# Influence of knowledge management practices on teaching methods and assessment in selected higher learning institutions of Tanzania

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## ABSTRACT

This study examines the influence of knowledge management (KM) practices on teaching effectiveness among academic staff in Tanzanian higher learning institutions (HLIs). The study, guided by Organizational Knowledge Creation Theory (OKCT) and the Knowledge Sharing Model, grounded in the understanding that KM enhances instruction quality and institutional performance, explores the extent to which KM practices, namely knowledge creation, storage, sharing, and application, are embedded in academic routines. Using a mixed-methods approach, data were collected from two public universities, the Sokoine University of Agriculture (SUA) and Mbeya University of Science and Technology (MUST), involving 190 academic staff. The population of academic staff was divided into strata based on academic rank, department, and years of experience. The sample size for each stratum was proportional to its population size to ensure representativeness. Random selection of participants within each stratum was conducted using a random number generator, guaranteeing that all subgroups are represented in the sample. Data was collected through structured questionnaires and semi-structured interviews. Descriptive statistics revealed moderate engagement across all KM domains, with the highest mean score recorded in knowledge creation, followed by sharing and application, while storage practices ranked lowest. Inferential analysis using regression modeling indicated that organizational, technological, and individual factors significantly predicted KM engagement levels, thereby influencing teaching preparation, delivery, and assessment strategies. Duncan's post hoc tests further underscored differences in KM practices across the academic ranks and faculties, suggesting a need for contextualized support interventions. Qualitative data complemented these findings by revealing structural constraints, including weak leadership, low commitment, limited digital infrastructure, and a lack of recognition for KM activities. Participants emphasized the disconnect between institutional KM policies and actual teaching practice, highlighting insufficient training, knowledge silos, and low integration of student feedback mechanisms. These barriers compromise pedagogical innovation and reduce the responsiveness of instruction to contemporary academic and societal demands. Despite the increasing acknowledgement of KM practices, the study concludes that their inconsistent implementation hinders efforts to enhance teaching quality and learning outcomes. Therefore, the study recommends institutionalization of KM policies, targeted capacity building for academic staff, enhancing digital infrastructure, and promoting the knowledge-sharing culture among academic staff, hence aligning KM activities' performance metrics.

**Keywords:** Assessment Methods, Academic Staff, Higher Learning Institutions, Knowledge Management, Tanzania

## I. INTRODUCTION

Knowledge Management (KM) has emerged as a critical strategic resource in higher education institutions (HEIs) worldwide, enhancing teaching, learning, and assessment processes. In developed countries, KM practices such as knowledge creation, sharing, storage, and application are systematically surrounded by instructional processes and institutional governance. They are supported by strong digital infrastructures, academic staff development programs, and performance-based governance systems (Benavides et al., 2020; Yanti & Defit, 2024) . These practices have strengthened pedagogical innovation, collaboration, and evidence-based assessment, thereby enabling universities to respond effectively to the demands of a knowledge-driven society. Moreover, the inclusion of knowledge management systems (KMS) into academic staff development has improved the effectiveness and adaptability of teaching practices among academicians in HLIs (Salami & Suhaimi, 2019).

Across Africa, the adoption of KM within HLIs has grown, though unevenly across different countries. For example, South African universities have made famous trends by implementing digital repositories and library-led KM initiatives, while others in Nigeria and Malawi are developing frameworks for academic staff knowledge sharing (Kanyundo et al., 2023; Mabunda & Du Plessis, 2022; Salami & Suhaimi, 2019). However, challenges such as low incentives for sharing, weak institutional KM policies, and inadequate ICT infrastructure persist among HLIs (Mushemeza, 2016). These hinder effective utilization of institutional knowledge assets in teaching, learning, and

assessment, resulting in uneven progress toward pedagogical innovation and quality assurance across the continent at large.

Although in Tanzania, policy recognition of KM as a driver of academic excellence is evident, its operationalization within higher learning institutions remains fragmented. Conducted studies reveal limited awareness of KM among academic staff, weak institutional mechanisms for knowledge dissemination, and underutilization of ICT tools in pedagogical design (Charles & Nawe, 2017; Mosha and & Ngulube, 2024; Moshi & Elia, 2025; Ponera & Madila, 2023). Teaching remains mostly exam-oriented and less informed by evidence-based approaches. This fragmentation is intensified by insufficient institutional support and the absence of comprehensive KM strategies, which limit academic staff's ability to create, store, share, and apply pedagogical knowledge for continuous improvement (Mkunde & Dachi, 2022, 2023).

At the individual level, effective KM practices empower academic staff to shift from traditional lecture-based teaching to reflective, student-centered learning approaches. When academic staff actively capture lessons learned, engage in peer knowledge exchange, and apply shared insights, they improve teaching effectiveness and enhance student learning outcomes (Al-Kurdi et al., 2018; Nguyen et al., 2019; Paiman et al., 2023). However, low KM awareness among Tanzanian lecturers often constrains innovation in assessment and feedback mechanisms. Organizational formal KM frameworks, such as digital repositories, peer-reviewed teaching portfolios, and shared databases of assessment rubrics, are essential for embedding institutional learning (Mabunda & Du Plessis, 2022). Where such structures are weak, as in most Tanzanian HLIs, teaching and assessment practices remain siloed, making it difficult to institutionalize best practices or measure teaching performance effectively (Kanyundo et al., 2023).

Aligning KM with assessment reforms is fundamental for enhancing learning quality. Recent literature emphasizes that reliable and formative assessment practices depend on shared institutional knowledge, including performance analytics, best practices, and collaborative review systems (Akosile & Olatokun, 2020; Oladipupo & AbdulRahman, 2018). Without this knowledge ecosystem, assessment remains largely summative and exam-focused, missing opportunities for continuous learning and improvement. Therefore, strengthening KM practices in Tanzanian higher learning institutions is essential for advancing pedagogical innovation, fostering reflective teaching, and enhancing overall academic quality.

### 1.1 Statement of the Problem

Knowledge management enhances academic quality by promoting collaborative knowledge sharing, evidence-based teaching practices, and dynamic assessment methods. Well-integrated KM systems enable institutions to harness both tacit and explicit knowledge, thereby improving instructional delivery and learning outcomes among academic staff (Galgotia & Lakshmi 2022). However, in many Tanzanian higher-learning institutions (HLIs), KM implementation remains irregular, informal, and poorly aligned with teaching and assessment functions. Conducted Studies in Tanzanian universities show that awareness of KM is low, formal mechanisms for knowledge capture and reuse are largely absent, and academic staff frequently rely on personal experience rather than institutionally shared pedagogical resources (Charles & Nawe, 2017; Maiga, 2017; Msafiri Ponera, 2023; J. M. Ponera, 2022). Knowledge generated through research and practice is rarely stored or reused for instructional improvement (Kanyundo et al., 2023; Ndibalema, 2025) .

This causes student learning to be affected by outdated teaching approaches, fragmented curricula, and narrow assessment formats that fail to promote critical thinking and practical application. Reliable and formative assessment methods require access to institutional knowledge assets such as past teaching reflections, assessment rubrics, and feedback data, which are missing or under-utilized in many Tanzanian HLIs (Aligula, 2024; Kyaruzi et al., 2019; Simon, 2019). Moreover, the absence of effective KM frameworks weakens organizational learning, leading to duplication of effort, inconsistent standards, and missed opportunities for innovation in pedagogy and assessment design (Barboza et al. 2020; Martínez-Lazcano et al. 2024; Nakash & Bouhnik 2022).

Although research on KM in corporate and public sectors in Tanzania is growing, empirical studies focusing specifically on the influence of KM on teaching and assessment in HLIs are scarce. Most existing studies emphasize knowledge sharing or technological barriers without sufficiently exploring how KM practices shape teaching methods and student assessment strategies (Albadawi & Salha 2021; Mulenga 2020). This study addresses that gap by investigating how KM practices influence teaching and assessment methods in Tanzanian HLIs, focusing on academic staff perspectives at selected institutions.

### 1.2 Research Objectives

i. To investigate teaching and Assessment Methods Used by Academics in HLIs
ii. To examine the influence of KM Practices on Teaching and Assessment in HLIs

## II. LITERATURE REVIEW

### 2.1 Theoretical Review

This study was guided by the Organizational Knowledge Creation Theory (OKCT) developed by Nonaka et al. (1996), and the knowledge sharing model developed by Cheng et al.(2009).

#### 2.1.1 Organization Knowledge Creation Theory (SECI Model)

Organizational Knowledge Creation Theory explains how knowledge is continuously created, transformed, and institutionalized through interactions between tacit and explicit knowledge. Tacit knowledge refers to personal, experience-based, knowledge-based insights embedded in individual practices, while explicit knowledge is formalized, codified, and easily communicated through documents, systems, and procedures (Oranga, 2023; Uusitalo & Kyrö, 2021). According to Nonaka et al. (1996), organizational learning occurs through four interrelated modes of knowledge Conversion: Socialization, Externalization, Combination, and Internalization (SECI).

In the aspect of Higher learning institutions, these four processes are directly linked to academic teaching and assessment practices. Socialization occurs when informal interactions such as peer mentoring, departmental meetings, Seminars and collaborative teaching activities, whereby academic staff share experiential pedagogical knowledge (Koehler et al., 2019; Simper et al., 2022). Externalization involves the articulation of tacit teaching experiences into explicit forms, such as lesson plans, assessment rubrics, teaching reflections, and curriculum documents. Combination: This refers to the integration and organization of explicit knowledge through institutional repositories, learning management systems, and shared databases that consolidate teaching and assessment resources (Seghroucheni et al., 2025). Internalization normally takes place when academic staff apply documented knowledge in classroom practice, hence embedding institutional knowledge into individual teaching methods and assessment strategies (Cheng, 2021a, 2021b) . This study conceptualizes teaching methods and assessment practices as outcomes of SECI knowledge conversion processes within HLIs.

#### 2.1.2 Knowledge Sharing Model

While the SECI model focuses on the processes through which knowledge is generated and transformed within organizations, the knowledge sharing Model provides insight into how knowledge is disseminated across individuals and groups and how organizational contexts influence this process. Knowledge sharing is understood as a purposeful activity involving the transfer and exchange of knowledge among individuals, tearms or organizational units to support collective learning and enhance performance (Zaremohzzabieh & Mohd Rasdi, 2025). The model underscores that effective knowledge sharing does not occur naturally, but rather it is contingent upon a range of facilitating and inhibiting factors such as trust, individual motivation, incentive structures, organizational culture, leadership support, and the availability of supportive ICT infrastructure.

In higher learning institutions, knowledge sharing plays a critical mediating role between knowledge creation and knowledge application. Even when academic staff generate valuable pedagogical knowledge, its impact on teaching and assessment remains limited if sharing mechanisms are informal, unsupported, or perceived as burdensome. The knowledge sharing Model therefore, provides an explanatory framework for understanding why knowledge sharing may fail to enhance teaching effectiveness in the contexts where incentives, recognition, and supportive cultures are weaker.

Through this study, knowledge sharing is treated as a core KM practice that connects individuals' knowledge creation with individual learning outcomes. The model helps explain variations in teaching methods and assessment practices by highlighting how organizational factors either facilitate or inhibit the flow of pedagogy across departments and institutions at large.

### 2.2 Empirical Review

#### 2.2.1 Teaching and Assessment Methods used by Academics in HLIs

Learner-centered, formative, and outcomes-driven approaches have replaced lecture-based and summative methods in contemporary educational institutions. As part of larger initiatives to match pedagogy with 21st-century capabilities, developed nations have embraced blended learning, problem-based learning (PBL), and genuine assessment(Fitria et al., 2025; Martinez, 2022; Solano et al., 2023). Knowledge platforms that record best practices and share innovative teaching techniques across departments frequently help these approaches.

However, instruction in African contexts is still mostly traditional, and written exams play a major role in assessment (Alordiah, 2025; Zigama, 2025). The usage of various assessment techniques, such as portfolios, peer evaluation, and case-based evaluation, has been hindered by the inadequate integration of ICT and KM platforms. Because of the enormous class numbers, low resources, and lack of training in alternative pedagogies, lectures and tests are often used as default methods by academics in Tanzania HLIs (Charles & Nawe, 2017; Mgwesa & Philip, n.d.; Shartiely, 2022). This necessitates an investigation into Tanzanian institutions' present methods of instruction and evaluation, with a focus on how they either follow or deviate from international trends

### 2.2.2 Influence of KM Practices on Teaching and Assessment

By allowing access to institutional knowledge, encouraging ongoing professional development, and stimulating creativity in instructional design, knowledge management has an impact on both teaching and assessment. Academic staff are more likely to use a variety of evidence-based pedagogical approaches when KM-like information sharing, digital repositories, and communities of practice are incorporated into academic workflow (Alzghoul & Aboalganam, 2025; Santos et al., 2024).

However, organizational reasons like poor leadership support, inadequate KM policies, as well as human variables such as low awareness, low motivation, and mistrust, continue to hinder KM implementation in Tanzania HLIs (Maiga, 2017; Mosha & Ngulube, 2023; Ponera, 2022). This restriction limits KM's ability to foster pedagogical innovations and have an impact on knowledge transmission within institutions. Furthermore, although KM systems are accessible, they are underutilized to enhance teaching and evaluation procedures due to a lack of digital literacy training and structured mechanisms. Therefore, this study explores the extent to which KM practices are influencing instructional design and assessment techniques among academic staff, aiming to provide evidence that can inform institutional strategies for pedagogical transformation.

## III. METHODOLOGY

### 3.1 Area of study

The study was conducted in Morogoro and Mbeya Regions, found in the mainland. The choice of SUA and MUST as case studies have driven by their distinct academic profiles, established knowledge management infrastructures, geographical variations, alignment with Tanzania's development priorities, and digital transformation initiatives, enabling a strong investigation of knowledge management's influence on teaching, learning, and their challenges. Comparative purposes influenced the choice; SUA is recognized for its high-quality, impactful research and innovation, while MUST, a rapidly emerging science and technology university in Tanzania, offers insights into technical issues that academic staff use to create, share, store, and disseminate knowledge throughout the entire university.

### 3.2 Study design, sampling, and sample size

A cross-sectional study was employed, collecting data at a single point in time. The target population of this study consisted of approximately 937 members of the academic staff from both institutions. A stratified random sampling technique was employed to select participants from two Tanzanian higher-learning institutions (SUA and MUST). The population of academic staff was divided into strata based on academic rank, department, and years of experience. The sample size for each stratum was proportional to its population size to ensure representativeness. Random selection of participants within each stratum was conducted using a random number generator, guaranteeing that all subgroups are represented in the sample. The sample size was estimated using the following formula $n=N/(1+N(e^2))$ as elaborated by Yamane where n=sample size,

N=Total population size
e = Margin of error (0.062)
Therefore, $n=N/(1+N(e^2))$,
$n=937/ (1+937(0.06^2)$.
n=937/ (1+937) (0.003844)
n=937/ (1+3.601828)
n=937/4.601828
n=203.6147374478
Hence, the required sample size= 204

Therefore, the study distributed 204 questionnaires, of which 190 were returned, yielding a response rate of 93%. This rate is considered excellent for the survey research, according to Lund, (2023); a response rate of 70% and above is very good for analysis and reporting, while Meyer et al.( 2022) similarly classifies response rates above 70% as very good. Therefore, the achieved response rate was deemed adequate to support a valid statistical analysis.

### 3.3 Data Collection and Measurement

A structured questionnaire was employed to collect quantitative data. Five-point Likert-scale items were designed to collect comprehensive data on teaching and Learning Processes and knowledge management practices in Higher learning institutions. The Teaching Methods and Assessment of Student Outcomes, measured as the dependent variable, included Instruction Design and Planning, Pedagogical Practices, Student Interaction, Student Assessment Practices, and Innovative Teaching. Additionally, the study assessed knowledge management practices in Higher

learning institutions. The study also compared KM practices between the selected institutions. On the other hand, an open-ended interview was employed to collect qualitative data on the influence of KM Practices in Teaching and Learning Processes in Tanzanian Higher Learning Institutions.

A five-point Likert scale was used to describe and determine variations in Teaching and Learning Processes in Higher Learning institutions. Teaching and Learning Processes (the dependent variable) were measured using a five-point Likert-type frequency scale. Response options ranged from Very Rarely, Rarely, Occasionally, Frequently, to Very Frequently, and were coded as 1, 2, 3, 4, and 5, respectively. On the other hand, the independent variables were measured using a five-point Likert-type frequency scale. Response options ranged from Very Rarely to Very Frequently for KM Practices, and were coded as 1, 2, 3, 4, and 5, respectively, as similarly employed by (Mwalukasa, 2020). Before analysis, the instrument's internal consistency was assessed using Cronbach's alpha. Coefficients were 0.79 for the Teaching Methods Processes scale and 0.72 for the KM practices scale, respectively.

### 3.4 Ethical Consideration

Conducting this study was permitted by the Sokoine University of Agriculture, and then seeking permission to conduct research from the Mbeya University of Science and Technology and the Sokoine University of Agriculture. Secondly, the researcher asked for consent from the respondents, as well as assuring them that the data they were asked to provide was confidential and would be used for academic purposes only.

### 3.5 Statistical Analysis

Qualitative data were analyzed via manual thematic analysis of individual responses. The quantitative data were coded on the Statistical Package for Social Sciences (SPSS). We utilized descriptive statistics, including frequencies, percentages, and means. An independent samples t-test was employed to compare KM practices between SUA and MUST to assess institutional differences. A p-value less than 0.05 was interpreted as a significant difference in Teaching Methods and KM Practices between SUA and MUST. The linear regression model was used to analyze the relationship between KM Practices and Teaching Methods processes in the studied institutions. The employed multiple linear regression model was expressed as:

$$Y = \beta 0 + \beta 1X1 + \beta 2X2 + \beta 3X3 + \beta 4X4 + \beta 5X5 + \beta 6X6 + \beta 7X7 + \varepsilon$$

$\beta o$ = Y intercept

$\beta i$= regression coefficients,

Xs = a set of predictors.

Y = Dependent variable is teaching methods processes

$X_1$ - $X_{11}$ explanatory variables

$X_1$ Age was measured in years

$X_2$ Sex coded as 1 Female and 0 for Male

$X_3$ =Designation

$X_4$ = Experience

Before running linear regression, the following assumption was tested: multicollinearity, autocorrelation, and homoscedasticity.

## IV. FINDINGS & DISCUSSION

### 4.1 Socio-Demographic Characteristics of Respondents and Knowledge Management Implications

The findings shown in Table 1 below indicate that the academic workforce in the studied institutions remains moderately male-dominated, with males constituting 59.5% of the respondents and females 40.5%. This gender composition mirrors persistent patterns within African higher education institutions, where academic staffing continues to reflect structural and cultural gender disparities (Morley & Leyton, 2022). From a knowledge management (KM) perspective, such imbalances may influence participation in collaborative knowledge activities, particularly informal knowledge sharing and mentorship, which are often shaped by institutional power relations and social networks.

Age distribution presented in Table 1 shows that the majority of respondents were mid-career academics aged between 37 and 45 years (41.6%), followed by those aged 27–36 (31.6%), while early-career academics (18–26 years) were minimally represented (7.4%). This demographic profile suggests that KM practices observed in this study largely reflect the experiences of established academics who balance teaching, research, and administrative responsibilities. Similar age structures have been reported in Sub-Saharan African universities, where delayed recruitment and limited entry-level opportunities result in a concentration of mid-career staff (Erena et al. 2023). In contrast, studies from Asian higher education systems report younger academic workforces due to rapid sector expansion and targeted graduate employment policies (Huang, 2021).

In terms of qualifications, the dominance of postgraduate degree holders 39.5% with master's degrees and 31.0% with doctoral degrees, confirms the specialized academic nature of the sample. This aligns with prior studies

indicating that postgraduate qualifications are a minimum requirement for academic positions across African universities (Nguyen et al., 2019). However, despite these qualifications, the academic rank distribution reveals that Tutorial Assistants and Assistant Lecturers constitute 69.0% of respondents. This mismatch between qualification, age, and rank points to structural constraints in academic career progression, including promotion bottlenecks and limited mentorship opportunities. Similar challenges have been documented in Tanzania and Kenya, where institutional barriers and restrictive promotion policies hinder academic advancement (Kadikilo, et al, 2024; Kay and Karmowska 2024; Mgaiwa and Kapinga 2021). Such stagnation has direct implications for KM, as limited career incentives may reduce motivation to engage in sustained knowledge documentation, sharing, and institutional learning.

**Table 1**

*Respondent Social Demographic Characteristics (n=190)*

| Variable | Category | N | % |
|---|---|---|---|
| Sex of Respondent | Male | 113 | 59.5 |
| | Female | 77 | 40.5 |
| | 18 – 26 | 14 | 7.4 |
| | 27- 36 | 60 | 31.6 |
| | 37 – 45 | 79 | 41.6 |
| | 46 + | 37 | 19.5 |
| Education level | Bachelor's degree | 56 | 29.5 |
| | Master's degree | 75 | 39.5 |
| | Doctoral degree | 59 | 31 |
| Academic Rank | Tutorial Assistant | 56 | 29.5 |
| | Assistant Lecturer | 75 | 39.5 |
| | Lecturer | 37 | 19.5 |
| | Senior Lecturer | 12 | 6.3 |
| | Associate Professor | 3 | 1.6 |
| | Full Professor | 7 | 3.7 |

### 4.2 Knowledge Management Practices and their Influence on Teaching and Assessment

The descriptive results presented in Table 2 demonstrate that KM practices are strongly embedded in core teaching and assessment functions. Student interaction recorded the highest mean score (M = 4.14), followed by student assessment methods (M = 4.11), instructional design (M = 4.09), communication (M = 4.07), and pedagogical practices (M = 4.06). These findings indicate that academic staff increasingly rely on institutional knowledge assets such as shared teaching materials, departmental guidelines, and digital communication platforms to support routine instructional activities.

The prominence of student interaction is consistent with recent studies emphasizing the role of KM tools, including collaborative learning platforms and feedback systems, in fostering dialogic and learner-centered pedagogies (Alzghoul & Aboalganam, 2025; Santos et al., 2024). Similarly, the high mean score for assessment practices suggests that KM systems facilitate access to archived examinations, shared rubrics, and benchmarking strategies, thereby enhancing transparency and consistency in evaluation processes (Cockett & Jackson, 2018; Haniya et al., 2020; Martínez-Lazcano et al., 2024; Stanja et al., 2023). Responses from the conducted interview evidence reinforce these findings. Where one academic staff member said:

> *"Having access to previous assessments and grading guidelines has helped us align our marking standards across departments." Interviewed on 10/02/2025*

However, innovative teaching practices recorded a comparatively low mean score (M = 3.13), revealing a critical gap between KM availability and pedagogical transformation. Despite the presence of KM infrastructure, academic staff appear to rely predominantly on traditional, lecture-based approaches. Interview data indicate that this stagnation is driven by limited time, insufficient pedagogical training, and a lack of institutional incentives.

As one respondent explained:

> *"We know there are new methods and tools, but redesigning courses requires time and support, which we simply do not have." Interviewed on 10/02/2025*

This pattern is consistent with earlier findings in Tanzanian and broader African contexts, where KM initiatives tend to support administrative efficiency rather than pedagogical innovation (Al-Kurdi et al., 2018; Charles & Nawe, 2017; Msafiri Ponera, 2023; Mushemeza, 2016).

**Table 2**

*Descriptive Statistics of Knowledge Management Influence on Teaching and Assessment Practices in Tanzanian Higher Learning Institutions*

| Variable | N | Mean |
|---|---|---|
| Index Institution design | 190 | 4.0860 |
| Index pedagogical practices | 190 | 4.0618 |
| Index student interaction | 190 | 4.1382 |
| Index student assessment | 190 | 4.1123 |
| Index innovative teaching | 190 | 3.1316 |
| Index communications | 190 | 4.0684 |
| **Valid N (listwise)** | 190 | |

### 4.3 Institutional Variations in Knowledge Management Practices

The examined results of the comparative analysis between Sokoine University of Agriculture (SUA) and Mbeya University of Science and Technology (MUST), shown in Table 3, revealed statistically significant differences in knowledge creation ($t = -3.27$, $p = .001$) and knowledge sharing ($t = -2.19$, $p = .031$). These variations suggest that institutional culture, leadership commitment, and incentive mechanisms play a decisive role in shaping KM engagement. This finding aligns with studies emphasizing the importance of organizational context and leadership support in driving effective KM practices (Alzghoul & Aboalganam, 2025; Charles & Nawe, 2017; Santos et al., 2024). The conducted interview provides further insight into these disparities. Respondents consistently described knowledge creation as project-based and individualized, while knowledge sharing remained informal and largely undocumented. One interviewee remarked:

*"Knowledge is rarely documented or shared beyond the originator's office." Interviewed on 06/01/2025*

Such statements echo concerns raised by Yao *et al.* ( 2023) and Zhao *et al.*( 2023), who observed that knowledge hoarding persists in environments lacking trust, incentives, and formal KM policies. In contrast, no statistically significant differences were observed in knowledge storage and application across the two institutions. This convergence suggests shared infrastructural and governance challenges, including limited usability of KM systems and insufficient training (Martínez-Lazcano et al., 2024; J. M. Ponera & Madila, 2023). Weak documentation, cultures, and siloed operations further constrain KM effectiveness (Al-Kurdi et al., 2018; Mushemeza, 2016). As Adhikari and Shrestha (2023) argue, without holistic alignment of leadership, infrastructure, and policy, KM practices remain fragmented.

**Table 3**

*Variations in Knowledge Management Practices Across Studied Institutions (SUA and MUST)*

| **Independent Samples Test** | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| Index1_Average rating on Frequency of knowledge creation in the institution | Equal variances assumed | .276 | .600 | -3.273 | 188 | .001 | -.34772 | .10623 | -.55728 | -.13815 |
| | Equal variances not assumed | | | -3.315 | 179.782 | .001 | -.34772 | .10489 | -.55470 | -.14074 |
| Index2-Average rating on Frequency of knowledge sharing in the institution | Equal variances assumed | 10.892 | .001 | -2.284 | 188 | .023 | -.21860 | .09569 | -.40736 | -.02984 |
| | Equal variances not assumed | | | -2.186 | 140.391 | .031 | -.21860 | .10002 | -.41633 | -.02087 |
| Index3_Average rating on Frequency of knowledge storage in the institution | Equal variances assumed | .214 | .644 | -1.685 | 188 | .094 | -.15540 | .09224 | -.33736 | .02656 |
| | Equal variances not assumed | | | -1.660 | 162.276 | .099 | -.15540 | .09363 | -.34029 | .02950 |
| Index4_Average rating on Frequency of knowledge application in the institution | Equal variances assumed | 6.821 | .010 | -1.900 | 188 | .059 | -.20523 | .10801 | -.41830 | .00783 |
| | Equal variances not assumed | | | -1.838 | 148.746 | .068 | -.20523 | .11165 | -.42585 | .01539 |

### 4.4 Predictive Influence of Knowledge Management Practices on Teaching and Assessment

Regression results, as shown in Table 4 below, demonstrate that knowledge application is the strongest predictor of teaching and assessment effectiveness ($\beta = .660$, $p < .001$), underscoring the critical role of translating accumulated knowledge into classroom practice. This finding corroborates studies highlighting applied knowledge as a key driver of

instructional quality and adaptive teaching (Alzghoul & Aboalganam, 2025; Santos et al., 2024). Knowledge storage (β = .211, p = .015) and knowledge creation (β = .133, p = .046) also exert significant positive effects, reinforcing the importance of institutional memory and continuous pedagogical development (Adhikari & Shrestha, 2023; Charles & Nawe, 2017). Conversely, knowledge sharing exhibited a negative but marginally non-significant association with teaching effectiveness (β = −.174, p = .051). This suggests that in the absence of incentive structures and supportive cultures, knowledge sharing may be perceived as burdensome rather than beneficial (Al-Husseini *et al*., 2021; Ponera & Ngulube, 2023). Interview responses insist on this dynamic. One academic from Mbeya University of Science and Technology stated:

> *"We learn by doing, but there's no platform to consolidate or share these learnings. "Interviewed on 06/01/2025*

Another respondent from Sokoine University of Agriculture added:

> *"Knowledge sharing is viewed as extra work, and there's no reward, so most of us keep things to ourselves. "Interviewed on 10/02/2025*

These narratives reinforce arguments by Al-Kurdi *et al*. (2018) and Zhao *et al.(*2023) that KM effectiveness depends not only on technological infrastructure but also on institutional incentives, trust, and leadership commitment. Martínez-Lazcano *et al*.(2024) further emphasizes that successful KM initiatives must be both technologically enabled and culturally embedded.

**Table 4**

*The Relationship between Knowledge Management Practices and Their Influence on Teaching and Assessment Methods*

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. | Collinearity Statistics | |
|---|---|---|---|---|---|---|---|---|
| | | B | Std. Error | Beta | | | Tolerance | VIF |
| 1 | (Constant) | 1.234 | .172 | | 7.172 | .000 | | |
| | Index_score_K_Creation | .111 | .055 | .133 | 2.007 | .046 | .455 | 2.198 |
| | Index_score_K_Sharing | -.161 | .082 | -.174 | -1.963 | .051 | .252 | 3.967 |
| | Index_score_K_Storage | .217 | .089 | .211 | 2.449 | .015 | .268 | 3.737 |
| | Index_score_K_Application | .569 | .086 | .660 | 6.595 | .000 | .199 | 5.032 |

## V. CONCLUSION & RECOMMENDATION

### 5.1 Conclusion

This study examined how knowledge management practices affected instruction and evaluation at Mbeya University of Science and Technology (MUST) and Sokoine University of Agriculture (SUA), two Tanzanian Universities. The results showed that, despite the moderate adoption of KM techniques such as knowledge sharing, documentation, and IT-supported collaboration, there is still little integration of these practices into regular instruction and evaluation. Academic staff perceptions and practices of knowledge management are greatly influenced by elements such as organizational culture, trust, incentives, and awareness

The survey also discovered that there is a lack of adoption of evidence-based and formative evaluation techniques in academic procedures, which still mainly rely on conventional, exam-oriented methodologies. The systematic use of KM tools for instructional design and evaluation is hampered by organizational Silos, a lack of policy direction, and a poor digital infrastructure, this is according to qualitative data. The analysis thus indicates that the transformative potential of knowledge management on instructional innovation and assessment reform remains untapped in the absence of a systematic institutional commitment to knowledge-driven knowledge ecosystems. These observations add to the current regional conversation around improving academic excellence in higher education environments with limited resources.

### 5.2 Recommendation

Several important tactics are suggested to improve knowledge management procedures in higher learning institutions. First, by creating comprehensive policies and procedures that are in line with their goals for teaching, research, and assessment, universities should institutionalize knowledge management. This should guarantee that KM becomes a fundamental component of academic operations and planning. Second, enhancing digital infrastructure is crucial. To improve academic staff's digital literacy and comfort in using these systems, institutions must invest in strong ICT platforms that support knowledge management activities and offer frequent training.

On the other hand, it is crucial to cultivate a culture of cooperative information sharing. This can be accomplished by arranging workshops and communities of practice that prioritize group learning, Forster multidisciplinary involvement, and supporting peer mentoring. By trying active involvement in Km efforts to create

possibilities for professional development, promotions, and performance reviews, KM should also be incorporated into staff development frameworks.

By outlining strategic aims, modeling preferred practices, and guaranteeing sufficient resource allocation to support KM activities, institutional leadership plays an important role in cementing KM values. Last but not least, students' input should guide instructional and evaluation strategies. Using student-driven feedback tools and formative assessment strategies will improve instructional responsiveness and knowledge application. A suitable knowledge management environment that promotes academic excellence and innovation will be fostered by these concerted efforts.

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