IJAAR PUBLISHING®

International Journal of Advanced Academic Research| ISSN: 2488-9849
Vol. 12, Issue 9 (2026) | https://doi.org/10.46654/2d270111

KNOWLEDGE MANAGEMENT STRATEGIES AND PERFORMANCE OF TERTIARY INSTITUTIONS IN SOUTH-SOUTH, NIGERIA

UDO Edidiong Udo
IHEMEJE Jecinta Chikaodinaka (Ph.D)
OKEBARAM Sunday Moses (Ph.D)

Department of Business Management
College of Management Sciences, Michael Okpara University of Agriculture, Umudike.

Corresponding Author's Email: eddybest93@yahoo.com

Abstract

The tertiary institutions as knowledge based institutions are expected to manage knowledge to ensure sustainable competitive advantage, growth and innovation in Nigeria. To this effect, this study ascertained the effect of knowledge management strategies and performance of tertiary institutions in South-South, Nigeria. Specifically, the study sought to: examine the effect of codification strategy on workflow adherence and determine the effect of knowledge application strategy on operational efficiency of the selected tertiary institutions in South-South, Nigeria. The study adopted a survey design approach while primary source of data was majorly used to obtain accurate data from the study. The target population of thirty three thousand, three hundred and eighty six (33,386) obtained from the twenty four (24) selected tertiary institutions in South-South, Nigeria. The sample size of five hundred and eighty nine (589) respondentswas derived from Godden (2004) statistical formula. The study utilized Simple Linear Regression Model of SPSS Version 25.0 to test the hypotheses. The result of the findings revealed that codification strategy has a positive and significant effect on workflow adherence and knowledge application strategy has a positive and significant effect on operational efficiency of the selected tertiary institutions in South-South, Nigeria. From the results of the hypotheses testing, the study concluded that knowledge management strategies had a positive and significant effect on the performance of tertiary institutions in South-South, Nigeria and therefore recommended that management of the tertiary institutions must continuously adapt and adopt codification to enable organizations store necessary knowledge for future consumption and should continuously encourage the application of knowledge assets to improve employee performance, regularly adopt policies that encourage employees to be innovative by using knowledge assets to improve their performance in regards to decision making and solving emerging problems as well as complex problems.

Keywords: Codification Strategy, Workflow Adherence, Knowledge Application, Operational Efficiency and Tertiary Institutions

INTRODUCTION

The concept of Knowledge Management (KM) evolved from recognizing knowledge as a strategic asset in the 1970s and 1980s (Drucker, 1960) to a formal business discipline in the 1990s, heavily influenced by information technology (IT), organizational learning, and the need to leverage intellectual capital. Its history spans from early scientific management (1911) to modern artificial intelligence and digital knowledge sharing (Arjoun & Boudabbous, 2024). In other words, knowledge management approach mobilizes methods and approaches for capitalizing, sharing/disseminating and circulation of knowledge within and outside the organization (Lee, Kim & Kim, 2012). According to Okebaram & Enemuo (2014), knowledge is the organisation's intellectual capital of increasing importance in promoting competitive advantage, thus, in the modern economy, the exploitation of knowledge is a competitive advantage of the organization. This advantage is achieved through the use of information, data, skills, commitments and motivation of people that lead to the creation of new ideas. Since the classical Greek era, philosophers have differed in defining knowledge, which has been the source of several debates (Noordin, Othman & Zakaria, 2013).

The popularity of the concept of knowledge management has resulted in several definitions. The commonest definition sees it as a set of skills or techniques that are acquired through learning and experience. The application of knowledge in our daily operations or activities cannot be over-emphasized (Mohajan, 2017). To this effect, it is always prudent to manage knowledge in a way that could easily be accessed and used to accomplish the needed task. Knowledge management is a concept that has gained popularity since its discovery (Kimile & Bulitia, 2020). It is the practice of organizing, capturing, using and analyzing the possible effect or impact of the collective knowledge of a group of people. This is done to ensure easy storing and access to the knowledge base of an entity in order to maximize efficiency and increase productivity whilst putting in efforts to retain every information or knowledge in the organization (Bhusry, Ranjan & Nagar, 2011).

Nonetheless, in today's society, knowledge in tertiary institutions have become such a key component of running day-to-day affairs. Knowledge, currently and in the future, symbolizes a power source that supports progress and competitive advantage because it reflects the most important source for the organizations, societies and the individuals (AL-Hayaly & Alnajjar, 2016). Hence, academic institutions, particularly higher education institutions such as universities and colleges are seen as knowledge hubs where diverse activities are carried out for the generation, preservation, diffusion and application of knowledge (Hoq & Akter, 2012). Balague, Düren and Saarti (2016) further explain that an academic institution is made up of different units that consume as well as create knowledge, they consist of faculty, students, administration, academics, research, training and placement. For this reason, it is important to be aware of the knowledge that each unit contributes to the system and the knowledge management strategy that each unit requires to perform its functions, and find ways to apply it effectively at the points of use, in order to meet the institute's goals and targets.

Undoubtedly, tertiary institutions are cognitive intensity institutions where the primary function is based on knowledge, production of knowledge, documentation and publishing. There is a growing belief that knowledge management in educational institutions help build the future of a dynamic learning environment, development and improvement of the efficiency activities of knowledge sharing and improve the overall performance of the

organization (Abu & Abdul, 2016). However, the implementation of KM strategy in a developing country especially in South-South region of Nigeria is ridden with quite a number of challenges such as inadequate awareness of the benefits of KM by top management, lack of KM strategy, lack of funds, lack of management support among others (Ojo, 2016).

In light of the above, the study attempts to complements prior work on knowledge management and performance by leveraging on knowledge management strategies and performance of tertiary institutions in South-South, Nigeria.

Statement of the Problem

Despite the importance of knowledge management, many tertiary institutions in South-South Nigeria continue to experience challenges that may affect their performance. These challenges include inadequate systems for capturing and preserving institutional knowledge, limited sharing of knowledge among academic and non-academic staff, poor utilization of available expertise, inadequate information and communication technology infrastructure, and difficulties in transferring knowledge when experienced staff leave the institution. Such challenges may reduce the institution's ability to improve its teaching effectiveness, research output, administrative efficiency and capacity to provide quality services to students and other stakeholders.

The performance of tertiary institutions in the South-South region is also affected by issues such as inadequate funding, infrastructural deficiencies, increasing student enrolment, staff shortages, administrative bottlenecks and changing technological requirements. Where knowledge is not systematically managed, institutional resources and employees' expertise may not be fully utilized. For example, knowledge possessed by experienced lecturers and administrators may remain largely personal rather than being documented and shared for the benefit of other employees and the institution as a whole. Additionally, the tertiary institutions as knowledge based institutions are expected to manage knowledge to ensure sustainable competitive advantage, growth and innovation in Nigeria. Most of them however, are not investing much on Research and Development (R&D) while the investment in research by the government is irregular. This research fund is irregular and inadequate; and to make it worse, it is difficult to access.

The problem, therefore, is not merely the availability of knowledge within tertiary institutions but the ability of institutions to effectively manage and utilize that knowledge to achieve desired performance outcomes. This study consequently seeks to examine the effect of knowledge management strategies on the performance of tertiary institutions in South-South, Nigeria, with a view to determining the extent to which effective management and utilization of knowledge can contribute to improved institutional performance.

Objectives of the Study

The main objective of this study was to ascertain the effect of knowledge management strategies on the performance of tertiary institutions in South-South, Nigeria while the specific objectives were to:

- **i.** Examine the effect of codification strategy on workflow adherence of selected tertiary institutions in South-South, Nigeria.
- **ii.** Determine the effect of knowledge application strategy on operational efficiency of selected tertiary institutions in South-South, Nigeria.

Research Questions

As a follow-up to the objectives of this study, the following tentative questions were raised to accomplish the study;

i. What is the effect of codification strategy on workflow adherence of selected tertiary institutions in South-South, Nigeria?
ii. What is the effect of knowledge application strategy on operational efficiency of selected tertiary institutions in South-South, Nigeria?

Research Hypotheses

The following research hypotheses posited in the null form were tested to aid the study;

$H0_1$: Codification strategy has no significant effect on workflow adherence of selected tertiary institutions in South-South, Nigeria.

$H0_2$: Knowledge application strategy has no significant effect on operational efficiency of selected tertiary institutions in South-South, Nigeria.

REVIEW OF RELATED LITERATURE

Concept of Knowledge Management

As a term, knowledge management (KM) has been known since the beginning of the 1980s. It was created by Peter Drucker. Knowledge management is a synonym to Information management, it is the processes that helps organizations to gain knowledge, choosing, and organizing, using and publicizing important information and experiences that are really important in the various management activities in making decisions, finding solutions for the problems, learning, and strategic planning (Andreev, 2022). Knowledge management is concerned with the entire process of discovering and creating knowledge, as well as its dissemination and usage. The definition of knowledge management mostly consists of the descriptive form that is why Arora (2011) defines knowledge management as the process through which an enterprise uses its collective intelligence to accomplish its strategic objectives. Knowledge management is not just about technology. It is about processes, people, behavior, workflow and other factors. Knowledge management is about understanding how people work, sharing concepts and ideas, identifying groups of people who work on similar things and seeing how they can learn from one another. Knowledge management is about organizations learning from their experiences and about leadership in organization (Arora, 2011).

According to Jameel, Massoudi and Agha (2021), the focal aim of KM is to increase an organization's efficiency and save knowledge within the institution. KM provides an opportunity to get a permanent competitive feature to the organizations, through empowering the organization to adopt more innovations such as goods and new services. Build abilities to learn the human being intelligence. Also, adopting the creative ideas through encouraging the principle of information sharing (Alyan, 2018).

Knowledge Management Strategies

Codification Strategy

According to Chai and Nebus (2011), codification defined as capturing and storing knowledge in explicit form in a centralized-knowledge repository. Hansen et al. (1999) stated that codified knowledge could be reutilized for various purposes. In principle, codification could reduce the loss of knowledge since knowledge could be stored and retrieved indefinitely (Handaruputri & Hartono 2016, citing Cowan & Foray, 1997).

Codification strategy contends how well explicit knowledge can be extracted for storage in knowledge databases for reuse by employees in the organization (Njenga, Ngugi & Odhiambo, 2019). The object of this strategy is to safeguard employees' knowledge through collecting, classifying, documenting, capturing, and recording processes (Kumar & Ganesh, 2011). In this strategy, knowledge is mainly extracted and stored, usually in some electronic repository, so that potential users can search and retrieve knowledge from the repository without essentially notifying the knowledge producer (Njenga et al., 2019 citing Liu, 2013). The people-to-document strategy focuses on capturing, codifying, storing and making the use of explicit knowledge in a form that is attuned with a company's objectives (Njenga et al., 2019).

Knowledge Application Strategy

Knowledge application is the process where knowledge is used to solve problems and perform duties (Ajmal & Koskinen, 2018). According to Zaim, Muhammed and Tarim (2018), knowledge application is the process of using knowledge that has been stored in the organization. Gasik (2011) noted that organizations benefit not from the existence of knowledge but from its proper application. Knowledge application is used to promote organization innovativeness, increase employee's skills, products and processes (Lee, Leong, Hew & Ooi, 2013). Delen, Tarim, Zaim, Zaim & Delen (2017) noted that the successful use of information had helped firms to enhance their proficiency and diminish costs.

This is one of the fundamental aspects of KM because the key goal of KMis to ensure that available knowledge is applied for the benefit of an organization. If an employee has something special, then the organization must do its best to take advantage of this talent by providing opportunities for development and putting each of them in the right place at the right time (Udo, Baridam & Akpan, 2023). Research evidence suggest that when knowledge is effectively applied, it reduces cost and increases the efficiency of organizations (Allameh, Zare, & Davoodi, 2011).

Organizational Performance

Organizational performance represents the institution's ability to define and implement the goals it seeks. Arabiyat (2012) defined organizational performance as the work that subordinates do, which contributes to achieving goals through his understanding of his role and mastery of his work, and following the instructions that it is reached by management, his behavior with colleagues, superiors, and his professional development. Organizational performance serves as a comprehensive yardstick of an entity's ability, whether it is a business, a non-profit organization, or a governmental agency, to effectively realize its overarching objectives. Okurebia and Udo (2023) opined that the performance of employees is a key factor in every organization's success. It encompasses diverse dimensions, including but not confined to financial prosperity, operational efficiency, strategic flexibility, employee contentment, customer and stakeholder relationships, and the capacity to adapt and excel within a competitive or operational context (Wood & Ogbonnaya, 2018).

Organizational performance mirrors the organization's proficiency in utilizing its tangible and intangible resources to meet or surpass predetermined benchmarks, sustain long-term growth, and generate value for its stakeholders (Kathambi, 2019). This assessment can be made through a diverse array of key performance indicators, such as profitability, market share, innovation, customer loyalty, employee retention, and social responsibility initiatives. These indicators collectively reflect the entity's overall well-being, sustainability, and its capability to flourish in a dynamic and demanding business environment. However, the importance of

performance is not just financial. An organization with high levels of performance will have motivated staff, capable of carrying out their duties as efficiently as possible. This will result in lower absenteeism and turnover rates (Udo, Udonde & Udo, 2024).

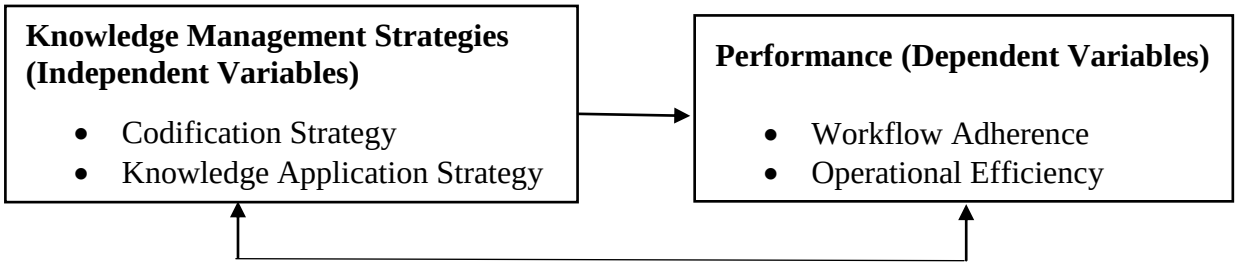


Fig. 1. Knowledge management strategies and performance of tertiary institutions framework
Source: Researcher, 2026.

Theoretical Review
Knowledge-based view (KBV) theory (Kogut & Zander, 1993)
The knowledge-based view of the firm was propounded by Kogut and Zander (1993). Originating from the strategic management literature, this perspective builds upon and extends the resource-based view of the firm (RBV) initially promoted by Penrose (1959) and later expanded by others (Werner felt 1984, Barney 1991, Conner 1991). Knowledge based view of the firm (KBV) is a management concept of organizational learning that provides firms with strategies for achieving competitive advantage. This is achieved through increased employee involvement in the formulation and administration of the operational goals and long-term transformational objectives of the firm. The continuous acquisition and transfer of knowledge within business organizations is necessitated by such factors as ever-changing competitive conditions in markets initiated by globalization, frequent deregulations, and technical advancements.

Furthermore, (KBV) theory postulates that knowledge is the only crucial intangible asset vital to organization growth Spender and Grant (1996). The use of knowledge concerning creativity and transfer of knowledge increases the firm's successes. The human capital theory postulated that employees are assets to the organization, as an investment in them will produce a maximum financial return. Thus, they are a powerhouse of the organization because they are the sources of idea generations, and they also work at the grass-root to improve organization performance financially. Moreover, they better suggest a better solution for problems arising in the organization (Brown, Osborn, Chan & Jaganathan, 2016).

In KBV theory, knowledge has been considered as the most strategic sources of an organization (Grant, 1996b). Proponents of the KBV recognized such resources are central source of competitive advantage, because such knowledge resources are difficult to imitate, socially complex, immobile and heterogeneous. The theory of KBV further validates that knowledge-related resources add more value for achieving organizational performance then tangible resources (Grant, 1996 & 1996). Furthermore, knowledge resides in individual and it is obligatory for managers to integrate such individual owned knowledge by providing structural arrangements of co-ordination and cooperation among specialized knowledge workers. Moreover, organization focus on organizational knowledge process flowing through these structural arrangements is utilized by individuals for knowledge creation, storage and deployment. Further, such knowledge management processes lead to organizational performance (Vathsala & Purnima, 2011).

Empirical Review

Roghyeh, Asghar, Sadigh and Yousef (2013) conducted a research on the influence of the personalization and codification strategies on successful knowledge management of National Iranian Oil Company. Specifically, the purpose of this study was on identifying, classifying and ranking the enablers related to four key factors of people, process, and leadership and information technology based on two given KM strategies. The quantitative approach was utilized in collecting data through questionnaire. In order to approve and classify the identified enablers in each key factor, a quantitative approach was utilized in collecting data through a few justifiable reliable questionnaires. The study designed them using Delphi method and distributed among organization experts. Significant factors extracted from applying an exploratory factor analysis using the SPSS package. In order to prioritize the extracted enabler's a fuzzy multi-criteria decision making technique was then applied. From the data analysis, the results showed that among thirty identified enablers in personalization strategy, twenty seven ones and among the nineteen identified enablers in codification strategy, sixteen of were significant. The study concluded that personalization and codification strategies positively influence the successful knowledge management of National Iranian Oil Company and therefore recommended that due to the difference missions and nature of works, firstly organizations should choose an appropriate management strategy and then identify the most effective relevant factors and enablers that will act as alternative.

Egena and Ayavoo (2020) study investigated the mediating role of knowledge application in the relationship between knowledge management practices and firm innovation. The study empirically examined the relationship between knowledge management practices and firm innovation in the context of service firms in developing countries. The research also examined the mediating role of knowledge application in the relationship between knowledge management practices and firm innovation. A drop-off-pick-up (DOPU) technique was used to obtain the data. The data was analyzed using Structural Equation Modeling (SEM). The findings showed that knowledge management practices contributed to firm innovation, both directly and indirectly. The results showed that knowledge generation, storage and application had significant and positive effect on firm innovation. The findings also showed that knowledge application mediated the relationship between knowledge generation, diffusion, storage and firm innovation. The findings implied that knowledge management practices contribute to innovation as a hierarchy, with the link through knowledge application having the greatest impact on firm innovation and recommended that future research can focus on specific knowledge management practices and how they influence firm innovation. Also, future research can focus on specific practices of knowledge application and how the mechanisms work in practice.

Endende, Kwasira and Makhamara (2022) carried out a study on the influence of knowledge application practices on employee performance in Public Technical Vocational Education and Training Institutions in Kenya. The purpose of this research was mainly to explore the effect of knowledge application practices on employee performance in public TVETs. The Knowledge Spiral Theory served as the basis for the investigation. The positivist philosophical approach and the descriptive survey research methodology were used in the study. The target population comprised of 11 national polytechnics in Kenya. The unit of inquiry comprised 265 administrators comprised of both academic and non-academic heads of department. Primary data was collected using structured self-administered questionnaires. Quantitative data were analyzed using descriptive and inferential statistics with aid of SPSS 26. The results of the regression analysis showed that the application of employee knowledge had a substantial (P=0.000) influence on employee performance. According to the findings of

the research, knowledge application practices had a substantial effect on the performance of employees in TVETs. According to the findings of this research, it was recommended that departmental leaders at TVETs should encourage staff members across all roles to utilize their expertise while making decisions, resolving problems, and developing new services. Technical and vocational education and training institutions (TVETs) should implement incentive programs that reward employees for making effective use of their knowledge in order to encourage employees to find new opportunities, promote innovation, and improve problem solving.

RESEARCH METHODOLOGY

Research Design

In this study, a survey design was adopted to obtain accurate data on the opinion of the respondents.

Population of the Study

A population is the totality of the people that are to be interviewed in the field work. There are 85 tertiary institutions across the South-South geopolitical zone (Akwa Ibom, Bayelsa, Cross River, Delta, Edo, and Rivers states). This estimate encompasses 43 universities, alongside numerous polytechnics, monotechnics, and colleges of education. However, the target population of this study included the academic and non-academic staff which made up of thirty three thousand, three hundred and eighty six (33,386) obtained from the twenty four (24) selected tertiary institutions in South-South, Nigeria. Four (4) selected tertiary institutions in Akwa Ibom State, four (4) selected tertiary institutions in Bayelsa State, four (4) selected tertiary institutions in Cross River State, four (4) selected tertiary institutions in Delta State, four (4) selected tertiary institutions in Edo State and four (4) selected tertiary institutions in Rivers State making it total of twenty four (24) selected tertiary institutions in South South, Nigeria. These institutions were selected based on their year of establishment and staff strength.

Sampling and Sample Size Determination

A sample refers to a subset of individuals from a larger population or a small group of subjects drawn from a definite proportion of a stated population. Therefore, in determining the sample size, the study adopted Godden (2004) statistical formula which is given as:

$$SS = \frac{Z^2 \text{ X (P) X (1-P)}}{C^2} \quad \text{..... Infinite (equation 1)}$$

Where.

SS= Sample size
Z = Z-value expressed (at 1.96 for a 95% confidence level)
P = Percentage of population picking a choice expressed as decimal$^{\beta}$
C = Confidence interval expressed (at .04 = +/- 4% points)

$$\text{New SS} = \frac{SS}{(1 + \frac{(SS-1)}{POP})} \quad \text{.....Finite (equation 2)}$$

Where;

SS= Godden sample size recommendation
POP= Study population

$$SS = \frac{Z^2 \text{ X (P) X (1-P)}}{C^2} \quad \text{..... Infinite (equation 1)}$$

$$SS = \frac{1.96^2\ (0.5)\ x\ (1-0.5)}{.04^2}$$

$$SS = \frac{3.8416\ (0.5)\ x\ (0.5)}{0.0016}$$

$$SS = \frac{3.8416\ x\ 0.25}{0.0016}$$

$$SS = \frac{0.9604}{0.0016}$$

$$SS = \frac{0.9604}{0.0016} = 600$$

$$\text{New SS} = \frac{SS}{(1 + \frac{(SS-1)}{POP})} \quad \text{.....Finite (equation 1)}$$

$$\text{New SS} = \frac{600}{(1 + \frac{(600-1)}{33386})}$$

$$\text{New SS} = \frac{600}{(1 + \frac{(599)}{33386})}$$

$$\text{New SS} = \frac{600}{(1 + 0.0179)}$$

$$\text{New SS} = \frac{600}{1+ 0.0179}$$

$$\text{New SS} = \frac{600}{1.0179}$$

$$\boldsymbol{New\ SS = 589}$$

Therefore, the sample size of the study was five hundred and eighty nine **(589).**

Sampling Procedures/ Research Instrumentation

In this study, a stratified sampling method was adopted to give every member of the selected teaching and non-teaching staff an equal chance of being selected and therefore made the sample a representative one.

A total of five hundred and eighty nine (589) copies of the questionnaire were distributed to the various selected tertiary institutions in South-South, Nigeria. Out of this number, one hundred and fifty-one (151) copies of questionnaire were lost or wrongly filled while four hundred and thirty eight (438) copies of questionnaire were correctly filled and returned and this was used for data analyses.

Method of Data Analysis

The hypotheses were analyzed using simple linear regression model to examine the effect of codification strategy on workflow adherence and determined the effect of knowledge application strategy on operational efficiency of selected tertiary institutions in South-South, Nigeria. However, the Statistical Package for Social Sciences (SPSS) window version 25.0 aided in the data analyses.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

Test of Hypotheses

Hypothesis One: Codification strategy has no significant effect on workflow adherence of the selected tertiary institutions in South-South, Nigeria.

Table 4.1: Regression analysis on codification strategy and workflow adherence

Variable	Parameters	Coefficient	Std error	T – value
Constant	β_0	2.164	0.143	5.356
CS (X_1)	β_1	0.312	0.030	3.372**
R-Square		0.804		
Adjusted R – Square		0.749		
F – statistics		18.547***		

Source: Field Data, 2026.

Table 4.1 showed the coefficients of codification strategy and workflow adherence. The coefficient of multiple determination (R^2) was 0.804 which implies that 80.4% of the variations in dependents were explained by changes in the independent variable while 19.6% were unexplained by the stochastic variable indicating a goodness of fit of the regression model adopted in this study which is statistically significant at 1% probability level.

The coefficient of codification strategy was statistically significant and positively related to workflow adherence at 5 percent level (3.372**). Therefore, we reject null hypothesis and uphold the alternative hypothesis that codification strategy has a positive and significant effect on workflow adherence of the selected tertiary institutions in South-South, Nigeria.

Hypothesis Two: Knowledge application strategy has no significant effect on operational Efficiency of the selected tertiary institutions in South-South, Nigeria.

Table 4.2: Regression analysis on knowledge application strategy and operational efficiency

Variable	Parameters	Coefficient	Std error	t – value
Constant	β_0	2.554	0.274	8.297
KAS (X_1)	β_1	0.732	0.017	4.654**
R-Square		0.890		
Adjusted R – Square		0.871		
F – statistics		25.394***		

Source: Field Data, 2026.

Table 4.2 showed the coefficients of knowledge application strategy and operational efficiency. The coefficient of multiple determination (R^2) was 0.871 which implies that 87.1% of the variations in dependents were explained by changes in the independent variable

while 12.9% were unexplained by the stochastic variable indicating a goodness of fit of the regression model adopted in this study which is statistically significant at 1% probability level.

The coefficient of knowledge application strategy was statistically significant and positively related to operational efficiency at 5 percent level (4.654**). Therefore, we reject null hypothesis and uphold the alternative hypothesis which states that knowledge application strategy has a positive and significant effect on operational efficiency of the selected tertiary institutions in South-South, Nigeria.

Discussion of Results

This study examined knowledge management strategies and performance of tertiary institutions in South-South, Nigeria. From the descriptive analyses, the result on objective, research question and hypothesis one showed that codification strategy has a positive and significant effect on workflow adherence of the selected tertiary institutions in South-South, Nigeria. This finding aligns with the findings of Paliszkiewicz (2019) who examined a study on knowledge codification and organizational performance in small and medium enterprises. From the result of the findings, it was concluded that knowledge codification positively enhance organizational performance in small and medium enterprises and therefore recommended that firms should continue to improve in their use of knowledge codification to enhance organizational performance. The study is also supported by the findings of Adetayo and Akpa (2025) who carried out a study on the effect of knowledge management strategies (personalization and codification) on organizational performance be synthesizing existing literature to develop a contingency framework for aligning knowledge management (KM) strategies with organizational performance objectives.

The result on objective, research question and hypothesis two showed that knowledge application strategy has a positive and significant effect on operational efficiency of the selected tertiary institutions in South-South, Nigeria. The study findings tallies with the findings of Endende, Kwasira and Makhamara (2022) who carried out a study on the influence of knowledge application practices on employee performance in Public Technical Vocational Education and Training Institutions in Kenya. According to the findings of the research, knowledge application practices had a substantial effect on the performance of employees in TVETs. The findings also correlate with the findings of Mobolade and Ibojo (2023) who examined a study on the impact of knowledge application and knowledge conversion on organizational performance. Specifically, the study examined the effect of knowledge application and knowledge conversion on organizational performance among manufacturing firms in Ibadan Oyo State. Results of the finding showed that knowledge application had a significant positively relationship with four sub-variables of organizational performance namely, revenue, financial strength, public image and goodwill.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary

i. Codification strategy has a positive and significant effect on workflow adherence of selected tertiary institutions in South-South, Nigeria (R^2 = 80.4%, t-value = 3.372** at 5 percent significant level). This showed that an increase in codification strategy, leads to an enhanced workflow adherence**.**

ii. Knowledge application strategy has a positive and significant effect on operational efficiency of the selected tertiary institutions in South-South, Nigeria (R^2 = 87.1%, t-

value = 4654** at 5 percent significant level). This showed that an increase in knowledge application strategy, leads to more operational efficiency.

Conclusion

The study outcome posits that knowledge management strategies have strongly and significant correlation with performance of tertiary institutions in South-South, Nigeria. Codification strategy has a positive and significant effect on workflow adherence and knowledge application strategy has a positive and significant effect on operational efficiency of the selected tertiary institutions in South-South, Nigeria. However, the overall results show that the knowledge management strategies represent a fascinating field of research and practice, necessitating additional study to fully grasp their significant influence on tertiary institutions performance. The study therefore laid a strong theoretical and empirical foundation and concludes that knowledge management strategies had a positive and significant effect on the performance of tertiary institutions in South-South, Nigeria.

Recommendations

The study recommended the following;

i. Management of the tertiary institutions or organizations that seek to utilize knowledge management strategies must continuously adapt and adopt codification because codification enables organizations to store necessary knowledge for future consumption by the employees in the organizations in case where generator of this knowledge is not available any more. Thus, stored information can be extracted, developed and utilized to enhance performance.

ii. The management and decision makers in the tertiary institutions should continuously encourage the application of knowledge assets to improve employee performance, regularly adopt policies that encourage employees to be innovative by using knowledge assets to improve their performance in regards to decision making and solving emerging problems as well as complex problems, departmental heads should encourage staff across all functions to apply knowledge in decision making, problem solving and development of services, introduce incentive programs that reward knowledge use to encourage employees to identify new opportunities, promote innovation and improve problem solving.

REFERENCES

Abu, G., & Abdul, R. (2016). *The role of knowledge management in improving the quality of higher education institutions outputs (2013-2015). Unpublished PhD thesis, Sudan University of Science and Technology, Graduate School, Khartoum, Sudan.*

Ajmal, M. M., & Koskinen, K. U. (2018). Knowledge transfer in project-based organizations: an organizational culture perspective. *Project management journal*, 39(1), 7-15.

Al-Hayaly, M., & Alnajjar, F. (2016). Knowledge management processes and their impact on organizational performance, the adoption balanced scorecard: the moderating role of quality assurance standards. An applied study on private Jordanian Universities. *International Journal of Business and Management*, 11, 70-86.

Allameh, S. M., Zare, S. M., & Davoodi, S. M. (2011). Examining the impact of KM enablers on knowledge management processes. *Procedia Computer Science*, 3, 1211–1223.

Andreev, I. (2022). Knowledge management. Joensuu, Finland: Valamis. Available from: https://www.valamis.com/hub/knowledge-management. Last accessed on 2022 Feb 22.

Arjoun, A. & Boudabbous, S. (2024). Knowledge management: a challenge for the company. *International Journal of Business and Management Review*. 12(10, 81-95.

Arora, H. S. (2021) Knowledge management: where did it come from and where will it go? *Journal of Expert Systems with Applications*, 13(1), 1-14.

Balague, N., Düren, P., & Saarti, J. (2016). Comparing the knowledge management practices in selected European higher education libraries. *Library Management*, 37, 182-194.

Bhusry, M., Ranjan, J., & Nagar, R. (2011). Implementing knowledge management in higher educational institutions in India: A conceptual framework. *Liceo Journal of Higher Education Research*, 7(1), 34–46.

Brown, J., Osborn, T., Chan, J.M. & Jaganathan, V. (2016). *Managing intellectual capital*. Research Technology Management, *48, 34-41*.

Chai, K. H., & Nebus, J. (2011). Personalization or codification? A marketing perspective to optimize knowledge reuse efficiency. *IEEE Transactions on engineering management*, 59(1), 33-51. doi:10.1109/TEM.2010.2058855.

Cowan, R., & Foray, D. (1997). The economics of codification and the diffusion of knowledge. *Industrial and corporate change*, 6(3), 595-622. doi:10.1093/icc/6.3.595.

Delen, M. F., Tarim, M., Zaim, H., Zaim, S., & Delen, D. (2017). Knowledge management and ERP: Complementary or contradictory?. *International Journal of Information Management*, 37(6), 703-712.

Egena, O. & Ayavoo, R. (2020). Mediating role of knowledge application in the relationship between knowledge management practices and firm innovation. *Journal of Innovation & Knowledge* 5 (1).209–217

Endende, K. L., Kwasira, J. & Makhamara, F. (2022). Influence of knowledge application practices on employee performance in public technical vocational education and training institutions in Kenya. IOSR *Journal of Business and Management (IOSR-JBM)*. 24(10). 68-79.

Endende, K. L., Kwasira, J. & Makhamara, F. (2022). Knowledge creation practices and employee performance in selected public technical vocational education and training institutions in Kenya. *European Journal of Human Resource Management Studies* ISSN: 2601 - 1972 ISSN-L: 2601 – 1972. 6(1).

Handaruputri, T. L. & Hartono, B. (2018). Relationship of knowledge codification towards organizational performance in Indonesian Construction Industry. *Journal of International Proceeding*. 2(1).

Kathambi, T. (2019). *Influence of employee competencies on employee job performance at energy and Petroleum Regulatory Authority. Doctoral dissertation, University Of Nairobi.*

Kimile, N. M., & Bulitia, G. M. (2020). Knowledge sharing strategies amongst academics in institutions of higher learning, *Kenya. Humanities & Social Sciences Reviews*, 8(4), 1276–1284.

Kumar, A.J. & Ganesh, L.S. (2011). Balancing knowledge strategy: codification and personalization during product development, *Journal of Knowledge Management*, 15 (1) 118-135.

Lee, V. H., Leong, L. Y., Hew, T. S., & Ooi, K. B. (2013). Knowledge management: A key determinant in advancing technological innovation?. *Journal of knowledge management*.2(7), 23-44.

Lee,S; Kim, B & Kim, H (2012) An integrated view of knowledge management for performance. *Journal of Knowledge Management*, 16(2): 183-203.

Mohajan, H. K. (2017). Tacit knowledge for the development of organizations. *ABC Journal of Advanced Research*, 6(1), 17–24.

Njenga, J., N. Ngugi. K. & Odhiambo, R. (2019). Assessing the Influence of Codification on Performance in Commercial Banks in Kenya. *Journal of Strategic management*, 3(3), 76-90.

Noordin, M. F., Othman, R., & Zakaria, N. A. (2013). Investigating key success factors in adopting knowledge management system. *World Applied Sciences Journal*, 21(2), 221– 229.

Ojo, A. (2016). Knowledge management in Nigerian Universities: A conceptual model. interdisciplinary. *Journal of Information and Knowledge and Management*, 11, 331-345.

Okebaram, S. M.& Enemuo, J. I. (2014). Overcoming cultural barriers to innovation and knowledge sharing: An organisation perspectives. *International Journal in Management and Social Science*, 2(9), 22-36.

Okurebia, S. O, & Udo, E. U (2023) Talent Management and Organizational Goal Attainment of Selected Manufacturing firms in Akwa Ibom State. *International Journal of Advanced Academic Research*, 9(6), 11-42.

Roghyeh, N., Asghar, M., Sadigh, R. & Yousef, J. (2013). Influence of the personalization and codification strategies on successful knowledge management case study: National Iranian Oil Company. *Research Journal of Applied Sciences, Engineering and Technology 6*(6): 989-996,

Vathsala, W. & Purnima, W. (2011). Benefits gained from dimensions of social capital: a study of software developers in Sri Lank. *Information technology & people*, 24(4): 393-413.

Wood, S., & Ogbonnaya, C. (2018). High-involvement management, economic recession, well- being, and organizational performance. *Journal of Management*, 44(8), 3070-3095.

Zaim, H., Muhammed, S., & Tarim, M. (2018). Relationship between knowledge management processes and performance: critical role of knowledge utilization in organizations. *Knowledge Management Research & Practice*, 1-15.

Udo, E. U., Udonde U. E., Udo A. U. (2024) Career Training and Employee Performance in Money Deposit Banks in Akwa Ibom State, Nigeria. *British journal of Management and Marketing Studies* 7(1), 168-184.

Udo, E. U, Baridam, D, & Akpan, A. (2023) Talent Management and Organizational Success of Manufacturing Firms in Akwa Ibom State. *International Journal of Advanced Academic Research,* 9(6), 42-72.