knowledge application). Organisational readiness is measured based on 15 items as follows: 3 items for, skilled people, 3 items for centralisation, 5 items for organisational learning and 4 items for IT support.

Participants were asked to show their agreement with the questionnaire items using a 5-point Likert scale, where 1 represents strongly disagree and 5 represents strongly agree. Most participants were native Arabic speakers, so a researcher with professional English speaking skills translated the questionnaire items. Four academicians who specialise in management and who speak, read, and write in Arabic and English reviewed and verified the translations.

Information gathered for this study is from secondary and primary sources. The primary data comprises survey data, which is unique and timely but has not undergone in-depth analysis. The secondary sources include articles, books, and other materials that are supported by primary information (Zikmund, Babin, Carr, & Griffin, 2013). Statistical data analysis used a 5-point Likert scale analysed with SPSS software.

The context of this study is a young public university in Saudi Arabia (referred as ABC University). This university is 10 years old, with around 1500 administrative staffs and 2500 academics. Both categories were targeted via an online survey, using their emails for sharing the survey URL. The participants were given two weeks to respond to the survey, and a reminder email was sent out.

### 3.3 Participants Profile

There are 212 responses collected for the survey. The study collected demographics such as gender, education, experience, and role, as shown in table 1. These demographics are important to assess the impacts of KM in different areas.

**Table 1**  
**Summary of Demographic Analysis**

Variables	Frequencies	Percentage
<b>Gender</b>		
Male	117	55.2%
Female	95	44.8%
<b>Education</b>		
PhD	72	34.0%

Table 1

Variables	Frequencies	Percentage
Masters	57	26.9%
Bachelor's	65	30.7%
Diploma	16	7.5%
High School	2	0.9%
<b>Experience in Education</b>		
1–3 years	29	13.7%
4–7 years	59	27.8%
7–10 years	42	19.8%
10 years or more	82	38.7%
<b>Role</b>		
Academic with administrative role	140	66.0%
Administrative staff	72	34.0%

According to table 1, data collection from male participants was higher (55.2%) than that from female participants (44.8%). Educational background varied, including PhDs (34%), master's degrees (26%), bachelor's degrees (30.7%), high school diplomas (7.5%), and some high school (0.9%). Most participants had high experience in higher education of 10 years or more (38.7%), 7–10 years (19.8%), and 4–7 years (27.8%), whereas fewer participants had 1–3 years (13.7%) of experience. Participant roles were divided into two categories: academic with administrative role (66%) and administrative staff (34%).

#### 4. Results and Discussion

##### 4.1 Current Knowledge Management Practices

The study aims to predict the results for analysing current KM practices. Table 2 summarises the responses, which show the degrees to which respondents agreed or disagreed, based on a 5-point Likert scale (1 = strongly disagree; 5 = strongly agree), with the questions.

**Table 2**  
**Summary of Survey Responses about Knowledge Creation**

Item	SD		D		N		A		SA		Mean	Std Dev
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%		
<b>Knowledge Creation</b>												
KC1: The university has mechanisms for creating and acquiring knowledge from different sources such as employee, customers and businesses partners	33	16%	53	25%	60	28%	60	28%	6	3%	2.65	1.06
KC2: The university encourages and processes for the exchange of ideas and knowledge between individuals and groups	29	14%	64	30%	56	26%	51	24%	12	6%		
KC3: The university rewards employees for new ideas and knowledge	39	18%	72	34%	66	31%	33	16%	2	1%		
KC4: The university has mechanisms for creating knowledge from existing	29	14%	63	30%	69	33%	51	24%	0	0%		
KC5: The university uses lesson learned and best practices from projects to improve successive projects	39	18%	63	30%	62	29%	44	21%	4	2%		
Average	34	16%	63	30%	63	30%	48	23%	5	2%		

In the domain of knowledge creation, the data show that the level of KM at ABC University was low. Only 25% of participants either agreed or strongly agreed that a knowledge creation process existed (overall mean

of 2.65). it further indicates that 46% of participants disagreed (30%) and strongly disagreed (16%) with knowledge creation practices such as rewarding new ideas, encouraging knowledge exchange, and managing lessons learned for experience.

**Table 3**  
**Summary of Survey Responses about Knowledge Sharing**

Item	SD		D		N		A		SA		Mean	Std Dev
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%		
<b>Knowledge Sharing</b>												
KS1: The university has knowledge in the form that is readily accessible to employees who need it (internet, internet)	14	7%	66	31%	61	29%	59	28%	12	6%	2.90	1.12
KS2: The university send out timely reports with appropriate information to employees, customers and other relevant organisations	30	14%	61	29%	62	29%	56	26%	3	1%		
KS3: The university has libraries, resources centre and other forums to display and disseminate knowledge	39	18%	45	21%	53	25%	67	32%	8	4%		
KS4: The university has regular symposiums, lectures, conferences and training sessions to share knowledge	28	13%	34	16%	48	23%	87	41%	15	7%		
Average	28	13%	52	24%	56	26%	67	32%	10	4%		

In the domain of knowledge sharing, almost 34% of respondents agreed or strongly agreed (28% + 6%), that ABC University had knowledge that was readily accessible to employees. In term of sending out timely reports

with appropriate information to employees, customers and other relevant organisations, around 43% participants disagreed (29%) or strongly disagreed (14%). Overall, agreement of knowledge sharing practices is better than knowledge creation as 36% of participants either agree or strongly agree with such practice.

**Table 4**  
**Summary of Survey Responses about Knowledge Application**

Item	SD		D		N		A		SA		Mean	Std Dev
	Freq.	%	Freq.	%	Freq.	%	Freq.	%	Freq.	%		
Knowledge Application												
KA1: The university has different methods for employees to further develop their knowledge and apply then to new situations	34	16%	69	33%	55	26%	50	24%	4	2%	2.68	1.00
KA2: The university has mechanisms to protect knowledge form illegal use inside and outside of the university	18	8%	62	29%	99	47%	31	15%	2	1%		
KA3: Decision are made in the university by relying on the existing knowledge	32	15%	57	27%	70	33%	48	23%	5	2%		
KA4: Solving problems in the university is done through analysing and evaluating the existing knowledge	31	15%	67	32%	77	36%	35	17%	2	1%		
KA5: The university always refer back to previous projects when new similar project is initiated	32	15%	48	23%	70	33%	56	26%	6	3%		
Average	29	14%	61	29%	74	35%	44	21%	4	2%		

Similarly, in the domain of knowledge application, only 26% of respondents agreed that ABC University had methods for employees to develop and apply their knowledge; 16% believed that the university had



mechanisms to protect knowledge from illegal use; 25% agreed or strongly agreed that the university used existing knowledge to make decisions; only 17% indicated that the university solved problems by analysing and evaluating existing knowledge; and finally, 29% agreed that the university always referred to previous projects when initiating new, similar projects.

**4.2 Organisational Readiness for Knowledge Management**

Table 5 summarises the participants’ responses to questions about ABC University’s readiness for KM. For organisational readiness, few domains show agreement. For example, only 28% (agreed 25% + strongly agreed 3%) of participants believed that university employees knew their own know-how; 43% either agreed (37%) or strongly agreed (6%) that they could explain their tasks to others; and 34% considered themselves experts. For organisational structure (centralisation), only 10% of respondents (8% + 2%) felt that they could take action without a supervisor, whereas 12% agreed that they could make their own decisions and 34% believed that employees could make decisions without approval.

**Table 5**  
**Summary of Test for University Readiness for Knowledge Management**

Item	SD		D		N		A		SA		Mean	Std Dev
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
<b>Skilled People</b>												
SP1: The University employees can know their own know-how accurately.	33	16%	59	28%	61	29%	52	25%	7	3%	2.87	1.16
SP2: The University employees can explain their own tasks to others.	31	15%	43	20%	47	22%	78	37%	13	6%		
SP3: The University employees think that they are expert in their own tasks.	33	16%	45	21%	62	29%	55	26%	17	8%		
Average	32	15%	49	23%	57	27%	62	29%	12	6%		
<b>Organisation Structure</b>												

**Table 5**

Item	SD		D		N		A		SA		Mean	Std Dev
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
SP1: The University employees can know their own know-how accurately.	54	25%	93	44%	45	21%	16	8%	4	2%	2.13	0.98
SP2: The University employees can explain their own tasks to others.	59	28%	70	33%	58	27%	23	11%	2	1%		
SP3: The University employees think that they are expert in their own tasks.	76	36%	83	39%	35	17%	15	7%	3	1%		
Average	57	27%	71	34%	49	23%	31	15%	5	2%		
Organisation Culture												
OC1: The University provides various formal training programs for performance of duties	38	18%	39	18%	57	27%	69	33%	9	4%	2.42	1.07
OC2: The University provides opportunities for informal individual development other than formal training	46	22%	75	35%	68	32%	21	10%	2	1%		
OC3: The University encourages people to attend seminars, symposia, and so on.	42	20%	54	25%	49	23%	59	28%	8	4%		
OC4: The University provides various programs such as clubs and community gatherings.	50	24%	81	38%	47	22%	31	15%	3	1%		
OC5: The University members are satisfied by the contents of job training or self-development programs	59	28%	57	27%	73	34%	18	8%	5	2%		
Average	45	21%	66	31%	55	26%	40	19%	7	3%		
IT Support												

Table 5

Item	SD		D		N		A		SA		Mean	Std Dev
	Freq	%	Freq	%	Freq	%	Freq	%	Freq	%		
IT1: The University provides IT support for knowledge sharing (e.g., intranet).	28	13%	61	29%	38	18%	69	33%	16	8%	2.55	1.09
IT2: The University provides IT support for knowledge acquisition (e.g., groupware or knowledge repository).	50	24%	58	27%	65	31%	37	17%	2	1%		
IT3: The University provides IT support for knowledge source finding and accessing (e.g., knowledge map).	42	20%	83	39%	63	30%	21	10%	3	1%		
IT4: The University provides IT support for customer knowledge gathering (e.g., CRM)	36	17%	76	36%	66	31%	27	13%	7	3%		
Average	43	20%	72	34%	65	31%	28	13%	4	2%		

In terms of organisational culture (learning), 37% respondents (33% + 4%) felt that the university provides formal training programs; 11% (10%+1%) agreed that the university provided opportunities for informal individual development; 32% (28%+4%) believed that the university encouraged people to attend seminars, symposia, and other continuous learning activities; 16% agreed that the university provided programs such as clubs and community gatherings; and only 10% (8%+ 2%) felt satisfied by job training or self-development programs.

Finally, for IT support, 41% of participants (33%+8%) felt that the university provides IT support for knowledge sharing (e.g., intranet); 18% suggested IT support for knowledge acquisition (e.g., groupware, knowledge repositories); 11% respondents (10%+1%) agreed that the university provided IT support for locating knowledge sources (e.g., knowledge maps); and about 16% agreed that the university provides IT support for customer knowledge gathering (e.g., Customer Relationship Management).

### 4.3 Knowledge Management and Organisational Readiness

The research model assumes a significant relationship between university readiness and KM. The regression analysis of organisation readiness suggested variable results for the involvement of ABC University in KM. Tables 6, 7 and 8 summarise the model and predictions for each variable.

**Table 6**  
**Regression Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.800 <sup>a</sup>	0.639	0.632	6.34044
a. Predictors: (Constant), _IT_support, Skilled_ people, Org_structure, Org_culture				

It suggests that the model tested is significant ( $p < 0.05$ ) for skilled people, organisational culture, and organisational IT support. However, the organisational structure is not significant for KM in ABC University. The assumption of linearity is true if R squared exceeds 0.2. In this model, R squared is 0.639, which suggests a linear relationship between organisational readiness and KM. Thus, KM at ABC University depends on organisational culture, skilled people, and IT support; however, it has no significant relation to its organisational structure.

**Table 7**  
**Regression ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	14743.373	4	3685.843	91.685	0.000 <sup>b</sup>
Residual	8321.646	207	40.201		
Total	23065.019	211			

a. Dependent variable: KM\_practices

b. Predictors: (Constant), \_IT\_support, Skilled\_people, Org\_structure, Org\_culture

The value of the standardised beta coefficient is not zero. Therefore, the dependency is skilled people (1.483), organisational culture (0.860), and IT support (0.717) to KM. The magnitude of the relationship is positive (+) for all independent variables. It could predict direct relationship between the variables, as there is a direct relationship between KM and organisational readiness. The one-unit change leads to a one-unit increase in KM. A unit increase in skilled people increases KM by .191. A unit increase in organisational structure increases KM by .183. A unit increase in IT increases KM by .210. The model is moderate, as the value of R squared is 0.639. The moderate model suggests improved chances by adding or subtracting variables that do not correlate with KM. Therefore, using correlation analysis we predict an accurate, strong model for KM and organisational readiness.

**Table 8**  
**Regression Coefficients**

Model B		Non-standardised Coefficients		Standardised Coefficients	t	Sig.
		Std. Error	Beta			
1	(Constant)	7.492	1.747		4.288	.000
	Skilled People	1.483	0.181	0.411	8.196	.000
	Org structure	0.213	0.192	0.058	1.108	.269
	Org culture	0.860	0.173	0.319	4.963	.000
	Org IT support	0.717	0.209	0.189	3.428	.001

**a. Dependent variable: KM Practices**

In the correlation matrix (table 9), values exceeding 0.50 suggest that KM is significant to skilled people, organisational structure, organisational culture, and IT support. This suggests that KM is significant to each organisational readiness component. However, the inter-correlation between other variables is weak, such as the correlation between skilled people and IT support (0.386) and organisational structure (0.430) and between organisational structure and skilled people (0.430) and IT support (0.429). Organisational culture is significant to all variables.

**Table 9**  
**Internal Consistency (Correlations)**

variables	Knowledge Management	Skilled People	Organizational structure	Organizational culture	Organizational IT support
Knowledge Management	1	0.678*	0.502*	0.694*	0.581*
Skilled People	0.678*	1	0.430*	0.530*	0.386*
Organizational structure	0.502*	0.430*	1	0.583*	0.429*
Organizational culture	0.694*	0.530*	0.583*	1	0.651*
Organizational IT support	0.581*	0.386*	0.429*	0.651*	1

\*Correlation is significant at the 0.01 level (2-tailed).

Conclusively, data shows that the effect of organisational readiness on KM is moderate (i.e., R squared is 0.639). This means that KM was influenced by organisational readiness at different levels, such as IT support, skilled people, and organisational culture, and at different combinations that have positive results for KM. Therefore, we conclude that KM can grow at ABC University in the presence of a supportive organisational culture, IT support, and skilled people.

#### 5.4 Demographic Analysis

KM is a quantitative variable (i.e., computed for knowledge creation, sharing, and application). We used nominal regression to test the significance of each demographic variable on KM and linear regression to test significance for categorical data. The average mean of KM is 38.28. A below-mean value represents responses suggesting that KM was below average at ABC university (50.9%, N =108). An above-mean value represents responses suggesting that KM was above average (49.1%, N = 104). Table 10 indicates that KM was mostly below average at ABC University (relative difference of 1.8%).

**Table 10**  
**Nominal Regression (Case Processing Summary)**

		N	Marginal Percentage
KM	Below mean (< 38.28%)	108	50.9%
	Above mean (> 38.28%)	104	49.1%
Gender	Male	117	55.2%
	Female	95	44.8%
Education	PhD	72	34.0%
	Masters	57	26.9%
	Bachelors	65	30.7%
	Diploma	16	7.5%
	High School	2	0.9%
Experience in Education	1–3 years	29	13.7%
	4–7 years	59	27.8%
	7–10 years	42	19.8%
	10 or more years	82	38.7%
Role	Academic with administrative role	140	66.0%
	Administrative staff	72	34.0%
Valid		212	100.0%
Missing		0	
Total		212	

Model fit information in table 11 shows that overall fit was significant and applicable at a 95% confidence interval (likelihood = 22.063, DF = 9, sig = 0.009 < 0.05).

**Table 11**  
**Nominal Regression (Model Fit)**

Model	Model Fit Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood	Chi-Square	df	Sig.
Intercept Only	110.975			
Final	88.940	22.036	9	.009

In table 12, the results suggest that the only variables that significantly affected KM at ABC University were gender ( $p = 0.010 < 0.05$ ) and education ( $p = 0.001 < 0.05$ ). Years of experience and role had no significant relation

with KM practices. These results indicate that KM is below average at ABC University and significantly affected by gender and education.

**Table 12**  
**Nominal Regression (Likelihood Ratio Tests)**

Effect	Model Fit Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	88.940 <sup>a</sup>	0.000	0	.
Gender	95.504	6.564	1	0.010
Education	107.731	18.791	4	0.001
Years of experience	91.418	2.478	3	0.479
Role	89.070	0.131	1	0.718

<sup>a</sup> The parameter is set to zero, as it is redundant

As emphasised by Alavi and Leidner (2001), each organisation has a unique approach to knowledge creation, application, and sharing. At ABC University, knowledge included encouraging idea exchange, rewarding employees for ideas and knowledge (Chow & Chan, 2008), leveraging best practices from previous projects, sharing internal and external knowledge, and applying developed knowledge in new situations (Knowledge management and organizational learning, 2009). The survey participants agreed that readiness to KM was present at ABC University, meaning that employees could act without supervision and were encouraged to make decision without approval (Friehs, 2003). In addition to these activities, a supportive culture also encourages individual development, such as attending seminars and symposia (Chow & Chan, 2008). The study findings suggest that IT infrastructure was present at in ABC University and that knowledge acquisition and access was supported (Chow et al., 2012). The study also confirmed that KM was significant to organisational readiness (i.e., organisational culture, skilled people, and IT) at in ABC University. However, organisational structure had no significance. KM also was significantly related to gender and education demographics, whereas no significance was present for other demographic variables.



## 5. Recommendation and Conclusion

The results of this study suggest that KM processes are unique to individual NPUS because they depend on many factors. We identified some of these factors and found that organisational culture, a skilled workforce, and IT support were significantly correlated with KM. We also found demographic components that influenced KM. Specifically, KM was above average for respondents with a master's degree and predictable based on female gender. This implies that KM was below average for people with less than a master's and for males. Although KM was supported by both genders and all educational levels, above average KM was indicated only for females with master's. It was below average for males in all education categories except master's. The results indicate that the organisational structure must support KM. As Hurley and Green (2005) suggest, strong organisational centralisation hinders knowledge sharing and creation. Therefore, higher education institutions must enhance the structures that support knowledge creation, sharing, and application.

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