

Employee Perception on the Impact of Knowledge Management on Organizational Performance: A Study on Academic and Non-Academic Staff in the Higher Education Sector of Bangladesh

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Abstract: The primary focus of the study is to ascertain whether there is a clear relationship between knowledge management (KM) and organizational performance (OP) by looking at the impacts of universities. Because of the sharper competition in the education sector, educational institutions must adopt knowledge management to be effective. Knowledge management methods employed at the Bangladeshi universities are still inadequate to fulfill ambitious priorities; KM practices must be improved from a variety of structural, facility, and cultural perspectives among academic actors. In this study, a survey method is employed with a questionnaire to gather primary data. Target population of the study were academic and non-academic members of staff of some selected universities of Bangladesh. Three hypotheses were proposed and evaluated through using partial least squares structural equation modeling technique. Findings of the study revealed that knowledge management has a positive impact on performance of the higher educational institutions. The research also discovered that knowledge management has a significant impact on organizational performance which, ultimately, improves the educational performance. However, Knowledge sharing between the universities and the faculties are acute in Bangladesh. In order to deal with the contemporary methods and approaches, efficiency of the academic staff must be improved. It is recommended that academic institutes and other organizations use knowledge management to effectively achieve organizational goals. Additionally, it is important to make sure that academic and non-academic staff receives the proper training and development so they may have the information necessary to successfully address today's difficulties. This study aims to shed light on this issue as well as experimentally investigate the relationship between organizational performance (OP) and knowledge management (KM).

Keywords: knowledge management, organizational performance, knowledge management and organizational effectiveness, higher education sector

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1.0 Introduction

The education sector, particularly, the higher education sector is extremely competitive. Survival in the higher education sector can be extremely challenging unless people involved in this sector have innovative knowledge and ideas. Land, labor, and capital are the three pillars of knowledge management in the twenty-first century. Higher education institutions are constantly scrutinized for the quality issues. In this context, a lot of study was done from an organizational standpoint, but just a few studies were done on educational institutions. Gholami et al. (2013) asserted that knowledge management techniques are closely connected to organizational performance. Many academics, including McKeen et al. (2009) and Zwain et al. (2012) concur with Gholami et al. (2013).

Knowledge Management (KM) plays a pivotal role in this knowledge-based economy to improve organizational effectiveness (Sahibzada et al., 2020). We are all aware that knowledge is power. As a result, knowledge management can be regarded as the key to power.

Kimaiyo, Kapkiyai, and Sang (2015), argued that all knowledge management methods are critical for improving an organization's performance. In order to achieve greater performance, academic staff and administrative personnel need continually use knowledge management by producing new information, translating knowledge into new strategy or approach, learning from prior experience, and protecting their knowledge. Mills and Smith (2011), found that information collection, implementation, and preservation, but not know conversion, are all highly correlated to organizational performance.

Many professional standards foster the critical function of the university as a centre of critical thinking, where information is created and widely disseminated. Furthermore, via teaching and learning techniques, one of the key purposes of a university is to offer an atmosphere under which university personnel and learners acquire skills, comprehension, and shared goals to university education. The primary objective of a university is to produce high-quality graduates with logical and intellectual abilities as well as interpersonal understanding, thereby making contributions to the country's national objective of establishing a knowledge-based (k-based) society. Universities seem to be the greatest place to practice knowledge management systems and the optimum site for knowledge production (Cronin, 2000). Regrettably, some Bangladeshi universities are not really fully utilizing knowledge to increase overall performance as knowledge service providers. This is due to the fact that statistics, documentation, and knowledge were not managed effectively so that university could proficiently distribute and reuse those to create new knowledge. Marwick (2001) claims that, effective and successful knowledge management necessitates a mix of organizational, cultural, and organizational efforts as well as the adoption of suitable technology.

Problem-solving, dynamic learning, strategic planning, and decision-making are all made possible by the knowledge management (KM) process, which assists with information identification, selection, organization, dissemination, and transfer (Shrivastav, 2016). In this study, an effort has been made to find out if academic staffs are concerned about it and if they are using it to improve their performance. The government of Bangladesh is now focusing on improving the efficiency of the academicians, particularly, in the areas of research and development, as well as implementing an outcome-based education (OBE) system. Consequently, information exchange between university and faculties is essential. It is also necessary to increase the efficiency of the academic staff in order to deal with current methods and techniques. Consequently, knowledge management would become a popular issue among researchers. Research involving KM in the area of higher education institutions hitherto underexplored. Therefore, there is an opportunity to contribute in this area to address the vital issues involving expansion on the existing research and enhance assistance to the academics in creating plans.

2.0 Objectives

The study's major goals are to determine whether there is a clear relationship between Knowledge management (KM) and organizational performance (OP). The specific objectives of the study are:

- To examine whether or not there is an association between knowledge management and organizational performance.
- To determine the extent to which knowledge acquisition affects the performance of academic staff and education-sector employees.
- To ascertain how knowledge sharing and knowledge discovery effect the performance of academic staff and education sector employees.
- To suggest some policy recommendations involving knowledge management in the higher education institutions.

3.0 Literature Review

3.1 Knowledge and knowledge management (KM)

In this era of the century driven by knowledge and information, knowledge is seen as a crucial organizational asset, identified by the ongoing KM assessments (Obeidat et al., 2016). Facts, thoughts, concepts, abilities, competence, and expertise all are examples of knowledge (Shahzad et al., 2016). Shahzad et al. (2016) argued, however, that information must be successfully managed through a suitable system in order to ensure organizational performance and long-term competitive advantage. Palacios et al. (2009) contended “a management solution

consisting of a sequence of fundamentals allied with a variety of practices and procedures by which the fundamentals are presented, the goal of which is to generate, transform, distribute, and apply knowledge,” (Palacios et al., 2009, p. 292). KM also refers to a method of formalizing knowledge, proficiency, and skill in order to generate new competencies that lead to improved OP through innovation and client happiness (Gold et al., 2001; Gloet and Terziovski, 2004). Knowledge management (KM) was described by Ramachandran et al. (2013) as the intentional and planned application of advanced approach assisted by optimum service. Writing research papers, presenting lectures, engaging in conversation, and engaging in community activity are all ways that people share their knowledge, whether it be explicit or implicit (Khoualdi and Saleh., 2015). For tacit knowledge to be shared and used, both the knowledge holder and the learner must be highly involved (Law and Chan, 2016). It seems that one of the most crucial components of creativity is knowledge sharing, which enhances work effectiveness (Lee, 2018). In an academic setting, Ngoc-Tan and Gregar (2018) found an unfavorable link between information distribution and administrative innovation.

Utilizing retirees’ expertise or making it available in papers through portals, one’s own website, training, and other methods are all part of the knowledge retention plan. Retention strategy reward systems, mentoring, and interviews are further methods. Therefore, there should be a strategy in place at higher education institutions to maintain knowledge that gives them a competitive edge.

H1: If there is a correlation between knowledge sharing and organizational performance.

3.2 Knowledge Management Strategy

It was determined that integrating KM strategy with organizational objectives are important to KM success (Gao, Li and Clarke, 2010, Oluikpe, 2012). Information transmission, knowledge retention, and quickening the acceptance of new knowledge are the three main objectives of knowledge sharing in a company (Du and Ren, 2007). The author provided data to support the claim that spending money on team-based research and development (R&D) results in improved performance contributions. Exposure to others’ knowledge, expertise, and experiences enhanced employees’ willingness to contribute and, as a consequence, the sharing of tacit information, which also had a direct beneficial influence on productivity (Torabi and El-Den, 2017).

The relationship of individual aspects of knowledge strategy implementation capacity and organizational success among most of Iran’s recognized sports teams, according to Reisi et al. (2013). Knowledge management is used

to improve organizational efficiency and is also utilized in sports. As per the outcomes of a multi-variant regression analysis, all aspects of knowledge management skills (knowledge conversion, knowledge discover, knowledge capture, and knowledge application) have a positive and strong connection with organizational effectiveness. They went on to suggest that knowledge and learning activities are two crucial elements that organizations must consider in order to increase their performance.

H2: If there is an association between knowledge discover and organizational performance.

H3: Knowledge Capture has an impact on organizational performance.

3.3 Organizational Performance

Many academics hold the view that knowledge alone can increase performance (Aladwan & Aladwan, 2020), which is why they are working so hard to quantify the value of knowledge management. Liu and Deng (2015) asserted that the effectiveness of every process outsourcing has a favorable correlation with every aspect of knowledge management capabilities. The most prominent variable linked with workflow outsourcing performance was determined to be knowledge application. They came to the conclusion that knowledge management capacity is a real tool for improving performance since it gives businesses as well as other areas a competitive advantage. Formerly, financial results indicators were primarily used to analyze organizational performance. Market share, sales growth, competitiveness, return on assets (ROA), and return on equity (ROE) are some of the most commonly used financial indicators. Even while these indicators remain the main focus of most businesses' activities, judging success merely on them is no longer sufficient to gauge the competences that contemporary organizations seek (Libsboa & Yasin, 2004; Gomes, Kaplan, & Norton, 1992).

3.4 Organizational Performance and Knowledge Management

Knowledge discover, knowledge sharing, knowledge capture, and knowledge application are generally included in the KM process. Mansour and Ahmad (2020) established a substantial linkage between KM and creativity as well as innovation. Stronger KM tends to improve education organization, according to Al Ahmar et al. (2014), however the improvement is not very noticeable. KM has a favorable association with overall performance, innovation, growth, and competitive advantage, according to Ohiorenoya and Eboime (2014). In an academic setting, Ngoc-Tan and Gregar (2018) found a favorable correlation between knowledge generation and innovation (technical and administrative). Utilizing cutting-edge technology, data, and information made available to users for productive use, KM may change organizations to new levels of effectiveness, efficiency, and scope of operation (Dhamdhere, 2015).

H4: Knowledge Management has an impact on organizational performance.

3.5 Knowledge management in Education sector

There has been an increase in discussion about knowledge management (KM) in higher education institutions (e.g., Nawaz & Gomes, 2014; Rodriguez-Gómez & Gairn, 2015). For a student who uses knowledge to guide their decision-making, knowledge is an invaluable intellectual resource that also serves as a gauge of their academic development (Bittman & Russell, 2016). The capacity to acquire knowledge, digest knowledge, transform knowledge, and use knowledge is only a few of the options presented by Zhi-xiong Xiao (2017) for measuring the knowledge absorption process. The cornerstone for assessing knowledge in learning and teaching, in terms of knowledge-in-use, is task performance. Distinguishing between superficial and in-depth information is also advised (De Jong & Ferguson-Hessler, 1996).

Enhancing the educational process through KM, services, e-learning, and other means all helps to build knowledge (Al Ahmar et al, 2014.).

According to Rodrigues & Pai (2005), who were quoted by Wing et al. (2011), teachers saw information sharing, people, culture, and storage with IT support as being crucial. The academic setting, by nature, is conducive to applying knowledge management concepts and techniques (Mikulecky and Mikulecka, 1999). The following are some of the reasons: Universities frequently had snipping infrastructure, instructors naturally share their knowledge with others, and students desire to learn as soon as possible from publicly accessible sources. Universities must survive up to the outside world society's expectations. Universities must embrace and adapt effective ICT and business practices. Universities' primary responsibilities have always been to generate and spread knowledge, which they accomplish through researching, lecturing, and extra curriculum activities. Universities have three primary missions, said by Metaxiotis and Psarras (2003):

- ❖ Teaching – to develop learners to be prosperous productive resources
- ❖ Research – to explore the possibilities of human knowledge and inspire innovation and
- ❖ Service – to serve on boards and in managerial roles within the university and professional organizations, as well as participate in community aid to support the native, societal, and worldwide peoples.

The relevance of academics or top level educational institutions as knowledge producers has been thoroughly investigated and asked by diverse stakeholders, including the wider population, in light of the rapidly changing competitive environment. To solve this issue, colleges are being supplied with knowledge management concepts and ideas to utilize in performing basic and scientific research. For example, mentoring relevant curricular programs, using knowledge for strategic decision aid, and poverty to increase knowledge application for an

effective interaction in the learning experience. The use of KM techniques and materials would allow institutions to share their ideas, increase research and education cooperation, and promote professional relationships among faculty, learners, and staff as well as other stakeholders (Mikulecky & Mikulecka, 1999). To effectively address KM efforts at universities, administration must actively and clearly oversee the procedures related with the development of the knowledge assets, as well as recognize the importance of their intellectual capital to their continued position in civilization (Rowley, 2000).

The study explores the effects of knowledge management in the top universities of Bangladesh, outlining an analysis and interpretation of knowledge tools and techniques for connecting people (students, teachers, experts, secretary general staff, and external sources) and enhancing knowledge sharing across an education institution's key processes and services. Research, learning, student and former student's services, administrative services and procedures, and strategic planning and management are just a few examples. The methodology proposed in this study attempts to enhance knowledge practices and procedures that promote an environment of knowledge collaboration, sharing, and discovery that should characterize an educational institute.

4.0 Methodology

4.1 Sources of data

In today's knowledge world, universities have a big impact on how economically and socially a nation develops. The authors of this study want to look at how academic staff and administrative staff in the education sector relate to knowledge management and organizational performance. Primary sources of data are used.

4.2 Population

The study's intended interest groups were the academic staff as well as the administrative professionals working in the public sector. An online survey was conducted to gather information for the testing of anticipated correlations. The convenience sampling technique, a rapid and affordable method of data gathering that is commonly employed in social and business studies, was followed to distribute a total of 200 questionnaires. To reach the target respondents in a timely fashion, an email invitation to participate was sent to each participant's personal inbox. Respondents were defined as those who answered to the email and verified their participation. A total of 141 questionnaires were returned, representing a response rate of 67%. 100 questionnaires remained after 41 invalid or incomplete surveys were eliminated. The questionnaire, which was used to record each respondent's responses, mostly consisted of closed-ended inquiries utilizing ratio and five-point Likert scales. There were three parts to it:

The first portion of the survey consisted of demographic questions about the respondent's profile, such as age, gender, years of job experience, high educational level attained, and administrative and professional roles held at the academic staff and university.

- Questions concerning the respondent's own knowledge practices in producing, acquiring, storing, and sharing knowledge were asked in the second part.
- The third part was created to gather information on the respondents' perceptions of the added value that knowledge management offers to the organization in terms of improving current performance.

Given the complexity of the suggested study model, the sample size is maintained since it is suitable for employing the structural equation model. (SEM) to investigate Kline's convoluted route model (2010).

4.3 Sample

A total of 100 academics and administrators were included in the study (50 academics and 50 administrators). A total of 10 top universities of Bangladesh were chosen conveniently and included in the sample. Five from public institutions and five from private universities were chosen.

Table 1: List of the universities considered in this study

SL. No.	Name of Universities	Public/Private
1	University of Dhaka	Public
2	Bangabandhu Sheikh Mujibur Rahman Maritime University, Bangladesh	Public
3	Noakhali Science and Technology University	Public
4	Rangamati Science and Technology University	Public
5	Pabna Science and Technology University	Public
6	Bangladesh University of Business and Technology	Private
7	American International University	Private
8	East Delta University	Private
9	Premier University	Private
10	Port City International University	Private

4.4 Sample Technique

Convenience sampling techniques are employed.

4.5 Measures

The 18 measuring items that were employed in this study were all drawn from earlier studies that had a university setting (Lawson, 2003) & Lee et al. (2015). A five-point Likert scale was employed in the poll, with 1 denoting “strongly disagree” and 5 denoting “strongly agree.”

4.6 List of variables

- A. Knowledge discovery: Using knowledge discovery, organizations may get valuable information out of unstructured information.
- B. Knowledge capture: Knowledge capture is the process of bringing knowledge from a person’s mind, organization, or other inaccessible form to a larger audience and putting it somewhere where others may access it.
- C. Knowledge sharing: The sharing of knowledge occurs when individuals, groups, communities, or organizations communicate information or understanding.
- D. Organizational performance: Organizational success or fulfillment at the conclusion of programs or initiatives is definition of organizational performance. The processes of knowledge capture (KC), knowledge sharing (KS), and knowledge discovery (KD) are typically a part of knowledge management (KM).

Table 2: Demographic Profile of the Respondents

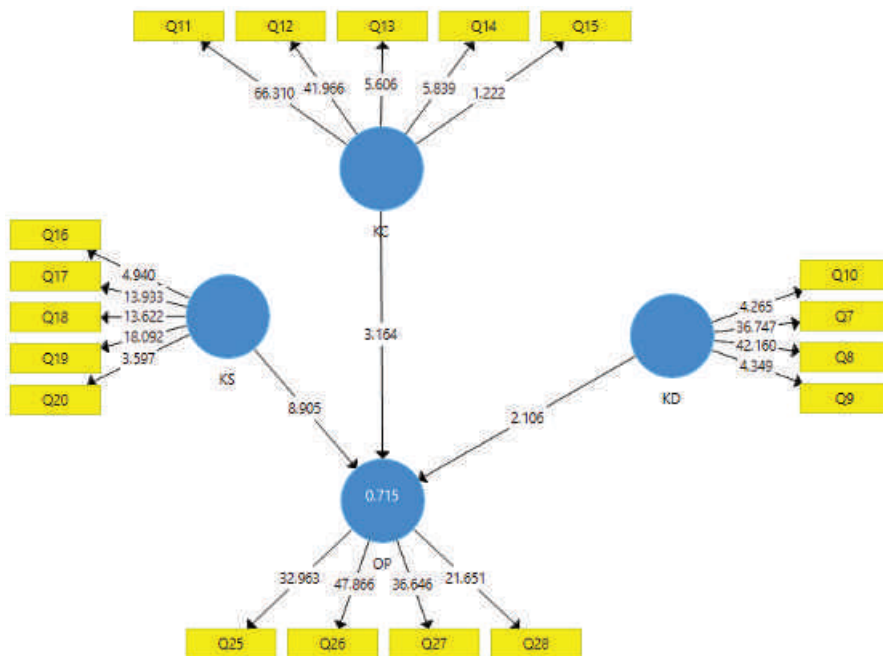
Profile	Description	Frequency	Percentage (%)
Age	More than 20 – Less than 25 years old	22	11
	More than 25 – Less than 30 years old	37	18.5
	More than 30 – Less than 35 years old	47	23.5
	More than 35 – Less than 40 years old	49	24.5
	More than 40 – Less than 45 years old	32	16
	More than 45 years old	13	6.5
Gender	Male	126	63
	Female	74	37
Marital	Single	62	31
	Married	138	69
Education	Degree	173	86.5
	Master	27	13.5
Experience	More than 1 – Less than 5 years	49	24.5
	More than 5 – Less than 10 years	66	33
	More than 10 – Less than 15 years	53	26.5
	More than 15 years	32	16
Salary	More than 30000 – Less than 50000	161	80.5
	More than 50000 – Less than 80000	39	19.5

From the above data, about half of the respondents (24.5%) were between the ages of 35 and 40, and the majority of them (63.0 percent) were males in permanent positions. The majority (92.0 percent) had a bachelor's degree, and half (86.5 percent) had 10-15 years of work experience. The majority (80.5 percent) of the respondents received a salary of tk.30000-50000.

5.0 The Measurement Model

Figure 1 depicts the structural model of the study. It displays the t values for each path as well as the items under each construct (variable). When the theoretical model is compared, the corresponding items of some constructs are eliminated due to low loading values for the purpose of getting good fit.

Figure 1: The measurement model of the study



5.1 Data analysis procedure

The quantitative approach of this investigation. PLS-SEM was used to evaluate the data together with the SmartPLS 2.0 software program (Ringle et al., 2005). In order to deal with small numbers of respondents and non-normal data, the new data analysis tool PLS-SEM is utilized in research in the industry, management, and humanities (2014) Hair et al. This method works well for studies that incorporate intricate model constructions and test current ideas (Ringle et al., 2018; Fernandes,

2012). The two steps of PLS-SEM analysis are measurement model specification and structural model assessment Wong (2013); Ringle et al. (2018). Only constructs with good indicator loading, convergent validity, composite reliability (CR), and discriminant validity will be used in the structural model, according to measurement model specification. The purpose of structural model evaluation is to assess path coefficients and test their significance using the bootstrapping technique. The PLS-SEM data analysis tool has been used in the majority of recent empirical studies in the KM field. (e.g. Shujahat et al., 2018; Valaei et al., 2017; Wang, Sharma and Cao, 2016; Wang, Wang, Cao and Ye, 2016).

5.2 Validity and Reliability of Research Indicators Test Results

The testing step of the measurement paradigm includes assessment of composite reliability, convergent validity, and discriminant validity. The results of the SmartPLS may be used to assess hypothesized relationships if all indicators in the model have met the requirements for convergent validity, discriminant validity, and reliability testing.

6.0 Data analysis and results

6.1 Measurement model assessment

As per Hair et al. (2006)'s guidance, the measurement model was initially assessed to determine whether the constructs and their dimensions were reliable and valid. Initially, the model included 28 indicators. Indicators with weak factor loading were deleted from the measurement model throughout testing and all factor loadings were checked repeatedly until they reached or almost reached the guideline value of 0.60 for each factor. The elements that were theoretically essential were not deleted, as per Hair et al. (2013)'s instructions, and their removal had no additional influence on average variance extracted (AVE) and CR. As a consequence, there were 18 elements in the finishing measurement model Table 1 shows that all factor loadings exceed the suggested limit of 0.60. Similarly, the AVE and CR of all constructions are equal to or larger than the suggested values of 0.50 and 0.70, respectively, which is an uncommon situation in KS. It may have resulted from incorrect question formulation and a small sample size. As a result, convergent validity and reliability have been established. Furthermore, discriminant validity is validated using the Fornell and Larcker criterion, as shown in Table 4 (1981). The model can be used to evaluate structures, according to the results of the confirmatory factor analysis.

6.2 Structural model assessment

Table 3: Convergent validity and reliability

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
KC	0.733	0.962	0.811	0.500
KD_	0.726	0.890	0.830	0.567
KS	0.679	0.707	0.800	0.462
OP	0.856	0.867	0.903	0.699

The direct effects of KP on OP were investigated. The direct effects of innovation and KD on OP were then investigated. To determine the significance of direct paths and estimate standard errors, the Bootstrap resampling method with 5,000 resamples (Ringle et al., 2005) was used. Table 3 summarizes the results of tests conducted on hypotheses proposed for direct relationships.

Table 4: Discriminant validity

	KC	KD_	KS	OP
KC	0.707			
KD_	0.567	0.753		
KS	0.893	0.616	0.680	
OP	0.670	0.615	0.821	0.836

6.3 Testing of Hypotheses

In PLS, hypothesis testing is often referred to as the inner model test. This test evaluates the magnitude of exogenous factors' influence on endogenous variables, along with the relevance of direct and indirect effects. In order to pinpoint the connections between the constructs in the research model, a structural model was developed. The bootstrap approach was used to test the hypotheses.

Table 5: Hypotheses Testing (Direct Effects)

#	Path	Original Sample (O)	Sample Mean (M)	Std. Dev. (STDEV)	T Statistics (O/STDEV)	P Values	Result
H3	KC -> OP	0.327	0.303	0.107	3.061	0.000	Supported
H2	KD -> OP	0.184	0.181	0.091	2.021	0.000	Supported
H1	KS -> OP	1.000	0.984	0.116	8.597	0.000	Supported

The study employs t-statistics and the P value to examine the relationship between endogenous and exogenous variables. The study discovered that KC ($t = 3.061$),

KD ($t = 2.021$), and KS ($t = 8.597$) had a significant effect on organizational performance because their t values were greater than 1.96. Knowledge management methods typically incorporate knowledge capture (KC), knowledge sharing (KS), and knowledge discovery (KD) (KM). The findings that validated the first three hypotheses (H1, H2, H3) therefore validate hypothesis four (H4) as well. As a result, the hypothesis's H1, H2, and H3 were supported. Finally, H4 is supported as well. Table 5 summarizes the observations and results.

7.0 Limitations and Future Research Directions

As with other studies, this one has some constraints. The sample size covered in this study is limited. A wider coverage of the samples can lead to different result. The generalizability of the study results may be limited. Because the data analysis results and findings may change substantially depending on the changes in the sample size. Finally, the questionnaire contained only a few limited knowledge management questions. There may be additional factors influencing performance that should be reported in the future studies.

Educational institutes in Bangladesh need to follow knowledge management to deliver quality education and outcome-based education. Because of the rising relevance of knowledge, enterprises and academic institutions are adopting knowledge management as a crucial strategy in their changing strategies. Academics in Bangladesh should have a better grasp of the ramifications of knowledge management implementation, which would enhance performance.

Knowledge exchange, acquisition, and application, among other things, are now crucial to the implementation of this new idea. Future research can be carried out involving these. Researchers may also explore approaches and strategies involving knowledge management and performance in the context of developing economies and where OBE based system is at its infancy.

8.0 Conclusion

Though knowledge management is a new concept in Bangladesh, its implementation has already begun. Knowledge management is a new term, but it has been used in the past to refer to knowledge sharing with academic staff, information sharing from top to bottom, computerized data storage, reward systems, and so on. Knowledge management therefore significantly affects how well the education industry performs. There is a strong connection with both KM and Organization, according to study. The management of performance and knowledge has a big impact on how well an organization performs. A well-defined strategic strategy, a focused staff, and sufficient resources are required to support KM efforts. The development of knowledge culture, while on the other hand, can take place in the field of education through acknowledgment, transparency,

sincerity, and collaboration (Yasir et al., 2017), in addition to various initiatives like frequent workshops, events, and chances to mingle and forge connections (Tan et al., 2016). Comparatively, university administration needs to set up a system of rewards that corresponds to knowledge accumulation, sharing, and application. Such a system of rewards could promote increased co-operation, fresh thinking, and novel approaches.

9.0 Policy Recommendations

The following recommendations are emanating from the study:

1. Across the globe, renowned universities are introducing outcome-based education. As soon as feasible, Bangladesh should put it into practice in the higher education sector.
2. In conventional education, the theoretical aspects of instruction are primarily emphasized. It provides the students little chance to pick up new abilities that can help them succeed in their careers. So, modern and innovative teaching and learning methodologies should be introduced.
3. Universities must also look into how universities have incorporated technique through knowledge management. Education institutions need to learn more about this cutting-edge idea in order to better understand the knowledge management approach.
4. Based on the current findings of this study, management should pay attention to the incentive structures for both the academician and administrative staff. University administration should implement an incentive structure that is consistent with knowledge acquisition, sharing, and usage. A system like this might encourage greater research cooperation, ideas, and participation.
5. With a view to increase the efficiency in an outcome-based education system, our educational sectors must be equipped with knowledge management abilities.

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