Knowledge Management Factors and Development of Universities in Nigeria

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ABSTRACT

The study examined the factors affecting knowledge management and assessed the effect of its factors on the development of Universities in Ondo State, Nigeria. Sample consists of 359 respondents selected from three of the four universities in the study area using stratified random sampling. The study was conducted Ondo State. The study used both descriptive and regression analysis to arrive at its outcomes. Descriptive analysis revealed that job security (4.67), allocation of sufficient financial resources (4.51), senior management support and commitment (4.47), technological infrastructure (4.42), employee involvement (4.34), employee motivation (4.32) and friendly organizational culture (4.28) are the factors affecting knowledge management of the universities. In addition, regression analysis revealed that the factors examined in the study have positive link with the development of Universities in the study area. The study recommends that University management should ensure that staff are guaranteed of the safety of their jobs as this will encourage them to feel comfortable in sharing their knowledge for the prospects of the
university. Also, university management should ensure that staff have a safe, comfortable and friendly working environment and introduce means for motivating them such as giving incentives and additional payments for overtime.

Keywords: Knowledge; knowledge management; knowledge management practices; public university; development.

1. INTRODUCTION

Knowledge has been identified as a valuable asset for every organisation. Knowledge management (KM) can increase an organisation’s performance, improve quality of service, and sustain competitive advantage [1]. According to Wilcox, King and Zeithaml [2], KM should aim at increasing the quality and performance of an organization in addition to helping them to compete effectively with their counterparts. The ability to generate new knowledge is a fundamental mechanism of KM processes that influence the performance of an organization [3].

Currently, it is being used by educational institutions during academic and non-academic activities to consolidate knowledge generation. In some part of the world, universities usually enjoy higher reputation domestically and they are often among the most influential research institutions in the world [4]. Educational development is about the continuous professional and personal growth of faculty members, and the entire University. It is a way to initiate and respond to change, it is an enhancement to the roles we can already play by taking risks with new practices and communicating new discoveries to people. Educational development allows for proactive responsibility for onboarding and mentoring new faculty, engaging in curriculum redesign or renewal and driving forward new changes at the department and faculty level [4].

In Nigeria, there have been many attempts to implement knowledge management in both private and government Universities but many initiatives have not been successful. Olayiwola [5] stated that the existing Nigerian Universities as are expected to use KM to have competitive edge, and sustainable growth over those that are just being established. Notwithstanding, The Nigerian University education has been bedeviled by institutional inadequacies engendered by poor governmental support, curricula that fall short of the expectations of the labour market, dilapidated infrastructure, administration that is more interested in pleasing the powers that appointed them than fulfilling the mission of the university, poor staff morale and weak academic culture [6,7]. This may be the cause of the decay observed in the system over the years. To utilize knowledge for University’s sustainable competitive advantage, growth and innovation, it is important to know the factors that affect its knowledge management.

Prior studies have attempted to model and explain the relationship between knowledge management practices and organizational performance [8,9,10]. However, little or no attempt have been made to evaluate how some knowledge management factors can inhibit the development of universities to perform their think tank role for national development [11,12,13]. Therefore, the study assessed the factors affecting knowledge management of the public Universities; and examined the effect of the influencing factors namely allocation of sufficient financial resources, technological infrastructure, employee involvement, senior management support and commitment, employee motivation, friendly organisational culture and job security on the development of public Universities. From the foregoing, the study tested whether knowledge management factors have significant effect on development of public universities in the study area. This has implication for ivory towers – they have a framework to guide their contributions to other institutions since they later can be modelled after university system in the area of knowledge management.

2. LITERATURE REVIEW

Authors have explored the effect of knowledge management FACTORS on the performance of an organisation. Moffett, McAdam, and Parkinson [14] in their study identified some key factors in successful knowledge management. These include job security, allocation of sufficient financial resources, senior management support and commitment, technological infrastructure, employee involvement, employee motivation, trustworthy teamwork, performance measurement, benchmarking, friendly organisational culture and knowledge structure.
Hasanali [15] opined that successful implementation of knowledge management is a function of many factors, such as, leadership, culture, structure, roles and responsibilities, information technology infrastructures, and measurement.

Job security is referred to as the willingness of employees to share knowledge without the fear of losing their jobs. Job security is considered as an important element in knowledge management within organisations. While this factor influences both small and large institutions because employees feel that the knowledge they possess gives them an edge over their colleagues [16]. The issue of hoarding one’s knowledge might arise among employees where a job is insecure, staff are unwilling to share information so that they can retain their roles within their organisations. This attitude hinders knowledge management practices [16]. Allocation of sufficient financial resources is another factor that could constraint knowledge management within an organisation. Financial resources levels in institutions vary based on their academic and research commitments. Low financial capabilities mean that an academic institution is unable to invest in technology and make the necessary organisational changes required for knowledge management. The cost of implementing some of the required knowledge management systems that could convert tacit knowledge to explicit knowledge is high [15]. Another element that influences knowledge management is managerial support and commitment, managers often drive how well knowledge management goals fit with an organisation’s overall strategic plans and operations. This is because the management usually have the authority, power and control to make strategic decisions. Thus, the ability to align knowledge management with the overall institution’s objective is often driven by the management [14].

Technological infrastructure is another important factor that affects knowledge management in an organisation. Technology is as an element acts as an enabler for most knowledge management practices. Information technology for example shows a significant correlation with knowledge management process [17]. Technology allows an institution to search for knowledge and access and retrieve more quickly. Also, technology enables collaboration and communication amongst staff [18].

Involving the employees in decision making at some stage and also sampling their opinions on some matter that affects an organisation is like a motivation to encourage the employees to feel accepted and carried along in an organisation. Involvement will instill a sense of confidence in the employees and they will feel free to make meaningful contributions that will positively affect the performance of the organisation [14].

Employee motivation is also another factor and within the context of today’s study. Incentives involves providing clear communication and appropriate motivational schemes, and managing change and performance as part of organisational strategies. Staff need to know that they are not sharing their knowledge for no reason. Finally, a friendly organisational culture often creates an enjoyable working environment, which could improve an organisation’s performance [17]. Friendly organisational culture places emphasis on their importance of collaboration between employees, as a way to facilitate open knowledge exchange.

Having presented the efforts of others on KM and its effects on Organization performance from other clime, it is important to look at this important concept as it relates to the performance of our ivory tower in Nigeria, thus, the study seeks to know what are the influencing factors of KM and their effects on the performance of Universities in Nigeria. Fig. 1 shows the framework for the relationship among the variables in the study.

3. MATERIALS AND METHODS

The survey research design was used in the study. The design of questionnaire was based on the study objectives. The self-administration of questionnaire was done to further with the research topic and to obtain firsthand information on the study. The design was used to describe the characteristics of the independent variables (allocation of sufficient financial resources, technological infrastructure, employee involvement, senior management support and commitment, employee motivation, friendly organisational culture and job security) and the dependent variable; development of universities. The study was carried out in Ondo State and the State consists of four (4) public Universities approved by the NUC (National Universities Commission). Therefore, three (3) public Universities in the state were selected for the study due to proximity to researchers’
educational institution for ease of questionnaire administration. The population of the study comprised of the academic and non-academic staff from various faculties of the selected public universities in the state, hence, the total population of the study was 3,523. A sample size of three hundred and fifty-nine (359) was selected out of the population size. The sample size was gotten based on the statistical formula postulated by [19] for determining sample size for a research. The questionnaire was administered to the respondents using the stratified random sampling. The responses to the items in the questionnaire were structured on a five point Likert scale. The alternatives ranged from strongly disagree to strongly agree. The constructs representing the independent variables recorded a Cronbach’s alpha values of more than 0.7, which is acceptable for the constructs’ reliability [20].

Descriptive statistics such as frequency table, mean table and standard deviation table were used to analyse the first objective. While inferential statistics such as; the Multiple Linear Regression was used to analyse the second objective. A total of three hundred and fifty-nine (359) respondents were targeted for the distribution of questionnaires, a valid response of two hundred and eighty-five (285) was used for the study. This represents a 79.4% of the total. This is a high response rate which is adequate enough to garner data needed for the study from the selected Universities in the study area.

4. RESULTS AND DISCUSSION

4.1 Demographic Information of Respondents

The demographic information of the respondents is presented in Table 1 and this provided details about the respondents which qualify them as participants in the study. These include age, gender, years of experience, academic qualification, and respondent’s staff category. Respondents age distribution as presented shows that many of the respondents belong to the active work age, which should make them productive while carrying on their duties in the school. Specifically, age group less than 40 has the highest percentage of 38.2, followed by ages 40 – 50 (37.2%) and ages 51 – 60 (21.4%). While ages above 60 years accounted for 3.2%. It is seen from the table that 61.8% of the respondents are male while 38.2% of the respondents are female. This shows that majority of University academic and non-academic staff are males. The respondents have different number years of work experience. Respondents with 10 years and below work experience are 51.2% which is the highest, followed by respondents with 10-20 years work experience are 36.8%, and respondents with 20-30 years work experience are 8.8%. While those with 30 years and above work experience are 3.2%. This implies that majority of respondents are well experienced and have adequate skills in carrying out their duties as this encourages quality knowledge to be in circulation in the schools. Respondents have attained different levels of education, the least level of educational attainment for the academic staff respondents is a second degree (M.Sc/M.Tech). While the least level of educational attainment for the non-academic staff is Ordinary National Diploma (OND). The second degree (M.Sc. /M.Tech.) certificate holders were the highest in representation with 37.9% while the first degree (HND/ B.Ed. / B.Sc. / B.Tech.) holders were 30.9% which is the second highest in the representation. While Ph.D. holders were 20.7%. Next is the OND holders which were 9.5% and the professors were the smallest representing a 1.1%. The University staff is categorized into teaching and non-teaching staff. The teaching staff represents 36.5% while the non-teaching staff is 63.5% which indicates that the non-teaching staff make up the largest proportion of the respondents.
Table 1. Demographic information of respondents

| Characteristics | Frequency | Percentage (%) |
|-----------------|-----------|----------------|
| **Age**         |           |                |
| Less than 40 Years | 109      | 38.2           |
| 40 - 50 Years   | 106       | 37.2           |
| 51 - 60 Years   | 61        | 21.4           |
| Above 60 Years  | 9         | 3.2            |
| **Total**       | 285       | 100.0          |
| **Gender**      |           |                |
| Male            | 176       | 61.8           |
| Female          | 109       | 38.2           |
| **Total**       | 285       | 100.0          |
| **For how long have you worked in this university** |   |                |
| 10 years and below | 146   | 51.2           |
| 10-20 years     | 105       | 36.8           |
| 20-30 years     | 25        | 8.8            |
| 30 years and above | 9     | 3.2            |
| **Total**       | 285       | 100.0          |
| **What is your highest educational qualification** |   |                |
| OND             | 27        | 9.5            |
| HND / B.Ed / B.Sc / B.Tech | 88     | 30.9           |
| M.Sc / M.Tech   | 108       | 37.9           |
| Ph.D            | 59        | 20.7           |
| Professor       | 3         | 1.1            |
| **Total**       | 285       | 100.0          |
| **Category of Staff** |       |                |
| Teaching staff  | 104       | 36.5           |
| Non- Teaching staff | 181   | 63.5           |
| **Total**       | 285       | 100.0          |

**4.2 Analysis and Interpretation of Objectives**

Study objective one assessed the factors influencing knowledge management of public universities in the study area. The results from Table 2 show that seven factors affecting knowledge management of public Universities were identified in the study, 'job security' was ranked first with a mean of 4.67. This means that respondents were of the opinion that job security is the most prominent factor affecting knowledge management of public Universities in the study area. Respondents also ranked another identified factor 'allocation of sufficient financial resources' with a mean value of 4.51 second which means that respondents strongly agreed that given the allocation of sufficient financial resources, knowledge management can be sustained within the University. They are equally of strong perception that 'senior management support and commitment' with mean value 4.47 is an important factor for consideration and it ranked third. Availability of technological infrastructure, employee participation, employee motivation and friendly organisational culture with mean values of 4.42, 4.34, 4.32 and 4.28 respectively, are equally important drivers affecting knowledge management but are less important than the earlier identified factors. As a result, they were ranked in the fourth, fifth, sixth and seventh positions respectively. This is in support of findings in [15] that the success of the implementation of knowledge management depends on many factors, which are leadership, culture, structure, roles and responsibilities, information technology infrastructures, and measurement. In reality, organisations usually adopt bottom-up approach to policy formulation which means senior managers are the last in the hierarchy to take the final decision while those at the bottom are closer to the implementation. Structure and infrastructure must be in place for successful implementation of policy. There must also be appropriate motivation.

**4.3 Test of Hypothesis**

Table 4 below showed the result from the test of the stated hypothesis. The significant probability
or significant value \( (p) = 0.00 \), indicates that the model reached statistical significance \( (p = 0.00 \text{ meaning that } p < 0.05) \). Therefore, the null hypothesis \( H_0 \): Influencing factors have no significant effect on the development of public Universities in the study area was rejected. Influencing factors have significant and positive effect on the development of public Universities in the study area. Given job security, allocation of sufficient financial resources, senior management support and commitment, availability of technological infrastructure, employee involvement, employee motivation and friendly organizational culture, universities in the study area can witness a major development.

Furthermore, the coefficient table (Table 5) below presents the beta and the sig values of the independent variables. The beta value indicated that a unit increase in job security will increase the development of public Universities by 0.306, a unit increase in good allocation of financial resources will increase the development of public Universities by 0.219, a unit increase in commitment and support of senior management will increase development of public Universities by 0.155, a unit increase in technological infrastructure inputs will increase development of the Universities by 0.121, a unit increase in the motivation of employees will increase development of public Universities by .068, where a unit increase in proper involvement of employees will increase the development of public Universities by .059 and a unit increase in friendly organisational culture will increase the development of public Universities by .036 respectively. This implies that job security made the highest significant contribution to the development of public Universities in the study area followed by allocation of sufficient financial resources.

Table 2. Statistics showing the descriptive analysis of the factors influencing knowledge management of public universities

| S/N | Factors                                      | Mean | Std. deviation | Ranking |
|-----|---------------------------------------------|------|----------------|---------|
| 1   | Job security                                | 4.67 | 0.910          | 1\textsuperscript{st} |
| 2   | Allocation of sufficient financial resources| 4.51 | 0.992          | 2\textsuperscript{nd} |
| 3   | Senior Management support and commitment    | 4.47 | 0.898          | 3\textsuperscript{rd} |
| 4   | Technological infrastructure                | 4.42 | 1.013          | 4\textsuperscript{th} |
| 5   | Employee Involvement                        | 4.34 | 0.946          | 5\textsuperscript{th} |
| 6   | Employee Motivation                         | 4.32 | 0.974          | 6\textsuperscript{th} |
| 7   | Friendly Organizational Culture             | 4.28 | 1.045          | 7\textsuperscript{th} |

Table 3. Statistics showing the effect of the influencing factors on development of public universities

| Model Summary                                                                 |
|-------------------------------------------------------------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|---|----------|-------------------|---------------------------|
| 1     | .805 | .648 | .640 | 10.82825 |

| a. Predictors: (Constant), Job security, Employee Motivation, Senior Management support and commitment, Friendly Organizational Culture, Employee Involvement, Technological infrastructure, Allocation of sufficient financial resources |
| b. Dependent Variable: Development of Public Universities |

Table 4. Statistics showing the test of hypothesis

| ANOVA                                                                 |
|------------------------------------------------------------------------|
| Model | Sum of squares | Df | Mean square | F  | Sig. |
|-------|----------------|----|-------------|----|------|
| 1     | Regression     | 59997.228 | 7  | 8571.033   | 73.100 | .000 |
| Residual | 32478.547 | 277 | 117.251     |    |      |
| Total  | 92475.775 | 284 |            |    |      |

| a. Dependent Variable: Development of Public Universities |
| b. Predictors: (Constant), Job security, Employee Motivation, Senior Management support and commitment, Friendly Organizational Culture, Employee Involvement, Technological infrastructure, Allocation of sufficient financial resources |
Table 5. Statistics showing the sig. values and contributions of the independent variables

| Model                          | Unstandardized coefficients | Standardized coefficients | T     | Sig. |
|-------------------------------|-----------------------------|---------------------------|-------|------|
|                               | B          | Std. Error | Beta  |       |       |
| 1 (Constant)                  | 30.897     | 3.918      |       | 7.887 | .000  |
| Job Security                  | 5.445      | 1.082      | .306  | 5.033 | .000  |
| Friendly Organisational Culture | 1.072     | 1.113      | .036  | .604  | .037  |
| Senior Management support and commitment | 2.682 | .936 | .155 | 2.867 | .004  |
| Allocation of sufficient financial resources | 4.170 | 1.121 | .219 | 3.720 | .000  |
| Employee Motivation           | 1.243      | 1.162      | .068  | 1.070 | .049  |
| Technological Infrastructure  | 2.432      | 1.078      | .121  | 2.256 | .025  |
| Employee Involvement          | 1.162      | .897       | .059  | 1.295 | .046  |

a. Dependent Variable: Development of Public Universities

resources and then in that order while friendly organisational culture made the least amount of contribution. Ragab and arisha [16] considered job security as an important element in knowledge management within organisations. They noted that employees feel that the knowledge they possess gives them an edge over their colleagues. The issue of hoarding one’s knowledge might arise among employees where a job is insecure, staff are unwilling to share information so that they can retain their roles within their organisations.

5. CONCLUSION

The study assessed the factors affecting knowledge management; and examined the effect of the factors on the development of public universities in the study area. The study concludes that, job security, allocation of sufficient financial resources and senior management support and commitment are the most prominent factors affecting development of public universities in the study area while the least ranked factor was friendly organisational culture. These factors jointly contribute positively to the development of the universities. Therefore, the study recommended that university management should ensure that staff are guaranteed of the safety of their jobs as this will encourage them to feel comfortable in sharing their knowledge for the prospects of the university. Also, university management should ensure that staff have a safe, comfortable and friendly working environment and introduce means for motivating them such as giving incentives and payments for overtime.

CONSENT

As per international standard or university standard, respondents’ written consent has been collected and preserved by the authors.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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