

## **Knowledge Sharing Strategies and their Effect on Research Collaboration in Universities in Katsina State**

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### **Abstract**

The study examines Knowledge Sharing Strategies and their Effect on Research Collaboration in Katsina State universities which include Umaru Musa Yar'adua University, Federal University Dutsinma and Alqalam University. The study intended to assess the current states of Knowledge sharing strategies within universities in Katsina State focusing on formal and informal mechanisms, to examine the effectiveness of Knowledge sharing strategies in enhancing research collaboration among academic staff and researchers in universities in the State, and identify the challenges associated with knowledge sharing strategies in research collaboration in the university under study. Knowledge creation and sharing model was used for this study. Positivism research paradigm and survey research design were employed in carrying out the study. The population of this study comprised 1465 academic staff in the study area. A sample of 303 respondents was drawn based on by Krejcie and Morgan (1970) table. Questionnaire was used as the research instrument to collect data. The quantitative data collected was analyzed using descriptive analysis .The findings revealed that knowledge-sharing strategies in universities in Katsina State have a strong preference for several strategies which are widely agreed upon as effective. The finding also revealed that the use of knowledge sharing strategies in Katsina State universities significantly foster innovation, improve learning outcomes, research sharing, teaching quality, problem-solving, collaboration, and job satisfaction, highlighting their crucial role in advancing academic development. The finding revealed that Katsina State universities, in knowledge sharing strategies face significant challenges including extracting tacit knowledge, time constraints, and establishing a supportive culture. The study therefore, recommended that by latest technology, adequate training, incentives, awareness, and provision of formal sharing channels could produce positive effect on the research collaboration in academic development efforts in Katsina state universities.

**Keywords:** knowledge sharing, universities, knowledge creation, strategies

### **Introduction**

Knowledge sharing within universities is a critical factor in promoting collaboration in research, fostering innovation, and enhancing the overall academic environment. In recent years, there has been an increasing focus on developing effective knowledge-sharing strategies to address the growing complexity of research and the

interdisciplinary nature of academic work (Afolabi & Adekola, 2018; Pilerot, 2012). Knowledge sharing is the movement of knowledge among academic in universities to help others and to collaborate with others for problem solving, develop new ideas or implement policies or procedures. It is also the process by which the knowledge processed understood and used by other individuals, and which is beneficial for all (Wang & Neo, 2010 in Mohajan, 2019). Universities are knowledge-intensive organizations where the dissemination and exchange of knowledge are essential for academic and research excellence (Levin & Cross, 2004).

However, According to Ling et al. (2009) the importance of Knowledge Sharing in Knowledge Management cannot be overrated. Knowledge Sharing and knowledge transfer are interlinked and hard to be separated (Al-Kurdi et al., 2018), as the difference between the two terms is obscure (Bartol & Srivastava, 2002). Thus, in this study, Knowledge Sharing is conceptualized as the exchange of knowledge among academic staff in universities, in turn creates more new knowledge (Al-Kurdi et al., 2018).

Knowledge Sharing strategies in universities have grown from the usual meetings, group discussions, and conferences to include the integration of technology (Yusof et al., 2015). These upcoming strategies formulate Knowledge Sharing groups that bear the descriptions of a Community of Practice (Cops) or virtual CoPs (VCoPs) as essential Knowledge Sharing forums for Universities, Knowledge Sharing helps in solving problems, thorough interactions, and exchange of ideas (Wang & Noe, 2010). Knowledge Management is seen as a tool that utilizes Knowledge Sharing for effective transfer of knowledge, intellectual capital management (I.C.M.), innovation, knowledge generation, and knowledge is focused at users.

Similarly (Yang 2007), in his study on organizational learning, found that sharing is beyond mere data collection and information but aimed at increasing knowledge sharing, other benefits include: innovation, reduced production costs, efficiency and, team performance leading to improved decision making. Studies have attributed this to quick solutions to problems, efficient learning, knowledge preservation, better investment returns, facilitation in repository building, and competition power (Ling et al., 2009; Adamseged & Hong, 2018). Generally, Knowledge Sharing enhances the quality of education through collaborations in particular, specific contexts such as Community of Practice, which are core to knowledge

creation and sharing for the success of an organization (Jeon et al., 2011).

Generally most academics are individualistic; there is low understanding of Knowledge Management Higher Institution of Learning (Slay et al., 2008; Fullwood et al., 2013). Academicians, as knowledge workers, utilize many strategies in Knowledge Management. However, they need to share their knowledge by forming expert social networks (CoPs), which effectively help harness knowledge creation and sharing. CoPs can be enhanced by embracing technology in KS (Annabi & McGann, 2013). However, Institution of Higher Learning lacks enabling knowledge sharing policies (Santos & Sanjaya, 2016; Abbas, 2017; Chikono, 2018). This means Knowledge sharing amongst Community of Practice lacks a strategic approach, and hence, Knowledge Sharing is mainly informal (Wenger, 2000).

Knowledge sharing strategies in universities consist of both formal and informal approaches. Formal methods, such as workshops, seminars, and conferences, provide platforms for researchers to present their findings, gain feedback, and build networks (Nonaka & Takeuchi, 1995). Informal methods, often facilitated by digital tools and social media, allow for continuous dialogue and the rapid exchange of ideas (Kumar & Ganesh, 2009). These strategies significantly contribute to research collaboration by enhancing communication among researchers, promoting knowledge co-creation (Cummings & Kiesler, 2005), and providing diverse perspectives essential for addressing complex research issues (Wenger, McDermott, & Snyder, 2002). Additionally, they help to foster a culture of trust and respect, which is keys to sustained collaboration (Levin & Cross, 2004).

Recent advances in information technology have transformed knowledge sharing in universities. Digital platforms, collaborative software, online databases, and social media now allow for real-time communication and global information exchange (Pilerot, 2012). The emergence of open-access journals and repositories has further enhanced the dissemination of research findings, enabling broader collaboration (Suber, 2012).

Therefore, the rationale behind this study is to explore the current states and effectiveness of knowledge-sharing strategies in universities within Katsina State and how these strategies impact research collaboration, innovation, and academic excellence. Given the global emphasis on knowledge exchange for academic advancement, it is

crucial to assess whether institutions in Katsina are adopting these strategies effectively and the barriers they may face in this regard. This research aims to provide insights into how knowledge-sharing can be improved to boost research outputs and contribute to sustainable development in the region. The researcher adopts a quantitative research method to gather data on knowledge-sharing strategies and their effects of research collaboration in universities. A statistical analysis was conducted to evaluate the effectiveness of different strategies and identify potential areas for improvement.

Knowledge Creation and Sharing Model KCS enabled the researcher in analyzing of Knowledge Sharing strategies, or forums and the integration of technology, which appropriately informed the study. Research collaboration and knowledge sharing are fundamental to advancing academic discourse and promoting innovation within higher education institutions globally (Bucciarelli et al., 2020; Holste & Fields, 2021). According to (Abubakar & Kabir 2022) knowledge sharing is considered as a process of transferring knowledge such as skills, experiences and understandings between individuals, groups and organizations. The authors went further to state that universities are becoming more conversant with knowledge sharing.

In India, a survey by (Santos & Sanjaya 2016) in a Mega Open University explored knowledge sharing among academia. The findings showed that knowledge sharing was merely a voluntary act and not formalized. However, the institutions sharing of learning methodologies and materials were externally drawn from the internet and not from the wealth of knowledge from colleagues (CoPs). Thus, the main challenge associated with Knowledge Sharing in academia was the lack of a KS policy. The study also revealed that the most preferred Knowledge Sharing strategy was publishing research articles, which concurred with earlier findings in UK Universities (Fullwood et al., 2013).

Research in Africa depicts a similar picture of the above phenomenon. In a study of Zimbabwe Open University, (Chikono 2018) reported the willingness of the faculty to engage in Knowledge Sharing activities. However, the lack of a Knowledge Sharing policy was an inhibitor as earlier exposed by (Santos & Sanjaya 2016). (Chikono 2018) recommended the design and development of a K.S. policy in developing countries. (Hussein & Nassuora 2011) asserts that, a Knowledge Sharing policy is a key tool for enhancing Knowledge Sharing. A study of South African universities revealed that

universities created an individualistic environment (Slay et al., 2008) which was associated with activities geared towards explicit learning (publish or perish) and not collaborative learning. The study also emphasized on Knowledge Sharing in CoPs where the exchange of information among the faculty.

According to (Abbas 2017), the Nigeria delved into Knowledge Sharing strategies and reported that conferences, workshops, and seminars were common strategies among faculty members. He also recommends the adoption of new technologies as a potential tool to enrich Knowledge Sharing through teaching and research. This narrows down the literature to the attachment of Information Technology application to sharing knowledge in CoPs/VCoPs. However, knowledge is well recognized as a critical asset in the Knowledge Economy, it is most important when shared through Information Technology.

Knowledge sharing strategies involve a variety of formal and informal methods aimed at facilitating the exchange of ideas, expertise, and resources among researchers (Babalola, 2020). Formal strategies such as workshops, seminars, and conferences offer structured platforms for sharing research findings and fostering interdisciplinary collaboration (Ponomariov & Boardman, 2018). Informal strategies, like peer-to-peer interactions and communities of practice, encourage continuous learning and innovation through less structured networks (Oluwatobi & Muhibat, 2022).

Effective knowledge management strategies are essential for promoting academic development and research excellence within universities (Adisa et al., 2020). These strategies encompass the creation, dissemination, and utilization of knowledge assets to boost organizational performance and competitiveness (Kwakman et al., 2023). In the context of Katsina State's higher education institutions, adopting robust knowledge management practices is crucial for addressing resource limitations and building a collaborative research culture.

The adoption of knowledge-sharing strategies is increasingly acknowledged as a catalyst for academic growth and research productivity in universities (Ojo & Oladele, 2019). Facilitating the exchange of tacit and explicit knowledge among faculty members and researchers helps promote innovation and improve the quality of scholarly outputs (Bucciarelli et al., 2020). However, the success of these strategies depends on several factors, including institutional

support, technological infrastructure, and cultural factors that influence knowledge-sharing behaviors (Holste & Fields, 2021).

Studies show that universities can leverage knowledge management and sharing strategies to enhance academic outcomes (Chuang et al., 2016). By investing in digital platforms, collaborative tools, and capacity-building programs, institutions can create environments conducive to knowledge creation and dissemination (Alavi & Leidner, 2001). For higher education institutions in Katsina State, integrating these strategies into institutional practices is essential to promote research collaboration and establish themselves as centers of innovation and knowledge creation.

The advantages of effective knowledge management and sharing strategies include increased research productivity, enhanced interdisciplinary collaboration, and improved student learning outcomes (Kou et al., 2021). By fostering a culture of collaboration and knowledge sharing, universities can achieve sustainable growth and remain competitive in the global academic environment (Olabode et al., 2023).

Despite the potential benefits, knowledge management and sharing strategies face several challenges in their implementation (Babalola, 2020). Key challenges include cultural resistance to sharing information, lack of incentives for collaboration, and insufficient technological infrastructure (Ponomariov & Boardman, 2018). Overcoming these obstacles requires a comprehensive approach involving organizational support, policy interventions, and capacity-building initiatives to create an environment conducive to knowledge sharing and research collaboration (Oluwatobi & Muhibat, 2022).

### **Statement of the Problem**

Knowledge sharing is a critical component in fostering research collaboration within academic institutions, as it enhances information exchange, promotes innovation, and ensures the collective growth of research outputs. However, despite the increased recognition of the importance of Knowledge sharing and research collaboration among higher institutions, during preliminary study conducted by the researcher, it was observed that effective knowledge-sharing strategies are still underexplored and underutilized in universities in Katsina State and also existing literature reveals significant gaps and challenges that hinder optimal collaboration and knowledge sharing among academics in Nigeria. Although formal mechanisms like

workshops and seminars are essential for promoting interdisciplinary collaboration and innovation, they are often sporadic and poorly integrated into institutional practices (Smith & Taylor 2021). Inadequate digital infrastructure, limited awareness of knowledge-sharing platforms, institutional silos, and a lack of policies encouraging collaboration may affect the quality and quantity of research outputs (Eze, Akande & Onwuka 2022). They emphasized that one major issue that affects knowledge sharing and collaboration is the lack of comprehensive frameworks and systematic strategies for knowledge sharing within and across institutions in Nigeria and also Technological infrastructure limitations further restrict effective knowledge sharing in higher education institutions in the country. The insufficient availability of digital platforms and tools necessary for seamless communication and information exchange impedes the progress of collaborative research. (Ahmad et al. 2020) noted that in Nigerian universities, the lack of robust communication channels and trust among researchers significantly impedes knowledge-sharing and collaboration. Similarly, (Salisu & Gani 2018) highlighted that insufficient training in digital tools for knowledge exchange limits researchers' ability to collaborate effectively.

Addressing these challenges requires a multi-prolonged approach. For instance, universities must establish policies that reward collaborative efforts, foster partnerships with international research institutions, and invest in technology to bridge the digital divide. Additionally, there is a need for continuous training and awareness campaigns to embed knowledge-sharing practices into institutions. Without these interventions, the potential for research collaboration in Katsina State may remain untapped, limiting the contribution of universities to societal development and innovation.

There is a need for a deeper understanding of the current states knowledge-sharing strategies in Katsina State's universities. The development of tailored strategies that foster a culture of collaboration will enhance research outcomes. This study aims to evaluate the effectiveness of existing knowledge-sharing strategies and explore their impact on research collaboration among academics in Katsina State, providing insights and recommendations for improvement.

### **Objectives**

1. To assess the current states of Knowledge sharing strategies within the universities in Katsina State focusing on formal and informal mechanisms

2. To examine the effectiveness of Knowledge sharing strategies in enhancing research collaboration among academic staff in universities in Katsina state
3. To identify the challenges associated with optimal knowledge sharing strategies and research collaboration in Universities in Katsina State

### Methodology

The Study guided by Positivism Research paradigm and Knowledge Creation and Sharing model (KCS), Quantitative research was used for this study. The Study adopted survey research. The target population of this study comprised academic Staff of the universities under study (UMYU, FUDMA and ALQALAM). A total of three hundred and thirty (303) questionnaires were distributed to the respondents which was drawn from Krejcie and Morgan table in the universities under study, and two hundred and fifty-one (251) questionnaires were duly completed and returned as shown in Table:

**Table 1:** Population

S/NO	Name of University	No. of Quest. distributed		No. of Questionnaire Returned		No. of Questionnaire not Returned	
		Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
1	UMYUK	110	91	82.7	19	17.3	
2	FUD-MA	132	107	81.1	25	18.9	
3	AL-QALAM	60	52	86.7	8	13.3	
	TOTAL	303	251	87.6	52	12.4	

### Result and Discussion

This presents and analyses the empirical data obtained from the respondents. This was in an attempt to answer the research questions of the study. The data presented in this section was drawn from questionnaires administered to the respondents. This was in an attempt to answer the research questions that deals with Knowledge sharing strategies and their effect on research collaboration in universities in Katsina state.

**Table 2:** Response rate of assess on the current states of Knowledge sharing strategies within the universities in Katsina State

Items	SD		D		UD		A		SA		Mean		ST D	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
Re use of knowledge through codification strategy	75	29.9	126	50.2	0	0	50	19.9	0	0	2.20	1.05		
Creating values for users	0	0	26	10.4	10	39.8	75	29.9	50	19.9	3.5	.92		
Creating coherence among colleagues	51	20.3	75	29.9	25	10.0	10	39.8	0	0	2.6	1.1		



Deepening research and learning processes	0	0	75	29.9	0	0	15	60.	2	10.	3.5	1.0
Application of skills to build new knowledge	0	0	75	29.9	25	10.0	12	50.	2	10.	3.4	1.0
Scaling innovation	75	29.9	101	40.2	0	0	75	29.	0	0	2.3	1.1
Engagement with senior colleagues on critical discourse	75	29.9	101	40.2	0	0	75	29.	0	0	2.3	1.1
Supporting existing structure	25	10.0	50	19.9	0	0	10	40.	7	29.	3.6	1.3
Competencies and culture of the Faculty	10	10.0	75	29.9	0	0	10	40.	5	19.	3.3	1.3
Knowledge audit on quarterly basis	76	30.3	125	49.8	25	10.0	25	10.	0	0	1.2	.90
Creating and sustaining knowledge bank	10	39.8	0	0	25	10.0	76	30.	5	19.	2.9	1.6
Facilitating interrelated committee work	52	20.7	127	50.6	12	4.8	60	23.	0	0	2.3	1.0
Training and retraining of staff	50	19.	50	19.9	25	10.0	10	40.	2	10.	3.2	1.7
Community development projects	10	41.0	76	30.3	12	4.8	24	9.6	3	14	2.0	1.1
Deepening research articles, books and monographs	52	20.7	38	15.1	12	4.8	11	45.	3	14.	3.1	1.4
Monitoring and support through corporate governance	25	10.0	26	10.4	0	0	10	39.	1	39.	4.0	.95
Maintaining policy for decision-making	14	56.2	12	4.8	24	9.6	36	14.	3	15.	2.6	1.0
Provision of efficient and effective KM entities	0	0	24	9.6	12	4.8	18	75.	2	10	3.8	.72
Universal access to information and knowledge	52	20.7	38	15.1	12	4.8	11	45.	3	14.	3.1	1.4
Managing people's intellect	38	15.	52	20.7	12	4.8	11	45.	3	14.	3.1	1.4
Ensuring that ICT facilities are available and accessible	10	10.0	75	29.9	0	0	10	40.	5	19.	3.3	1.3
Intensive face-to-face communication amongst colleagues	64	25.5	52	20.7	24	9.6	75	29.	3	14.	3.1	1.2

Keys: SD= strongly disagree -1; D= Disagree -2; UD= Undecided -3; A= Agree -4; SA= strongly agree -5  
 (Source: Filed data, 2024)

The analysis of the findings from the table highlight the knowledge sharing strategies status currently employed within universities in Katsina State. The respondents generally agree (mean > 3.00) with several strategies, including creating values for users, deepening research and learning processes, applying skills to build new knowledge, supporting existing structures, enhancing faculty competencies and culture, training and retraining staff, deepening research publications, monitoring and support through corporate governance, providing efficient and effective KS entities, ensuring universal access to information and knowledge, managing people's intellect, ensuring the availability and accessibility of ICT facilities, and promoting intensive face-to-face communication among colleagues. Conversely, strategies such as reusing knowledge through codification, creating coherence among colleagues, scaling innovation, engaging with senior colleagues on critical discourse, conducting quarterly knowledge audits, creating and sustaining a knowledge

bank, facilitating interrelated committee work, managing community development projects, and maintaining decision-making policies received mean scores below 3.00, indicating disagreement and highlighting areas needing improvement.

**Table 3:** Responses rate on the effectiveness of Knowledge sharing strategies in enhancing research collaboration among academic staff and researchers in universities in Katsina state

Items	SD		D		UD		A		SA		X		STD	
	F	%	F	%	F	%	F	%	F	%	F	%	F	%
More effective decision-making	75	29.9	25	10.0	0	0	0	0	126	50.2	25	10.0	3.40	1.02
Improved organizational efficiency	50	19.9	0	0	0	0	0	0	151	60.2	50	19.9	3.80	.98
Increased institutional reputation	0	0	50	19.9	0	0	0	0	176	70.1	25	10.0	3.70	.900
Improved access to knowledge resources	25	10.0	50	19.9	0	0	0	0	101	40.2	75	29.9	3.60	1.35
Stronger relationships with external partners	75	29.9	126	50.2	0	0	0	0	25	10.0	25	10.0	2.20	1.25
Increased collaboration between staff and students	64	25.5	52	20.7	24	9	9	75	29.9	36	14.3	3.19	1.20	
Enhanced learning outcomes	38	15.1	52	20.7	12	4	4	113	45.0	36	14.3	3.17	1.41	
Development of new ideas and innovations	12	4.8	0	0	0	0	0	166	66.1	73	29.1	4.24	.53	
Increase sharing of research findings	0	0	24	9.6	12	4	4	189	75.3	25	10.0	3.86	.72	
Improved quality of teaching	13	5.2	36	14.3	0	0	0	190	75.7	12	4.8	3.71	.77	
Improved understanding of complex issues	0	0	75	29.9	0	0	0	126	50.2	50	19.9	3.60	1.11	
Increased capacity to solve problems	36	14.3	13	5.2	0	0	0	190	75.7	12	4.8	3.71	.77	
Greater adaptability to change	25	10.0	75	29.9	0	0	0	126	50.2	25	10.0	3.40	1.02	
Improved sharing of knowledge easily and job satisfaction	64	25.5	52	20.7	24	9	9	75	29.9	36	14.3	3.19	1.20	

(Source: Field Data, 2024)

X=mean; SD= strongly disagree -1; D= Disagree -2; UD= Undecided -3; A= Agree -4; SA= strongly agree -5

The analysis of the findings indicates that research collaboration among academic staff and researchers in universities in Katsina State significantly enhances various aspects of academic development. Based on the data in Table 2, it is clear that collaborative strategies, particularly those related to knowledge management and sharing, play a critical role in fostering academic and professional growth.

Knowledge sharing strategies significantly facilitate collaboration learning in universities in Katsina State. The strategies lead to improved organizational efficiency (Mean = 3.80) and increased institutional reputation (Mean = 3.70), reflecting strong agreement among respondents. They also contribute to better decision-making (Mean = 3.40) and improved access to knowledge resources (Mean =

3.60). Moreover, these strategies facilitate the development of new ideas and innovations (Mean = 4.24), enhance learning outcomes (Mean = 3.17), and increase the sharing of research findings (Mean = 3.86). They further improve the quality of teaching (Mean = 3.71), understanding of complex issues (Mean = 3.60), and the capacity to solve problems (Mean = 3.71). Additionally, they boost collaboration between staff and students (Mean = 3.19) and enhance job satisfaction through improved knowledge sharing (Mean = 3.19). Overall, these strategies play a crucial role in fostering a productive academic environment

However, it is important to note that while collaboration helps enhance knowledge management (Mean = 3.17), the percentage of respondents who disagreed or were undecided about its effectiveness in this area is relatively higher compared to other aspects. This suggests that there may be challenges in the full integration or utilization of these strategies for knowledge enhancement, preservation, and protection. This aligns with findings from studies such as Kahn and (Prager 2019), which noted that while collaboration offers numerous benefits, there can be obstacles in effectively managing and preserving knowledge in collaborative settings, particularly in resource-limited environments like Katsina State.

Overall, the results of the study align with the broader literature on the importance of research collaboration in academic settings. However, the slight variation in responses regarding knowledge preservation suggests that further efforts may be needed to optimize knowledge management practices in Katsina State universities.

Table 3: Responses rate on the challenges associated with knowledge sharing strategies and research collaboration in University in Katsina State.

Items	Yes		No	
	F179	%	F	%
How to extract tacit knowledge	76	30.3	215	69.7
Time constraints	50	19.9	201	80.1
Difficulties in establishing and embedding a KS culture	72	28.7	179	71.3
Geographical distance and/or language barriers in an international company.	48	19.1	203	80.9
Limitations of information and communication technologies.	72	28.7	179	71.3
Poor training or mentoring programs.	36	14.3	215	85.7
Inability to recognize or articulate knowledge.	175	69.7	76	30.3
Internal conflicts.	239	95.2	12	4.8
Lack of incentives or performance management goals.	161	64.1	90	35.9
Lack of Awareness about Knowledge Sharing In Faculty	135	53.8	116	46.2

Lack of Relevant Information and communication Technology Skills	125	49.8	126	50.2
Poor Reward Systems Motivate People To Share Their Knowledge	176	70.1	75	29.9
Non-Cordial Work Relationships Among Staff	239	95.2	12	4.8
Lack Of Adequate Information and communication Technology Facilities	135	53.8	116	46.2
Lack Of Formal oral that Encourage Knowledge Sharing	72	28.7	179	71.3
Reluctance To Share Knowledge Due To Prejudice	72	28.7	179	71.3

(Source: Field Data, 2024)

Key: Yes 1 No 2

The table above shows that the challenges associated with knowledge sharing strategies in universities in Katsina State is multifaceted and impactful with Yes above 50%. They include inability to recognize or articulate knowledge, internal conflicts, lack of incentives or performance management goals, lack of awareness about knowledge sharing in faculty, poor reward systems that motivate people to share their knowledge, non-cordial work relationships among staff and lack of adequate information and communication technology facilities. Addressing these challenges is crucial for promoting a collaborative and innovative academic environment that supports effective knowledge management and enhances academic development in the region.

## **DISCUSSION**

The primary aim of this study is to demonstrate the present knowledge sharing strategies and their effect on research collaboration in university in Katsina State. (Abbas 2015) explained that discussion and interpretation of research findings are essential in providing meaning to the research results and they also help in explaining what has been discovered by the researcher in the course of the study. To achieve this primary aim, this research has tried to answer the following research questions linked to the research objectives:

The current status of Knowledge sharing strategies within the universities in Katsina State focusing on formal and informal mechanisms: The findings indicate overall agreement among respondents in Katsina State universities on various Knowledge Sharing (KS) strategies, particularly those enhancing value creation, research processes, and faculty competencies. However, strategies aimed at reusing knowledge through codification, scaling innovation, and conducting knowledge audits received lower support, suggesting areas needing improvement. Issues such as creating coherence among

colleagues and sustaining a knowledge bank also require attention to optimize KM effectiveness and foster a more collaborative academic environment

The effectiveness of Knowledge sharing strategies in enhancing research collaboration among academic staff and researchers in universities in Katsina state: knowledge management strategies in Katsina State universities significantly enhance organizational efficiency, institutional reputation, decision-making, and access to knowledge resources, with strong agreement among respondents. These strategies also foster innovation, improve learning outcomes, research sharing, teaching quality, problem-solving, collaboration, and job satisfaction, highlighting their crucial role in advancing academic development.

The barriers and challenges associated with optimal knowledge sharing strategies and research collaboration in Universities in Katsina State: The finding revealed that Katsina State universities, knowledge sharing strategies face significant challenges including extracting tacit knowledge, time constraints, and establishing a supportive culture. Geographical barriers, technology limitations, internal conflicts, inadequate training, lack of incentives, awareness gaps, reluctance due to prejudice, and absence of formal sharing channels further hinder effective knowledge management and academic development efforts.

According to (Abdullah et al. 2022), institutions that adopt a hybrid model of knowledge sharing, incorporating both face-to-face and digital platforms, have been shown to foster more effective research collaboration. This approach addresses diverse preferences and optimizes the benefits of both traditional and modern methods, potentially improving academic productivity and fostering collaborative research. As such, Katsina State's higher education institutions may benefit from fostering a more conducive environment for both digital and traditional knowledge sharing methods.

## **Conclusion**

While the importance of various knowledge-sharing strategies in universities across Katsina State is widely recognized, the effectiveness of these strategies is influenced by distinct preferences and challenges. Achieving a balance between traditional and digital approaches, addressing organizational barriers, and cultivating a culture that actively supports knowledge sharing are crucial for

promoting research collaboration and advancing academic growth in the region. By implementing these steps, universities can foster a more dynamic research environment that encourages innovation and long-term development.

### **Recommendations**

Katsina State universities should adopt a hybrid knowledge-sharing model that integrates both digital platforms and face-to-face interactions. Additionally, providing adequate training, creating formal sharing channels, and offering incentives can help build a supportive culture, enhance research collaboration, and optimize academic productivity. This approach would address challenges such as tacit knowledge extraction, time constraints, and geographical barriers while promoting collaboration and innovation.

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