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## Applications of Knowledge Processes Among Faculty of Physical Education and Sports Sciences Professors at Kirkuk University

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### ABSTRACT

*The current research aims to evaluate application of knowledge processes among faculty members at Faculty of Physical Education and Sports Sciences, University of Kirkuk, and to identify differences in mean among research sample and the hypothetical mean for scale's axes, as well as to determine the ordinal ranking of the research axes. The researchers hypothesize that faculty members at Faculty of Physical Education and Sports Sciences, University of Kirkuk, possess a good level of effectiveness in applying knowledge processes, that there are statistically significant differences between mean of research sample and hypothetical mean for scale's axes, and that there is a variation in ordinal ranking of research axes. The researchers used descriptive method as it is suitable for nature of research. The research sample consisted of (16) faculty members, and data were statistically analyzed using unclear possibly statistics. The hypothetical mean, standard deviation, one-sample t-test, percentile weight, and percentage were used. The researchers concluded that research sample achieved a high level in assessments of knowledge acquisition and generation processes across four research axes: knowledge acquisition and generation, knowledge storage, knowledge distribution, and knowledge application. All items on scale achieved required scores. Knowledge management processes demonstrated positive levels exceeding theoretical hypothetical mean for statements. The means for all axes of knowledge management processes scale exceeded hypothetical means for those axes. Significant differences were found among means for all four axes of Knowledge, Management, Processes scale and hypothetical means for those axes, favoring research sample. The knowledge acquisition and distribution axis ranked first, Knowledge distribution axis second, Knowledge Storage axis third, fourth focus is on knowledge application.*

Keywords: Applications Of Knowledge Processes; Management; Sports Science; University Professors.

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## **ABSTRAK**

Penelitian saat ini bertujuan untuk mengevaluasi penerapan proses pengetahuan di antara anggota fakultas di Fakultas Pendidikan Jasmani dan Ilmu Olahraga, University of Kirkuk, dan untuk mengidentifikasi perbedaan rata-rata antara sampel penelitian dan rata-rata hipotetis untuk sumbu skala, serta untuk menentukan peringkat ordinal sumbu penelitian. Para peneliti berhipotesis bahwa anggota fakultas di Fakultas Pendidikan Jasmani dan Ilmu Olahraga, University of Kirkuk, memiliki tingkat efektivitas yang baik dalam menerapkan proses pengetahuan, bahwa ada perbedaan yang signifikan secara statistik antara rata-rata sampel penelitian dan rata-rata hipotetis untuk sumbu skala, dan bahwa ada variasi dalam peringkat ordinal sumbu penelitian. Para peneliti menggunakan metode deskriptif karena cocok untuk sifat penelitian. Sampel penelitian terdiri dari (16) anggota fakultas, dan data dianalisis secara statistik menggunakan statistik yang tidak jelas. Rata-rata hipotetis, standar deviasi, uji-t satu sampel, bobot persentil, dan persentase digunakan. Para peneliti menyimpulkan bahwa sampel penelitian mencapai tingkat tinggi dalam penilaian proses perolehan dan generasi pengetahuan di empat sumbu penelitian: akuisisi dan pembuatan pengetahuan, penyimpanan pengetahuan, distribusi pengetahuan, dan penerapan pengetahuan. Semua item dalam skala mencapai skor yang diperlukan. Proses manajemen pengetahuan menunjukkan tingkat positif yang melebihi rata-rata hipotetis teoretis untuk pernyataan. Rata-rata untuk semua sumbu skala proses manajemen pengetahuan melebihi rata-rata hipotetis untuk sumbu tersebut. Perbedaan signifikan ditemukan di antara rata-rata untuk keempat sumbu skala Pengetahuan, Manajemen, Proses dan rata-rata hipotetis untuk sumbu tersebut, mendukung sampel penelitian. Sumbu akuisisi dan distribusi pengetahuan menempati peringkat pertama, sumbu distribusi pengetahuan kedua, sumbu Penyimpanan Pengetahuan ketiga, fokus keempat adalah pada penerapan pengetahuan.

Kata Kunci: Penerapan Proses Pengetahuan; Manajemen; Ilmu Olahraga; Profesor Universitas.

## **INTRODUCTION**

Technological development, thanks to learning technologies and the information revolution, requires keeping up with this rapid movement in development by being informed of every detail and trying to apply it in the field of specialization and work (Bruno et al., 2020; Rosita et al., 2020). Scientific progress and achieving high achievements depend on the cross-fertilization of sciences with each other to achieve integration in scientific knowledge in all its aspects (Indrakasih et al., 2022; Iskandar et al., 2020). Among these sciences is the science of management, of which sports management is one of the branches that is based on several components that together constitute the science of sports management (Hussein, A., Abdzid Ashoor, I., & Saeed Majed, S. (2024).

Furthermore, related sciences in sports management, such as time management, personnel management, sports facility management, sports competition management, sports knowledge management, sports crisis management, and organizational conflict management, require integration among these elements in order for sports management to achieve its objectives, starting with planning, which is the key to administrative

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processes, as well as decision-making, control, direction, follow-up, and evaluation. (Jasim, & Saleh Ahmed (2023)

Knowledge management is a modern management concept that has garnered widespread attention from researchers due to its significant benefits as a tool for developing the performance and knowledge of employees in sports organizations. This scientific phenomenon has stimulated the interest of writers and researchers in writing about knowledge management, including sports knowledge management (Duncan et al., 2019; Jones & Jones, 2014; Mega Widya Putri et al., 2021). Consequently, the literature related to this topic has grown both quantitatively and qualitatively, especially in light of the information revolution and the accompanying significant advancements in the field of knowledge acquisition. Information is readily available through modern communication methods as well as the organization's internal channels (Mega Widya Putri et al., 2021). Knowledge management has become one of the most important inputs for development, as it has been able to bring about a qualitative shift in the performance level of various institutions (Ohaeri et al., 2019; Watanabe et al., 2021).

Since mathematical knowledge, like all forms of life knowledge, is in a state of continuous development, academic sports institutions are obligated to engineer their knowledge management processes. An organization, in essence, thrives on knowledge, is founded within it, draws upon its diverse sources, and develops and grows by utilizing new and advanced knowledge. An organization ceases to exist when it can no longer acquire the necessary knowledge resources for its continued existence, or its efficiency and competitiveness may decline and collapse when its knowledge base stagnates and the process of knowledge renewal ceases (Al-Zatma, 2011, pp. 2, 19). (Al-Bajari, 2015, pp. 10-11).

The past few years have witnessed a growing interest in knowledge management as a crucial factor for the success of all academic and sports organizations. The development of information technology and knowledge transfer in the 21st century has led to a focus on valuable knowledge amidst the vast amount of information and the ever-increasing information revolution. This knowledge density has given rise to many modern management concepts, including knowledge management, which encompasses processes of knowledge identification, acquisition, and application (Hijazi, 2005, p. 132).

Knowledge management is formed because of several processes that provide the key to understanding knowledge management and how it is best implemented within an organization. Most researchers in the field of educational management indicate that knowledge derived from information and its internal and external sources is meaningless unless it is preserved and retrieved for application or reuse. (Al-Zatma, 2011, p. 76)

Knowledge management processes operate sequentially and are integrated with each other, as each process depends on the other. (Abu Farah and Alian, 2010). From the above, the importance of research in evaluating knowledge management processes among the faculty of the College of Physical Education and Sports Sciences at Kirkuk University becomes clear.

The absence of refinement and training processes for employees in colleges and departments of physical education and sports science, which is one of the constructive steps to provide employees with experience, culture, and good handling of daily work processes in the college, is one of the important reasons that requires evaluating the

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level of experience, scientific and cognitive culture, and ways of managing it through knowledge management processes.

The importance of knowledge management is evident in the role it plays in higher education institutions, and in the goals that knowledge management and its processes aspire to. Through knowledge management, the organization can use many technological and other means to enable individuals in the organization to access, store, and share various knowledge, as well as to work on renewing different knowledge and exchanging ideas and experiences among individuals at different administrative levels. From the above, the research problem gains its importance.

The research aims to evaluate the effectiveness of knowledge process applications among the faculty of the College of Physical Education and Sports Sciences at Kirkuk University. Identifying the differences in the arithmetic mean between the research sample and the hypothetical mean for the scale axes. Identifying the hierarchical sequence of the research axes.

The researchers assume that the faculty members of the College of Physical Education and Sports Sciences at Kirkuk University possess a good level of cognitive process effectiveness, that there are statistically significant differences between the arithmetic mean of the research sample and the hypothetical mean of the scale's axes, and that there is a variation in the ordinal ranking of the research axes.

Knowledge management is "a dynamic and continuous process that includes a set of activities and practices aimed at identifying, finding, developing, distributing, using, preserving, and facilitating the retrieval of knowledge, resulting in improved performance, reduced costs, and enhanced capabilities related to adapting to the demands of rapid change in the organization's environment." (Abu Khader, 2009, p. 9)

Fearnley and Holder defined it as the use of collective knowledge, experience, and competencies available internally and externally to the organization whenever and wherever required. (Fearnley & Holder, 1997, 25) While Capshaw and Frappolo defined it as the practices and technologies that facilitate the efficient generation and exchange of knowledge at the organizational level, Al-Ali et al. defined knowledge management as the strategies and structures that maximize intellectual and informational resources through transparent and technological processes related to finding, collecting, sharing, regrouping, and reusing knowledge in order to create new value by improving individual efficiency and effectiveness and collaboration in knowledge work to increase innovation and decision-making (Al-Ali et al., 2006, p. 26).

Al-Bajari defines knowledge management processes as all the activities and practices that sports organizations undertake or should undertake to generate, acquire, store, and distribute knowledge to make it available to all employees and beneficiaries, and to apply it in a way that leads to improved performance and contributes to achieving the goals of these organizations efficiently and effectively (Al-Bajari) 2015, pp. 14-15).

Previous research has discussed the comparison between those who adopt everything new and modern in the world of training and qualifications, where traditional methods are the preferred choice in training operations (Alwan, 2024). Furthermore, the vocabulary of inquiry-based learning methods in Physical Education Volleyball lessons requires a focus on the practical application of student learning stimulation methods for inquiry rather than explanations and guidance in gymnastics technique education units

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to improve student empowerment to practice and apply based on knowledge discovery with performance (Kaab & Gatia, 2024).

## METHOD

The researchers used descriptive methods with survey and comparative methods because they were appropriate for the nature of the study (Al-Tikriti, 2018, 150). The research population was represented by professors at Kirkuk University's Faculty of Physical Education and Sports Science, totaling 20 teaching staff. Purposive sampling was used in this study, resulting in a sample of 16 teaching staff representing 80% of the original research population.

The researchers used the scale that was built by Dr. Basman Mahmoud Ayoub Al-Bajari in (2015) in his thesis entitled "The role of knowledge processes and dimensions of organizational culture in the organizational effectiveness of youth and sports forums in Iraq from the point of view of their administrative and training staff", and whose statements were adapted to the College of Physical Education and Sports Sciences (Al-Bajari, 2015, 233-249) and presented to specialists to show the validity of the statements.

Statistical processing: Mean, Standard deviation, Percentile ratio, One-sample t-test, Hypothetical mean. (Al-Tikriti and Al-Ubaidi, 2012, pp. 103-360). The researchers used percentages to classify levels of response, as follows: (80) or higher is a very high level. From (70) to less than (80) is a high level. From (60) to less than (70) is an average level. From (50) to less than (60) is a low level. Less than (50) is a very low level (Al-Dulaimi, 2012, 61).

## RESEARCH RESULTS

Results of knowledge acquisition and generation axes:

**Table 1.** Shows First Area in Acquiring and Generating Knowledge

No.	Phrases	Statistical indicators	
		Weighted average	Weight shelter%
1	The Training and Qualification Unit contributes to providing the teaching staff working in the College of Physical Education and Sports Sciences with sports knowledge.	3.93	78.6
2	The Faculty of Physical Education and Sports Science relies on prediction to determine the required sports knowledge according to strategic objectives.	3.56	71.20
3	The College of Physical Education and Sports Sciences relies on enhancing the knowledge of its faculty members through their participation in training courses held outside the college.	4.18	83.6
4	The administration of the College of Physical Education and Sports Sciences determines the required knowledge by comparing it with the cognitive capabilities of distinguished departments.	3.93	78.60
5	The administration of the College of Physical Education and Sports Sciences supports opportunities for scientific and academic development, such as obtaining a higher	4.12	82.40

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	academic, training, or refereeing certificate, for its faculty members.		
6	The administration of the Faculty of Physical Education and Sports Sciences is actively seeking modern sources of sports knowledge to utilize.	4.25	85.00
7	The College of Physical Education and Sports Sciences includes staff with diverse experiences, skills, and talents who form a primary source of sports knowledge.	3.932	78.60
8	The administration of the College of Physical Education and Sports Sciences attracts specialized sports expertise through contracts.	3.6	72.40
9	The administration of the College of Physical Education and Sports Sciences is working to update and refine sports knowledge to enhance its competitiveness.	4.00	80.00
	Arithmetic mean and percentile weight %	3.95	78.93
	Standard deviation ±	0.22	4.40
	The true total	39.69	793.749
	hypothetical sum	45.00	90.00
	hypothetical mean	3.00	60.00
	Calculated value of t	30.5368*	

Based on Table 1, the weighted average value in the first area of acquiring and producing knowledge is 3.95 with a percentage weight of 78.93%. The standard deviation was recorded at 0.22 with a percentage weight of 4.40%, indicating a relatively small variation in answers. The true total is 39.69 with a weight of 793.749, while the hypothetical amount is 45.00 with a weight of 90.00, and the hypothetical mean is 3.00 with a weight of 60.00. The t-value of the calculation was obtained as 30.5368\*.

In terms of items, the highest weighted average value was found in statement number 6 of 4.25 (85.00%), followed by statement number 3 of 4.18 (83.60%), and statement number 5 of 4.12 (82.40%). The lowest score is found in statement number 2 of 3.56 (71.20%), and number 8 of 3.60 (72.40%).

The findings show a high level of involvement and significant results. Where, with a strong foundation and institutional competitiveness, academic development, and innovation in sports education can increase desire and knowledge growth. Significant difference at probability of error  $\leq 0.05$  for degrees of freedom (15), tabulated t-value = 1.753.

Results of knowledge storage axes:

**Table 2.** Shows Second Area in Knowledge Storage

No.	Phrases	Statistical indicators	
		Weighted average	Weight shelter%
10	The Faculty of Physical Education and Sports Sciences possesses the necessary technologies for storing and retrieving sports knowledge, such as computers.	3.68	73.60
11	The College of Physical Education and Sports Sciences relies on the method of classifying electronic databases to	3.68	73.60

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	store sports knowledge (its staff, members, activities, material capabilities, teaching staff, administrators, conferences and seminars it participated in and their results).		
12	The administration of the College of Physical Education and Sports Sciences provides the necessary human resources to operate and maintain information technology.	3.68	73.60
13	The plans of the Faculty of Physical Education and Sports Sciences constitute stored and approved knowledge base systems.	3.81	76.20
14	The Faculty of Physical Education and Sports Sciences has a suitable and well-organized sports library.	3.93	78.60
15	The administration of the College of Physical Education and Sports Sciences provides suitable spaces for information technology requirements.	3.75	75.00
16	The administration of the College of Physical Education and Sports Sciences is committed to retaining its distinguished teaching staff.	3.87	77.40
17	The administration of the Faculty of Physical Education and Sports Sciences uses training curricula as a means of storing sports knowledge.	3.93	78.60
18	The administration of the College of Physical Education and Sports Sciences is making every effort to preserve his athletic knowledge.	3.68	73.60
	Mean and percentile weight %	3.78	75.58
	Standard deviation ±	0.10	2.05
	The true total	37.89	757.83
	hypothetical sum	45.00	90.00
	hypothetical mean	3.00	60.00
	Calculated value of t	55.1627*	

Nilai rata-rata (mean) untuk bidang penyimpanan pengetahuan adalah 3,78 dengan bobot persentase sebesar 75,58%, yang menunjukkan tingkat penerapan yang baik. Standar deviasi sebesar 0,10 (2,05%) mengindikasikan bahwa jawaban responden relatif homogen atau konsisten. Nilai total sebenarnya (true total) tercatat sebesar 37,89 dengan bobot 757,83, lebih tinggi dibandingkan nilai rata-rata hipotetik sebesar 3,00 (60%). Jumlah hipotetik sebesar 45,00 dengan bobot 90,00. Nilai t hitung sebesar 55,1627\* menunjukkan adanya perbedaan yang signifikan secara statistik antara mean aktual dan mean hipotetik.

Nilai weighted average tertinggi terdapat pada pernyataan nomor 14 dan 17 sebesar 3,93 (78,60%). Diikuti oleh pernyataan nomor 16 sebesar 3,87 (77,40%), dan nomor 13 sebesar 3,81 (76,20%). Nilai terendah terdapat pada pernyataan nomor 10, 11, 12, dan 18 masing-masing sebesar 3,68 (73,60%).

**Table 3.** Shows Third Area in Distribution of Knowledge

No.	Statistical indicators	Statistical indicators	
		Weighted average	Weight shelter%

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19	The administration of the College of Physical Education and Sports Sciences provides its teaching staff with modern and diverse sports training and educational programs.	3.68	73.60
20	The Faculty of Physical Education and Sports Sciences provides the expertise and experiences of other departments for their benefit in performing their work.	3.93	78.60
21	The administration of the Faculty of Physical Education and Sports Sciences is committed to providing books, newspapers, and internal publications as a means of disseminating sports knowledge within the faculty.	3.75	75.00
22	The dissemination of sports knowledge in the College of Physical Education and Sports Sciences takes place through individuals working with their highly experienced colleagues.	4.12	82.40
23	The administration of the College of Physical Education and Sports Sciences supports internal organizational learning processes (internal training courses, expert teams, seminars, meetings, visits) in disseminating sports knowledge among its faculty members.	4.12	82.40
24	The administration of the College of Physical Education and Sports Sciences plans to organize and train faculty members to enhance their knowledge.	3.87	77.40
25	The administration of the College of Physical Education and Sports Sciences allocates sufficient funds to cover the costs of disseminating sports knowledge within the college.	3.83	68.60
26	The administration of the College of Physical Education and Sports Sciences invests in the proximity of teaching and training facilities as a means of exchanging and distributing knowledge among its faculty members.	3.37	67.40
27	The administration of the College of Physical Education and Sports Sciences provides its faculty with clear and diverse procedures and methods that facilitate access to sports knowledge within it.	3.93	78.60
	Arithmetic mean and percentile weight %	3.84	76.00
	Standard deviation $\pm$	0.22	5.09
	The true total	38.66	765.09
	hypothetical sum	45.00	90.00
	hypothetical mean	3.00	60.00
	Calculated value of t	27.0010*	

Based on the results of the analysis on the aspect of knowledge distribution, an average value (mean) of 3.84 was obtained with a percentage weight of 76.00%, which shows that the level of knowledge distribution in the Faculty is in the good category. The standard deviation of 0.22 (5.09%) indicates a relatively small variation in answers, so the respondents' responses are quite consistent. The true total value is 38.66 with a weight of 765.09, higher than the hypothetical average value of 3.00 (60%). The t-value of 27.0010\* shows a statistically significant difference between the actual mean and the hypothetical mean, so it can be concluded that the distribution of knowledge has been carried out effectively.

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The highest score is found in statements number 22 and 23 with a weighted average of 4.12 (82.40%), which shows that the dissemination of knowledge occurs mostly through collaboration between individuals and internal organizational learning support such as training, seminars, and meetings. Statements number 20 and 27 also show a high value of 3.93 (78.60%), indicating the use of cross-departmental experience and clear procedures in accessing knowledge. Medium scores were found in numbers 24 (3.87; 77.40%) and 21 (3.75; 75.00%), which were related to training planning and the provision of internal reading resources and publications. The lowest scores were found in statements number 26 (3.37; 67.40%) and number 25 (3.83; ±68.60%), which indicated that the aspects of physical facilities and the allocation of funds for knowledge distribution still need to be improved.

**Table 4.** Shows Fourth Area in Application of Knowledge

No.	Statistical indicators	Statistical indicators	
		Weighted average	Weight shelter%
28	The administration of the College of Physical Education and Sports Sciences relies on internal (multi-expert) activities that bring knowledge to support its operations and activities.	3.93	78.60
29	The administration of the College of Physical Education and Sports Sciences provides its faculty with suitable opportunities to apply their specialized knowledge.	3.75	75.00
30	The administration of the Faculty of Physical Education and Sports Sciences uses the latest educational equipment and devices that help in applying knowledge.	3.37	67.40
31	The administration of the Faculty of Physical Education and Sports Sciences uses the club's knowledge to improve the performance of its operations and activities, thereby achieving its competitive advantage.	3.87	77.40
32	The directions and guidelines of the College of Physical Education and Sports Sciences administration represent one of the ways to support the application of knowledge.	3.87	77.40
33	The administration of the College of Physical Education and Sports Sciences relies on using the knowledge of its sports instructors to solve problems scientifically and effectively.	3.81	67.20
34	The College of Physical Education and Sports Sciences seeks to improve the quality of its services through the use of sports knowledge.	3.75	75.00
35	The administration of the College of Physical Education and Sports Sciences emphasizes the need to implement the results and recommendations of sports research and studies.	3.56	71.20
36	The administration of the Faculty of Physical Education and Sports Sciences provides a suitable environment for applying knowledge, such as (stadiums, halls, and equipment).	3.37	67.40
Arithmetic mean and percentile weight %		3.70	72.96
Standard deviation ±		0.20	4.44

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The true total	37.18	734.00
hypothetical sum	45.00	90.00
hypothetical mean	3.00	60.00
Calculated value of t	23.7485*	

Based on the results of the analysis on the aspect of knowledge application, an average value (mean) of 3.70 was obtained with a percentage weight of 72.96%, which shows that the level of knowledge application is in the good category. A standard deviation of 0.20 (4.44%) indicates that respondents' answers are relatively homogeneous and do not show significant differences between respondents.

The true total value is 37.18 with a weight of 734.00, higher than the hypothetical average value of 3.00 (60%). The calculated t-value of 23.7485\* indicates a statistically significant difference between the actual mean and the hypothetical mean. Thus, it can be concluded that the application of knowledge in the faculty has been running effectively although it still needs to be strengthened in several aspects.

The highest score is found in statement number 28 with a weighted average of 3.93 (78.60%), which shows that the faculty administration relies on multi-skill-based internal activities to support its operations.

Statements number 31 and 32 obtained a score of 3.87 (77.40%), indicating that the use of knowledge to improve performance and the existence of administrative directives and guidelines are sufficient to support the process of applying knowledge.

The medium value can be seen in statements numbers 29 and 34 of 3.75 (75.00%), which shows that there is an opportunity for lecturers to apply knowledge and efforts to improve the quality of services through sports knowledge.

A relatively lower value is found in statements numbers 30 and 36 of 3.37 (67.40%), as well as numbers 33 (3.81;  $\pm 67.20\%$ ) and number 35 (3.56; 71.20%), which indicate that the use of modern equipment, the provision of an optimal environment, and the implementation of research results still need to be improved.

**Table 5.** Shows Hierarchical Sequence of Knowledge Management Axes

No.	Axis	Mean	Standard deviation $\pm$	Percentage	Hierarchy	Level
1	Acquiring and generating knowledge	3.95	0.22	78.93	First	High
2	Store knowledge	3.78	0.10	75.58	Third	High
3	Knowledge distribution	3.84	0.22	76.00	Second	High
4	Applying knowledge	3.70	0.20	72.96	Fourth	High

Based on the results of the analysis of the hierarchy of the knowledge management axis, all aspects are at a high level, which shows that the implementation of knowledge management in the Faculty of Physical Education and Sports Sciences in general has gone well.

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Acquiring and Generating Knowledge ranked first with a mean value of 3.95, standard deviation of 0.22, and a percentage of 78.93%. This shows that the faculty is very good at acquiring and producing knowledge, both through training, staff development, and the use of modern knowledge resources. Knowledge Distribution is ranked second with a mean of 3.84, a standard deviation of 0.22, and a percentage of 76.00%. This shows that the process of disseminating knowledge through collaboration, internal training, and organizational learning runs effectively.

Store Knowledge ranks third with a mean of 3.78, a standard deviation of 0.10, and a percentage of 75.58%. Despite being in third place, this aspect remains in the high category and shows the existence of a good knowledge storage system and adequate technological and human resource support. Applying Knowledge is ranked fourth with a mean of 3.70, a standard deviation of 0.20, and a percentage of 72.96%. Although still in the high category, this aspect obtained the lowest score compared to other axes, which indicates the need for an increase in the use of modern technology, infrastructure, and the optimal implementation of research results.

## **DISCUSSION**

These findings indicate that faculty have a strong capacity to identify, develop, and update knowledge through training, external cooperation, and strengthening lecturer competencies. Conceptually, these results are in line with the view that the process of knowledge acquisition and creation is the main foundation in the knowledge management cycle, because without new knowledge inputs the organization will experience innovation stagnation. Previous studies have also confirmed that higher education organizations that actively promote professional development and access to external knowledge sources tend to exhibit more adaptive and progressive institutional performance.

In the same dimension, the low standard deviation (0.22) indicates the consistency of respondents' perception of knowledge acquisition practices. This indicates the uniformity of experience in the academic environment related to institutional support for scientific capacity development. These results are in line with previous research that stated that clear institutional and structural support and policies in the development of academic competencies contribute to the creation of a strong learning culture. Thus, the strength in this aspect can be seen as strategic capital in increasing the competitiveness of the faculty.

In Table 2, the aspect of knowledge retention is also in the high category (mean = 3.78; 75.58%) with very small variation in answers (SD = 0.10). This shows that documentation systems, databases, and the use of information technology have been adequately integrated in supporting knowledge storage. These findings are consistent with the knowledge management literature that emphasizes the importance of technological infrastructure and formal documentation systems in maintaining the sustainability of organizational knowledge. Previous research has also stated that the existence of a structured storage system allows educational organizations to reduce knowledge loss due to rotation or mobility of human resources.

Nonetheless, the position of knowledge storage ranks third in the overall hierarchy (Table 5). This suggests that even though the system is already available, the optimization of its utilization can still be improved. Several previous studies have

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emphasized that the effectiveness of knowledge storage is determined not only by the availability of technology, but also by the sharing culture and the individual's commitment to documenting his or her professional experience. Therefore, strengthening organizational culture aspects is relevant to ensure that the storage system runs optimally.

Table 3 shows that the distribution of knowledge is ranked second (mean = 3.84; 76.00%). These findings confirm that the mechanism of knowledge dissemination through collaboration, internal training, seminars, and interaction between individuals has taken place effectively. These results support the theory that knowledge transfer in educational organizations often occurs through social interaction and collective learning. Previous research has also found that cross-departmental communication and team-based learning play a significant role in improving the quality of academic decision-making.

However, some indicators show that facility support and financial resource allocation are still relatively lower than other indicators. This condition indicates that the distribution of knowledge is still highly dependent on personal interaction rather than a formal system supported by adequate resources. Previous literature has emphasized that a balance between informal (socialization) and formal mechanisms (institutionalization) is essential so that the distribution of knowledge does not depend on a specific individual alone.

In Table 4, the aspect of knowledge application obtained the lowest score even though it remained in the high category (mean = 3.70; 72.96%). This shows that the process of implementing knowledge in operational and academic activities has been running, but it is not as optimal as other aspects. These findings are consistent with various studies that state that the application stage is the most complex phase in knowledge management, as it requires integration between policies, resources, individual competencies, and technology support. The challenges in the use of modern equipment and the implementation of research results are indicators that there is still room for improvement.

Table 5 shows that the knowledge management cycle in the faculty has been running comprehensively, with the main strength in the aspects of knowledge acquisition and creation, followed by distribution, storage, and application. This pattern is in line with the knowledge management model that places knowledge creation as the starting point for an organization's transformation towards competitive advantage. Thus, the findings of this study reinforce the empirical argument that higher education institutions that systematically manage knowledge tend to have a strong foundation for sustainable innovation, although strengthening at the implementation stage remains a strategic agenda that needs to be prioritized.

## **CONCLUSIONS AND RECOMMENDATIONS**

The research sample achieved a high level in the evaluations of the knowledge acquisition and generation processes in the four research axes: knowledge acquisition and generation, and knowledge storage. Knowledge distribution and knowledge application. All items on the Knowledge Management Processes scale achieved positive levels that exceeded the hypothetical (theoretical) arithmetic mean of the statements. The arithmetic means for all axes of the Knowledge Management Processes scale

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exceeded the hypothetical axes. Significant differences were found between the arithmetic means of all four axes of the Knowledge Management Processes scale and the hypothetical axes, favoring the research sample. The following axes achieved the highest rankings among the research axes, as follows: (1) Acquiring and disseminating knowledge-First place, (2) Knowledge Distribution-Second Place, (3) Knowledge Storage-Third Place, (4) Knowledge Application - Fourth Place

Engaging staff in faculties of physical education and sports science in courses related to sports knowledge management to raise their levels in sports knowledge management. Selecting individuals with good levels of sports knowledge management when choosing employees in colleges of physical education and sports science who could manage and invest knowledge processes to improve the work of colleges of physical education and sports science as they are active elements in the management of sports organizations. Using knowledge management processes to guide the thinking of teaching staff towards the best interests of the work. Identifying strengths and weaknesses and working to improve them through periodic and continuous evaluation of knowledge management elements is essential to establishing a strong foundation for achieving objectives. It is crucial to focus on enhancing knowledge management processes in sports organizations based on research findings, improving and strengthening access to new knowledge, organizing its storage, diversifying its dissemination mechanisms, and ensuring its utilization. Further research recommendations may consider the application of knowledge processes among professors at various universities in Kirkuk.

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