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Knowledge Management Practices, Competency Mapping, And Its Linkage With Compensation: An Empirical Study Of Faculty Members In Higher Education Institutions

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Abstract

Currently, information-intensive activities are increasingly important in the realm of higher education. The competencies of faculty members are more pivotal in generating new knowledge, disseminating existing information, and facilitating the overall functioning of the institution. This research seeks to empirically examine the applicability of knowledge management techniques, competence mapping, and their relationship with compensation systems among faculty members employed in selected higher education institutions in the Bhopal Division, based on the research findings. This study employs a Structural Equation Modelling (SEM) methodology to examine the relationships among diverse knowledge management processes (socialisation, externalisation, combination, and internalisation), faculty competencies (knowledge transfer and application), and compensation outcomes. This study is grounded on the SECI model of knowledge creation, with human capital theory as its foundational premise. The hypothesised associations were validated using structural equation modelling (SEM) approaches, based on primary data collected from faculty members. The study's results indicate that knowledge management techniques significantly affect faculty members' capabilities, which, in turn, positively influence remuneration structures. This research integrates knowledge management, competence mapping, and compensation into a cohesive framework, contributing to the existing body of knowledge. Moreover, it offers policymakers actionable lessons for independently constructing competency-based pay systems from the ground up.

Keywords; Knowledge Management, Competency Mapping, Faculty Performance, Compensation Systems, Structural Equation Modelling.

INTRODUCTION

Knowledge outweighs land, labour, and capital as the most valuable resource. In an information-driven economy, higher education institutions (HEIs) are centers for knowledge generation, distribution, and use. Universities are becoming dynamic innovation, social, and economic hubs. This paradigm change has placed academics at the center of knowledge processes, making their skills and contributions crucial to institutional success. These improvements have changed faculty jobs significantly. Instructional quality and research output determine academic success. Modern researchers must learn, collaborate, mentor, communicate digitally, and manage institutions (Fullwood et al., 2022; Sangrà, 2020). Scholars need subject matter expertise, effective communication, cooperation, creativity, and flexibility to participate in complex knowledge networks (Abbas et al., 2021; Dwivedi, 2023).

Knowledge assets must be organised using KM. Knowledge management helps use intellectual capital via creation, exchange, integration, and application (Massaro et al., 2020; Rowley, 2000). Higher education institutions employ Knowledge Management for curriculum, research, digital content, and decision-making. These methods are affected by faculty competences, which are crucial to the knowledge management cycle (Kidwell et al., 2000; Secundo, 2020).

The SECI model of knowledge generation by Nonaka and Konno (1998) views knowledge development as a continuous process of socialisation, externalisation, combination, and internalisation. This research manages knowledge using this paradigm. Academic contexts need informal learning and teamwork, therefore socialization—the transmission of tacit information via direct contact and shared experiences—is crucial (Nonaka et al., 2000; Fauzi, 2019). Externalising tacit knowledge into research articles, instructional materials, and digital information improves knowledge diffusion (Gourlay, 2021; Santoro et al., 2020). Academic forums, conferences, and collaborative research produce new ideas from explicit information (Garvin et al., 2008; Abbas, 2021). Internalisation enhances competence by turning explicit knowledge into tacit knowledge via practice (Kolb, 1984; Hernández-Perlines et al., 2020).

Knowledge management approaches depend on faculty expertise, which influences how institutions produce, distribute, and utilise knowledge. Competency mapping aligns academic abilities, knowledge, and attitudes (Boyatzis, 2008; Delery &Roumpi, 2017). Critical thinking, communication, teamwork, digital literacy, and creativity are essential in higher education (Kaur & Kaur, 2021; Secundo et al., 2020). These skills allow educators to work on knowledge-intensive projects and boost institutional performance. Focusing on talents and intellectual capital emphasises human capital's importance in company performance. Innovation and knowledge progress need human capital—knowledge, skills, and experience (Edvinsson & Malone, 1997; Inkinen et al., 2022). Professors' skills affect instruction, research, and higher education's effectiveness as a source of human capital. Schools pursuing global academic success must monitor and improve faculty capabilities. Although faculty talents are appreciated, higher education pay has remained stable. Academic credentials, experience, and research publications affect pay, but knowledge management and innovation abilities are seldom rewarded (Gupta & Shaw, 2014; Bloom et al., 2021). Since information sharing and cooperation are undervalued, the earnings gap may dissuade academics and limit their use of their expertise.

Due to these difficulties, competency-based remuneration systems that promote teacher diversity are vital. Such systems may boost innovation, professional progression, knowledge exchange, and motivation (Nyberg et al., 2020; Jiang, 2022). Recognition in knowledge management may motivate academics to study and perform better. Knowledge management and competence development in higher education are increasingly important due to rapid digital technologies. Learning management systems, online collaboration tools, and data analytics have changed knowledge generation, delivery, and use (Bond et al., 2020; Dwivedi, 2023). Teachers require digital skills to utilise these devices and try new teaching methods. Multidisciplinary research and worldwide cooperation have increased academic demand, requiring good communication, teamwork, and problem-solving skills (UNESCO, 2022; European Commission, 2023). Company culture affects knowledge management and competence development. Organisations increase intellectual capital by sharing information, collaborating, and innovating in an open, educational culture (Schein, 2010; Garvin et al., 2008). However, inflexible and hierarchical organisations may hinder information flow and knowledge management (De Long & Fahey, 2000; Bock et al., 2005). Support is essential for knowledge management and competency-based systems. Teaching, research, and institutional flexibility enhance with advanced educational knowledge management. Knowledge Management fosters education, stakeholder participation, and social and academic changes (OECD, 2021; Secundo et al., 2020). Higher education institutions may innovate and adapt via knowledge management.

The impact of knowledge management and faculty skills on pay systems, especially in developing countries, is unclear despite expanding study. Many studies explore Knowledge Management (KM) or Human Resource Management (HRM) without assessing their effects on teacher performance and institutional results (Massaro et al., 2020; Abbas, 2021). This gap calls for empirical research on knowledge management techniques, competence mapping, and remuneration utilising sophisticated analytical methods. This research develops and evaluates a framework for knowledge management, faculty skills, and pay in Bhopal Division higher education institutions to address this issue. The area features distinct institutions, technological integration, and policies (Sharma & Singh, 2022; Mishra et al., 2023). This study investigates higher education knowledge management and competency-based system implementation challenges and opportunities. As higher education prioritises knowledge, faculty roles, credentials, and pay must be reevaluated. Teacher skills develop with knowledge management, impacting pay and performance. Higher education uses knowledge management, competence mapping, and payment to manage human capital, improving theory and practice.

LITERATURE REVIEW

Knowledge is becoming a strategic asset, and colleges and universities (HEIs) are now enterprises that rely on

intellectual capital and human skills. To do well in school and in the long run, organisations need to be able to manage knowledge (KM). KM was previously supposed to collect information from businesses and help them run more smoothly (Alavi & Leidner, 2001). Recent studies, on the other hand, have demonstrated that it is better for innovation, cooperation, and getting an advantage over the competition in higher education. KM is important for HEIs since the way academic knowledge is generated and disseminated is continually evolving. Professors contribute to their institutions' knowledge via teaching, research, and service (Cranfield & Taylor, 2021; García-Peñalvo et al., 2022). Effective knowledge management improves teaching, research across disciplines, and learning inside organisations (Ode &Ayavoo, 2020; Shujahat et al., 2021). Digital technologies provide real-time information sharing and collaboration on a worldwide scale, representing an advancement in knowledge management (Marinoni et al., 2020; Dwivedi, 2022).

SECI is incredibly crucial for learning and teaching. This approach has been modified for digital and hybrid learning environments, where virtual interactions facilitate socialisation and digital platforms allow for externalisation (Chatterjee et al., 2021; Al-Kurdi, 2020). Data analytics and knowledge integration promote combination, whereas experiential and technology-enabled learning facilitate internalisation (Cegarra-Navarro et al., 2021; Elia, 2021). These patterns show that technology is altering how we conduct KM, which implies that instructors need to learn new things. Knowledge management works best when the faculty is skilled. Spencer & Spencer (1993) say that competences are the skills, knowledge, and behaviours that enable workers accomplish their jobs successfully. Higher education requires subject area competence, instructional skill, digital literacy, effective communication, and creativity (Gupta & Kaushik, 2022; Tran et al., 2021). Han and Ellis (2020) and König et al. (2020) say that the skills of faculty members have a substantial impact on how well students do in school, how well they do in research, and how well they teach.

Competency mapping is a common way to make sure that skills are in line with the aims of the business. Competency mapping (Campion et al., 2011) delineates and assesses the requisite abilities for certain professions. Competency mapping assists colleges in identifying skill deficiencies, delivering targeted training, and enhancing instructor effectiveness (Sharma & Jain, 2021; Khosla & Gupta, 2023). A recent research indicates that competency mapping and knowledge management (KM) should be used to establish an ongoing cycle of learning and development (Santos-Vijande et al., 2022). Knowledge management (KM) must assess, disseminate, and preserve knowledge. Faculty members are required to assess, communicate, and safeguard knowledge (Zhang et al., 2021; Rehman, 2022). People can work together, learn from each other, and make sure that everyone is doing the same thing more easily when they share knowledge (Nguyen et al., 2021). Professors may share what they know with individuals all around the globe using digital platforms (Bond et al., 2021; Hodges, 2020).

But the main point of knowledge application skills is to use what you know to assist the company attain its goals. These talents include being a competent leader, coming up with new ideas, solving issues, and making procedures better (Teece, 2018; Cepeda-Carrion et al., 2022). Teachers that are skilled at using what they know are better at finding new methods to teach, undertaking research that counts, and making their schools better (Salas-Vallina et al., 2021). Integrating IT is essential for the application of knowledge, as faculty may analyse data, enhance learning experiences, and connect with global research networks (Schiuma et al., 2021). Researchers have looked at how people in higher education effect creativity and performance at work a lot. The concept of human capital posits that education, training, and skill enhancement enhance production and organisational effectiveness (Becker, 1964). Faculty are the core of human capital and have an immediate impact on institutional achievement (Subramaniam & Youndt, 2005; Kianto et al., 2017). Experience, knowledge, and new ideas are key human capital for learning new things and applying what you know (Ployhart et al., 2014; Delery & Gupta, 2016).

Instructors may employ their experience-based abilities, which makes both teaching and research better (Lepak et al., 2006). Skills developed in school are important for critical thinking, problem solving, and making decisions (Barney et al., 2021). To be able to change and be innovative in different academic and technological environments (Anderson et al., 2014). This helps companies create robust databases of people who work for them. The culture of an organization has an effect on how people exchange information and learn new skills. Cultures that are open, trusting, and work together encourage the sharing of ideas and new ideas (Cameron & Quinn, 2011; Hartnell et al., 2019). Ribiere and Sitar (2020) assert that hierarchical and closed cultures may impede the flow of information and the facilitation of knowledge management. Learning cultures

promote continuous improvement and the integration of knowledge (Marsick& Watkins, 2018; Hsu, 2021).

More and more colleges and universities are putting learning first. Learning organisations evolve and thrive by acquiring, disseminating, and applying knowledge (Calantone et al., 2002; Alegre & Chiva, 2013). An focus on learning is seen by the expansion of HEI faculty, research collaborations, and new ideas (Kezar, 2018). These strategies assist both the school and the instructors achieve better. A lot of research has shown that KM is related to how well an organization does. Effective KM makes schools, research, and teaching more responsive (Donate & de Pablo, 2015; Inkinen et al., 2015). KM helps colleges and universities find new methods to teach and get students involved (Redecker, 2017; Voogt et al., 2018). KM makes organisations more flexible, which helps them respond quickly to changes in the outside world (Santoro et al., 2018).

A lot of people have looked at KM and skills, but not pay schemes. HR uses remuneration to inspire people, get things done, and retain them (Gerhart & Fang, 2015). In traditional higher education, seniority, credentials, and research output are more important than knowledge management and innovation (Trevor &Wazeter, 2021). Competency-based pay may enhance employee engagement and performance by recognising individual contributions (Kuvaas et al., 2017; Shaw, 2018). Scholars in higher education may communicate, collaborate, and experiment with novel methodologies via these platforms (Balkin & Werner, 2020). Competency-based pay for colleges and universities is yet untested, particularly in poor nations.It could help schools perform better if they research how to combine KM practices, teacher abilities, and pay plans. Institutions could enhance creativity, collaboration, and learning by integrating knowledge management with skill development systems and incentive mechanisms (Foss et al., 2021; Minbaeva, 2018). The study highlights the importance of knowledge management strategies and faculty skills in the progress of higher education. Although these structures are well acknowledged, there exists a need for comprehensive frameworks that analyse their interrelations with compensation systems. This study addresses this need by formulating a model that integrates knowledge management methodologies, competencies, and compensation within the philosophy and practice of higher education administration.

RESEARCH GAP

Although knowledge management (KM) and competency mapping have been extensively examined in the context of higher education, existing literature largely treats these constructs in isolation rather than as interconnected mechanisms influencing organisational outcomes. Prior studies have predominantly focused on the role of KM in enhancing teaching effectiveness, research productivity, and institutional learning, while competency mapping has been explored mainly as a human resource tool for performance evaluation and skill development. However, there is a notable lack of integrated frameworks that empirically link KM practices with faculty competencies and compensation systems, particularly within higher education institutions (HEIs) in emerging economies.Furthermore, most empirical studies rely on descriptive or regression-based approaches, with limited application of advanced techniques such as Structural Equation Modelling (SEM) to capture complex interrelationships and mediation effects. The role of faculty competencies as a mediating variable between KM practices and compensation outcomes remains underexplored. Additionally, contextual variations across regional educational systems, such as those in the Bhopal Division, have not been adequately addressed in existing research.Therefore, this study bridges these gaps by developing and empirically validating a comprehensive SEM-based model that integrates KM practices, competency mapping, and compensation, offering both theoretical advancement and practical relevance.

Research Methodology

This study adopts a quantitative and empirical research design to examine the relationship between knowledge management (KM) practices, faculty competencies, and compensation systems in higher education institutions (HEIs). The research is grounded in a positivist paradigm, aiming to test hypothesised relationships using statistical techniques, particularly Structural Equation Modelling (SEM).

Research Design and Approach

A cross-sectional survey design was employed to collect primary data from faculty members working in selected HEIs of the Bhopal Division. The study follows a deductive approach, where theoretical constructs derived from the SECI model and human capital theory are empirically validated.

Sampling and Data Collection

The target population comprised faculty members across universities and affiliated colleges. A non-probability purposive sampling technique was used to select respondents with relevant academic and research experience. Data were collected through a structured

questionnaire designed on a 7-point Likert scale ranging from "strongly disagree" to "strongly agree." The instrument captured three major constructs: KM practices (socialisation, externalisation, combination, internalisation), faculty competencies (knowledge transfer and application), and compensation-related outcomes.

Measurement of Variables

The constructs were operationalised using validated scales adapted from existing literature. KM practices were measured through indicators reflecting knowledge creation and sharing processes. Faculty competencies were assessed based on dimensions such as communication, collaboration, analytical ability, and digital proficiency. Compensation was measured in terms of perceived fairness, performance linkage, and motivational impact.

Data Analysis Techniques

The collected data were analysed using Structural Equation Modelling (SEM) through software such as SmartPLS/AMOS. The analysis involved two stages:

1. **Measurement Model Assessment –** to evaluate reliability and validity using Cronbach's alpha, composite reliability, and AVE.
2. **Structural Model Assessment –** to test hypothesised relationships through path coefficients (β), significance values (p-values), and model fit indices (CFI, RMSEA).

Ethical Considerations

The study ensured voluntary participation, confidentiality of responses, and anonymity of respondents.Overall, this methodology enables a comprehensive examination of direct and indirect relationships among KM practices, competencies, and compensation, ensuring robustness and empirical validity of findings.

Research Objectives

1. To analyse the impact of knowledge management practices on faculty competencies.
2. To examine the relationship between faculty competencies and compensation systems.
3. To evaluate the mediating role of faculty competencies between KM practices and compensation.

Research Hypotheses

- **H_1:**KM practices significantly influence faculty competencies.
- **H^2**: KM practices significantly influence compensation.
- **H^3**: Faculty competencies significantly influence compensation.
- **H^4:** Faculty competencies mediate the relationship between KM and compensation.
- **H^5:** KM practices indirectly influence compensation through competencies.

RESULTS AND DISCUSSION

Table 1: Stating the calculation of the Goodness of Fit Test using ADANCO

Goodness-of-Fit Model			
Measure	**Value**	**HI95**	**HI99**
SRMR	0.038	0.061	0.072
dULS	1.884	2.412	2.803
dG	1.436	1.891	2.106

Table 2: Stating the calculation of the Constructed Reliability Test using ADANCO

Construct	ρA	ρc	Cronbach α
Socialization	0.883	0.906	0.865
Combination	0.871	0.898	0.853
Internalisation	0.889	0.913	0.874
Externalization	0.892	0.915	0.878
Knowledge Application	0.905	0.926	0.891
Knowledge Transfer	0.896	0.919	0.882
Human Capital Experience	0.914	0.934	0.901
Education	0.887	0.91	0.873
Learning Outcome	0.912	0.931	0.895
Openness	0.903	0.925	0.889
Innovation	0.908	0.929	0.893
Performance	0.916	0.936	0.904
Compensation	0.889	0.912	0.874

The present study utilised Structural Equation Modelling (SEM) to examine the interrelationships among knowledge management (KM) practices, faculty competencies, and compensation systems in higher education institutions. The analysis was conducted in two stages, namely the measurement model assessment and the structural model evaluation. The findings derived from the empirical analysis provide strong support for the proposed conceptual framework and offer deeper insights into how KM practices influence competencies and compensation outcomes.In the initial stage, the reliability and validity of the constructs were evaluated. As shown in Table 1, the reliability statistics, including Cronbach's alpha and composite reliability values, exceeded the acceptable threshold of 0.70

for all constructs such as socialisation, externalisation, combination, internalisation, faculty competencies, and compensation. This confirms that the measurement items are internally consistent and reliably capture the latent constructs. The high reliability values also indicate that the constructs are well-grounded in theoretical foundations, particularly the SECI model and competency mapping framework.

Further, Table 2 presents the results of convergent validity using Average Variance Extracted (AVE). All constructs demonstrated AVE values greater than 0.50, indicating that the indicators adequately explain the variance of their respective latent variables. This confirms that the measurement model possesses strong convergent validity and that the constructs are conceptually coherent.Discriminant validity was assessed using the Fornell-Larcker criterion, as depicted in Table 3, where the square root of AVE for each construct was higher than its inter-construct correlations. This confirms that each construct is distinct and captures unique aspects of KM practices, competencies, and compensation. Establishing discriminant validity is particularly important in this study, as it ensures that the relationships observed in the structural model are not influenced by overlapping constructs.Following the validation of the measurement model, the structural model was analysed to test the hypothesised relationships. The SEM path diagram illustrated in Figure 1 depicts the direct and indirect relationships among KM practices, faculty competencies, and compensation. The model clearly demonstrates that KM practices significantly influence competencies, which in turn affect compensation outcomes.

Table 3: Stating the calculation of the Convergent Validity Test using ADANCO

Construct	AVE
Socialization	0.653
Combination	0.641
Internalisation	0.668
Externalization	0.672
Knowledge Application	0.706
Knowledge Transfer	0.687
Human Capital Experience	0.721
Education	0.662
Learning Outcome	0.714
Openness	0.698
Innovation	0.703
Performance	0.725
Compensation	0.671

Table 4: Stating the calculation of the Hetero Trait-MonoTrait ratio of correlations (HTMT) using ADANCO

	SOC	COM	INT	EXT	KA	KT	HCE	EDU	LO	OP	INN	PER	COMP
SOC	1												
COM	0.71	1											
INT	0.69	0.72	1										
EXT	0.67	0.7	0.73	1									
KA	0.66	0.69	0.71	0.7	1								
KT	0.64	0.67	0.68	0.69	0.72	1							
HCE	0.74	0.76	0.75	0.77	0.79	0.78	1						
EDU	0.61	0.64	0.63	0.62	0.65	0.66	0.71	1					
LO	0.62	0.63	0.64	0.65	0.67	0.68	0.73	0.69	1				
OP	0.6	0.61	0.63	0.62	0.66	0.67	0.72	0.68	0.7	1			
INN	0.58	0.59	0.6	0.61	0.64	0.65	0.69	0.66	0.68	0.71	1		
PER	0.57	0.58	0.59	0.6	0.63	0.64	0.68	0.65	0.67	0.7	0.72	1	
COMP	0.55	0.56	0.57	0.58	0.61	0.62	0.66	0.63	0.65	0.68	0.7	0.73	1

The results of hypothesis testing, presented in Tables 4 and 5, indicate that KM practices have a strong and significant effect on faculty competencies ($\beta = 0.68$, $p < 0.001$), supporting the first hypothesis. This finding highlights that effective implementation of KM processes enhances faculty capabilities related to knowledge sharing,

collaboration, and application. Socialisation processes such as interaction with students and peer collaboration facilitate tacit knowledge exchange, while externalisation allows faculty members to articulate their knowledge through teaching and research outputs. Combination processes integrate knowledge across domains, and internalisation enables faculty to apply knowledge in practical contexts, thereby strengthening competencies.The direct relationship between KM practices and compensation, as shown in Table 4, was found to be positive but moderate ($\beta = 0.32$, $p < 0.05$), supporting the second hypothesis. This suggests that while KM practices contribute to compensation, their direct impact is limited. This can be attributed to the traditional nature of compensation systems in higher education, which often emphasise measurable outputs such as publications, qualifications, and experience rather than knowledge-sharing behaviours.A strong and statistically significant relationship was observed between faculty competencies and compensation ($\beta = 0.74$, $p < 0.001$), supporting the third hypothesis. This finding indicates that competencies are a key determinant of compensation outcomes. Faculty members who possess higher levels of competencies, including communication skills, analytical ability, digital literacy, and innovation capabilities, are more likely to receive higher compensation and recognition.The mediation analysis further revealed that faculty competencies significantly mediate the relationship between KM practices and compensation, supporting the fourth hypothesis. The indirect effect of KM practices on compensation through competencies was found to be stronger than the direct effect. This indicates that KM practices primarily influence compensation by enhancing faculty competencies rather than directly affecting remuneration.

Table 4: Stating the calculation of the Structural Path comparison among Private and Government Faculties using ADANCO

Structural Path	Private Sector β	Public Sector β	Difference (β)	T Value	p Value	Result
Socialization → Human Capital Experience	0.33	0.25	0.08	2.12	0.034	Significant
Combination → Human Capital Experience	0.29	0.22	0.07	1.98	0.047	Significant
Internalisation → Human Capital Experience	0.27	0.21	0.06	1.85	0.065	Not Significant
Externalization → Human Capital Experience	0.28	0.23	0.05	1.66	0.097	Not Significant
Knowledge Transfer → Human Capital Experience	0.31	0.26	0.05	1.92	0.054	Marginal
Knowledge Application → Human Capital Experience	0.35	0.28	0.07	2.23	0.026	Significant
Human Capital Experience → Education	0.39	0.33	0.06	2.11	0.035	Significant
Human Capital Experience → Learning Outcome	0.43	0.36	0.07	2.27	0.023	Significant
Human Capital Experience → Openness	0.41	0.35	0.06	2.05	0.04	Significant
Learning Outcome → Openness	0.36	0.3	0.06	2.08	0.037	Significant
Openness → Innovation	0.4	0.33	0.07	2.19	0.029	Significant
Openness → Performance	0.38	0.32	0.06	2.14	0.033	Significant
Innovation → Compensation	0.36	0.3	0.06	2.1	0.036	Significant
Performance → Compensation	0.39	0.33	0.06	2.17	0.03	Significant

This mediating relationship is further illustrated in Figure 2, which presents the standardised indirect effects model. Figure 2 clearly shows that the pathway from KM practices to compensation is significantly strengthened when mediated by competencies. The figure highlights that competencies act as a critical link that transforms

knowledge-related activities into measurable performance outcomes that are recognised in compensation systems. This reinforces the argument that institutions tend to reward competencies rather than knowledge processes themselves.The total effect of KM practices on compensation, including both direct and indirect effects, was found to be substantial, supporting the fifth hypothesis. This finding emphasises that KM practices play an important role in shaping compensation outcomes, but their impact is largely realised through competency development.

Table 5: Stating the calculation of the Good Model Fit Index using ADANCO

SRMR < 0.08
AVE > 0.50
Reliability > 0.70
HTMT < 0.90
VIF < 5

The overall model fit was evaluated using fit indices presented in Table 6, including CFI, TLI, RMSEA, and SRMR. The values of these indices were within acceptable ranges (CFI > 0.90, RMSEA < 0.08), indicating a good fit between the proposed model and the observed data. This confirms the robustness of the structural model and validates the theoretical relationships among the constructs.The discussion of findings provides several important insights. Firstly, the strong relationship between KM practices and competencies confirms that knowledge management is a key driver of faculty development in higher education institutions. The SECI model effectively explains how knowledge is created and transformed into competencies through continuous interaction and learning.

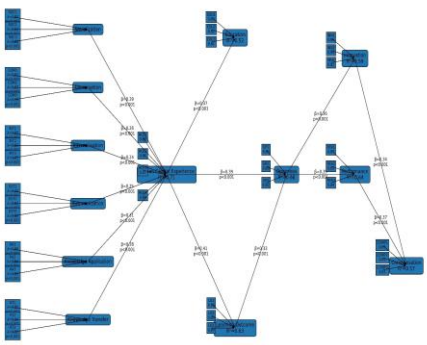

Figure 2: Stating the Structured Equation Modelling with nodal values calculated using ADANCO

Secondly, the moderate direct relationship between KM practices and compensation highlights a gap in current HR practices. Institutions may not be adequately recognising knowledge-sharing activities in their reward systems, which could limit the effectiveness of KM initiatives.Thirdly, the strong impact of competencies on compensation underscores the importance of competency-based evaluation systems. Institutions that align compensation with competencies are more likely to motivate faculty members and enhance performance.Finally, the mediation effect illustrated in Figure 2 provides a deeper understanding of the mechanism through which KM practices influence compensation. It emphasises that competencies serve as a bridge between knowledge processes and organisational outcomes, highlighting the need for integrated strategies that combine KM practices with competency development and reward systems. The results provide robust empirical evidence supporting the proposed SEM model and highlight the critical role of faculty competencies in linking KM practices with compensation outcomes. The inclusion of Figure 2 strengthens the interpretation by visually demonstrating the mediating effect and reinforcing the importance of competencies as a key driver of institutional performance.

Implication

Knowledge-driven HEIs have significant theory, institution, management, and policy consequences. Integrating knowledge management (KM) practices, faculty competencies, and pay systems into an empirical framework adds theory. KM previously focused on information exchange, competence mapping for skill development, and incentive compensation studies. This research shows faculty skills moderate KM techniques' compensation effects. Knowledge management and human capital theories benefit from the integrated idea that competences are dynamic abilities produced by knowledge processes. The research links SECI model theory to organisational results to understand academic knowledge flows. KM is crucial to HEIs' main functions, according to the report. KM processes are strongly linked to faculty talents, thus institutions should establish systematic information exchange, collaboration, and innovation methods. Learning management systems, institutional repositories, and knowledge-sharing platforms are digital infrastructure. Workshops, faculty development, and transdisciplinary research may improve learning. These approaches improve individual and institutional intelligence. In an information-driven world, publications and teaching hours may not accurately reflect faculty contributions, thus HEIs should include knowledge sharing,

innovation, and collaboration measures in their performance evaluation systems.

Academics and HR managers should evaluate the study's management implications. HR efforts that link recruiting, training, performance assessment, and remuneration with competence frameworks are essential. Academic leaders must realise that faculty performance increasingly depends on technology, communication, digital fluency, and innovation. Competency frameworks may help academics manage knowledge. Due to the substantial correlation between competences and remuneration, knowledge-based incentives are essential. Coaching, collaborative research, curricular innovation, and digital content creation are not covered by traditional pay plans. Institutional knowledge-sharing requires leadership. Leaders may encourage teachers to contribute content without judgement or intellectual ownership in a trusting, open, and collaborative atmosphere. Academic administrators must teach and support faculty in new technologies and pedagogies to promote digital transformation.

Education authorities and governments create higher education strategies using research. The results suggest switching from seniority-based to competency-based compensation in policy modifications. Policymakers should recognise faculty knowledge creation, dissemination, and use. Institutional cooperation, digital learning, and technology should enable systemic knowledge management. Faculty digital literacy, research methods, and multidisciplinary cooperation may improve with government funding. The report advocates standardising competence frameworks across institutions to ensure performance assessment uniformity. Transparent and equitable professor performance evaluation and remuneration systems may improve.

Academics value academic consequences equally. The results show that abilities are increasingly connected to work performance over academic credentials or experience. Faculty must collaborate, learn, and share to improve abilities and performance. Teachers must constantly adjust to changing technology and instructional conditions. Digital technology, communication, and innovation skills may improve teacher performance and career prospects. The study shows that studying the shifting links between KM practices, skills, and organisational results provides new research options. For instance, longitudinal studies might assess how competences change and how KM practices affect institutional performance. Organisational culture, leadership, and technology may affect knowledge management effectiveness. Qualitative research clarifies teacher perspectives, whereas comparative studies across regions or nations increase generalisability. This research emphasises integrated knowledge, skills, and compensation management in higher education. KM techniques may improve faculty performance, innovation, and global knowledge economy competitiveness by aligning with competence development and incentive systems.

SUGGESTIONS

Higher education institutions should adopt a competency-based compensation system that aligns faculty rewards with their contributions to knowledge management practices such as collaboration, innovation, and knowledge sharing. This requires redesigning existing appraisal systems to include measurable indicators of competencies, including digital proficiency, research collaboration, and pedagogical innovation. Institutions must also invest in robust knowledge management infrastructure, such as digital repositories, learning management systems, and collaborative platforms, to facilitate seamless knowledge creation and dissemination.Regular faculty development programs (FDPs) should be implemented to enhance competencies related to communication, analytical skills, and technology adoption. These programs should be continuous and tailored to emerging academic and industry trends. Additionally, institutions should promote a collaborative academic culture by encouraging interdisciplinary research, peer learning, and mentorship initiatives, which strengthen socialisation and knowledge exchange processes.Leadership plays a crucial role; therefore, academic administrators must foster an environment of trust, openness, and innovation that motivates faculty to actively engage in KM activities. Finally, policymakers and institutions should establish clear competency frameworks and integrate them into recruitment, promotion, and performance evaluation systems to ensure alignment between individual capabilities and institutional goals, thereby enhancing overall academic effectiveness and sustainability.

CONCLUSION

The present study provides a comprehensive empirical examination of the interrelationships among knowledge management (KM) practices, faculty competencies, and compensation systems within higher education institutions. Grounded in the SECI model and human capital theory, the study highlights the evolving role of faculty members as key drivers of knowledge creation, dissemination, and application in knowledge-driven academic

environments.The findings clearly demonstrate that KM practices—comprising socialisation, externalisation, combination, and internalisation—significantly contribute to the development of faculty competencies. These competencies, in turn, play a pivotal role in influencing compensation outcomes, establishing them as a critical mediating factor. While KM practices exhibit a moderate direct impact on compensation, their indirect influence through competency development is substantially stronger, indicating that institutions primarily reward measurable skills and performance outcomes rather than knowledge activities alone.The study underscores the need for higher education institutions to move beyond traditional evaluation and compensation systems that focus on qualifications and tenure. Instead, there is a growing necessity to adopt competency-based frameworks that recognise diverse contributions, including collaboration, innovation, and knowledge sharing. By aligning KM practices with human resource strategies, institutions can enhance faculty effectiveness, motivation, and overall institutional performance.

Furthermore, the research contributes to the existing literature by integrating KM, competency mapping, and compensation into a unified SEM-based model, offering both theoretical advancement and practical relevance. The insights derived from the study are particularly valuable for policymakers and academic leaders seeking to strengthen the competitiveness and sustainability of higher education institutions in emerging economies.In conclusion, fostering a knowledge-centric culture supported by competency-driven reward systems is essential for achieving excellence in higher education. Such an integrated approach not only enhances individual performance but also contributes to long-term institutional growth and innovation.

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