



Evaluation of Knowledge Management System Requirements According to ISO 30401

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Abstract:

This Paper assesses the knowledge management system (KMS) requirements at Al-Ameed University concerning ISO 30401:2022. Specifically, the research aims to ascertain the degree to which international standards have been complied with and gaps that have been identified. A case study was conducted using field observations, interviews, and checklists to assess the institution's compliance with the KMS framework. The level of implementation and documentation of knowledge management processes was assessed using a seven-point scale.

The findings reveal that Al-Ameed University has severe gaps in knowledge creation, sharing, and support for knowledge management in terms of strategic leadership. While certain elements like availability of resources show high degrees of compliance, others like stakeholders need assessment and continuous improvement show weaknesses. The overall degree of compliance with the ISO 30401:2022 is 58.08%, having a gap of 41.92% to be bridged.

This study shows there is an urgent need to improve knowledge-sharing systems, strengthen leadership engagement, and strategically align knowledge management with the university's mission and goals. Their findings could help those academic institutions that want to improve knowledge governance and align themselves with internationally accepted standards shaking hands to become the key players in innovation and operational efficiencies. Future research should investigate KMS gap closure methodologies in other advanced situations/dimensions in higher educational settings.

Keywords: Knowledge Management System, ISO30401: 2022, Knowledge Transfer and Development, Al-Ameed University.

1. Introduction:

Knowledge management is a capacity that organizations have to manage their intellectual capital, with the primary goal of adding value to their production chain and guaranteeing them a competitive market advantage (Oliveira et al., 2016). (Maximo et al., 2020a) have emphasized that knowledge energizes the organization and thus has effects on its entire structure, reaching directly to the people who have become a specific part of creating and sharing knowledge. Knowledge management makes a difference by providing the management of knowledge identification, creation, storage, sharing, and use processes as its main asset (Millar-Schijf et al., 2016). Many organizations have developed systems-based information technology designed specifically to facilitate the merging and exchange of knowledge and benefit from it (Saeed & Khalil, 2023). Key capabilities of 21st century companies are acquiring new knowledge, applying current knowledge, retaining current knowledge, and handling outdated or invalid knowledge (Kudryavtsev & Sadykova, 2019). In 2018, the release of the ISO 30401 Knowledge Management Systems Standard, a type A regulation which may serve as a basis for certification (Pawlowsky et al., 2021). It enables organizations to identify, capture, organize, share, and utilize knowledge to achieve their objectives (Collison et al., 2019). The purpose of this ISO management system standard for knowledge management is to support organizations in developing a management system that effectively promotes and enables value-creation through knowledge (Orth et al., 2023). Knowledge has become a key resource in the contemporary economy. To be competitive and survive in the knowledge economy, companies must be more and more knowledge-driven (Carlucci et al., 2022). They need to nurture key capabilities such as acquiring new knowledge, applying up-to-date knowledge, retaining current knowledge, and handling outdated or invalid knowledge (Nonaka & Takeuchi, 2019). Regardless, the application of standards for KM is gaining increasing attention among consultants, certification bodies, and widely, practitioners (Maximo et al., 2020b). The studies on ISO 30401 reveal that to date the research is still in its infancy and well-defined mainstreams have yet to emerge (Boonchan et al., 2022). Knowledge management refers to the identification and use of collective knowledge within the organization to help organizations compete (Mızrak & Akkartal, 2023). The organization shall determine the knowledge necessary for the operation of its processes and to achieve conformity of products and services. This knowledge shall be maintained and made available to the extent necessary (Bougoulia, 2023). Knowledge Management Systems (KMSs) have been defined as an integrated technical system that supports knowledge management processes through acquiring, storing, applying, and sharing knowledge (Nagy, 2019). (Saeed & Khalil, 2023) have shown that KMSs are responsible for implementing the knowledge management strategy by activating knowledge management processes and their life cycle. Organizations view knowledge strategically, in which their management improves their processes and directs them to solve their challenges (Barnes, 2022). Most of these studies have dealt with previous versions of the specification and within a limited scope of applications. Based on the reviews, interviews, and field observations that were conducted, and also based on personal experiences. The researchers adopted the urgent need to adopt a knowledge management system that contributes to achieving maximum benefit from available knowledge and contributes to enhancing academic excellence. From this standpoint, the research problem can be crystallized by stating the extent of the availability of the requirements of the knowledge management system according to the specification (ISO/IEC30401:2022) at Al-Ameed University. The importance of the research extends to include important practical applications that can directly affect the administrative and academic processes at Al-Ameed University, as well as other academic institutions seeking to improve their knowledge management systems. In addition, the research contributes to enhancing Al-Ameed University's ability to adapt to international standards by providing practical recommendations for developing the knowledge management system. To ensure compliance with the requirements of (ISO/IEC 30401:2022).

The research aims to identify the availability of knowledge management system requirements according to the specification (ISO/IEC30401:2022) at Al-Ameed University. The results of the field visit and interviews with specialists at Al-Ameed University regarding the application and commitment to the international specification related to developing the educational process and improving the level of its outputs showed an initial readiness to apply the specification for KMSs (ISO/IEC30401:2022).

2. Literature Review and Hypothesis Development:

A study of (Mohamed et al., 2019) indicated that managing intellectual assets is a challenge faced by many organizations in today's business environment. However, these challenges can be overcome by implementing the best practices for knowledge management. Document management, training and support, knowledge creation, and knowledge capture and storage were found to be the four best practices for knowledge management. A study conducted by (Vold et al., 2020) summarized the practices of KMSs in higher education institutions into six conceptual approaches to achieve the goal of knowledge management, which are a control of intellectual assets, knowledge transfer, knowledge improvement techniques, knowledge management training, creation and sharing of academic knowledge, and implementation of knowledge management. A study conducted by (Hsieh et al., 2020) also indicated that KMSs have become more important for achieving sustainable success. Therefore, knowledge-based organizations have primarily embarked on knowledge management practices to raise the challenges of rapidly changing markets. The results of the study conducted by (Saeed & Khalil, 2022) showed that the overall rate achieved through analyzing and measuring the availability of KMSs requirements according to ISO30401 in the Oil Projects Company had a percentage of 53% and an application rate of 3, meaning that it was partially applied and fully documented, which led to a gap of 47%. The results of the study conducted by (Hashemi et al., 2023) showed that ISO 30401 successfully combines a variety of studies into an international working standard. The study explained how ISO 30401 can help create value for the organization. The study also indicated that the standard guides managers on what they should do to add value when implementing ISO 30401. A study conducted by (Cocca et al., 2022) showed that the availability of knowledge management tools in organizations is relatively small and does not paint a picture of maturity and completeness. Knowledge management represents a challenge for organizations because they usually lack the resources necessary to fully utilize their knowledge stock. In their study (Carlucci, et al., 2022) titled "Knowledge Management Systems in the Digital Age", they proposed a new framework for knowledge management based on a literature review of the ISO standard for knowledge management, where they proposed a visualization of the ISO standard for knowledge management through some conceptual and mental maps that organize and collect the knowledge management requirements of ISO. A study of (Carlucci et al, 2022) indicated that the knowledge management standard gives organizations the freedom to choose the knowledge management frameworks that they see as best suited to their needs provided that they adequately justify their choices according to the ISO:30401 audit accreditation standards. The study conducted by (Dneprovskaya & Shevtsova, 2023) dealt with a conceptual description of the implementation of Knowledge Management Systems KMSs as a mechanism for the strategic development of universities, as the study proved that the practice of Knowledge Management (KM) from all over the world has a positive impact of KMS on the productivity of educational institutions. A study of (Hashemi et al., 2022) showed that ISO 30401 can lead to defining a knowledge management system framework to formulate effective strategies to enhance value creation and improve organizational performance. A study conducted by (Safira & Andhika, 2024) aimed to measure the level of maturity of knowledge management based on ISO 30401 and the quality management system as a strategy to face globally competitive conditions in the future so that leaders can develop effective strategies to reduce the loss of organizational knowledge and customer complaints that occur due to lack of knowledge management.

3. Methodology:

The study adopted the case study approach, which included field experience, direct observation, observations, questions, inquiries, and interviews with interested parties to reach the real data and determine the gap between the application of the requirements of the knowledge management system according to the international standard specification (ISO/IEC30401:2022) at Al-Ameed University.

To provide a practical methodology for collecting and analyzing data regarding the evaluation of the extent of application of the knowledge management system requirements according to the international specification under study at Al-Ameed University, and to achieve the data analysis process and obtain a higher level of accuracy. The seven-point scale was adopted for these lists to identify the extent of compliance of the actual application of the knowledge management system requirements at the university under study and compare them with the requirements of the international standard specification (ISO 30401:2022), as it includes allocating a specific weight to each item of the specification according to the level of application and documentation of it. Table 2 shows those items and their weights, which range between full application and documentation with a weight of 6 degrees and non-implementation and documentation with a weight of 0 degrees.

For data analysis purposes, a seven-point scale was used in the checklists to measure the extent of compliance of the application and actual documentation with the requirements of the international standard (ISO/IEC30401:2022) at Al-Ameed University, and with the weights specified for the answers to the questions included in the checklists by assigning a specific weight to each item of the scale, as shown in Table 1. After consulting the opinions of statisticians, the researchers intended that the number 6 would represent the highest weight on the scale, while the number 0 would represent the lowest weight on the scale, as used in the latest studies to reveal the gap between the knowledge management system and the requirements of the international standard (ISO/IEC 30401:2022).

Table 1: Seven-point scale for the extent of conformity with the standard specification

No.	Scale items	Item weight (point)
1	Fully implemented Fully documented	6
2	Fully implemented Partially documented	5
3	Fully implemented Not documented	4
4	Partially implemented Fully documented	3
5	Partially implemented Partially documented	2
6	Partially implemented Not documented	1
7	Not implemented Not documented	0

Source: Vagias, Wade M., (2006), "Likert-type scale", Clemson International institute for tourism, department of parks, recreation and tourism management, Clemson University, USA: p:2.

The approximate rate of the extent of conformity and actual documentation of the business continuity management system at Al-Ameed University as a case study was calculated in comparison with the requirements of the specification by extracting the weighted arithmetic mean according to the following equation:

$$\text{Weighted arithmetic mean} = \text{Sum of } \frac{(\text{weights} \times \text{their frequencies})}{\text{Total repetitions}}$$

The percentage of the extent of conformity of the application and actual documentation of the requirement with the standard specification, according to the following equation:

$$\text{Percentage of conformity} = \frac{\text{Arithmetic mean}}{\text{Highest weight on the scale}} \times 100\%$$

The highest weight in the seven-point scale is six degrees and represents the state of complete conformity with the requirements of the standard specification.

Calculating the gap size through the following equation:

Gap size for each checklist = 1 - percentage of conformity

Representing the results with a Pareto chart

Representing the results with a Cause & Effect diagram.

Representing the results using a fishbone diagram.

4. Results:

Based on the results of the checklists conducted by the researchers, which evaluated the level of application and documentation of the requirements of the international standard (ISO/IEC30401:2022). The aggregated results will be displayed by calculating the weighted arithmetic mean for each of the seven sub- and main elements of the standard, as shown in Table2.

Table 2: Summary of the results of the level of conformity and documentation for the requirements of the international standard specification (ISO/IEC 30401:2022) at Al-Ameed University

Requirement titles according to ISO/IEC 30401:2022			Assessment grades for actual application and documentation		
No	The Requirement No.	Required Name	Degree achieved	Achieved %	Gap %
1	1-4	Understanding the University and its Context	5.5	%91,6	%8,4
2	2-4	Understanding the needs and expectations of stakeholders	3,66	%61,1	%38.9
3	3-4	Defining the scope of the KM system	3.3	%55,5	%44,5
4	1-4-4	Knowledge Management / General Item	5	%83.3	%16,7
5	2-4-4	Knowledge Development	2.5	%31.6	%68.4
6	3-4-4	Knowledge Transfer and Transformation	4	%66,6	%33,4
7	4-4-4	Knowledge Management Enablers	3,6	%60	%40
8	5-4	Knowledge Management Culture	2.87	%47.6	%52.4
9	1-5	Leadership and Commitment Gap	3.3	%55	%45
10	2-5	Policy Gap	3,44	%57,4	%42,6
11	3-5	Roles, Responsibilities, and Authorities Gap	3,75	%62,5	%37,5
12	1-6	Actions taken to address risks and opportunities	3.28	%54,7	%45,3
13	2-6	Service Management Goals and Plans to Achieve Them Gap	3.4	%57,8	%42,2
14	1-7	Support / Resources	5	%83.3	%16.7
15	2-7	Support / Capability	3,5	%58,3	%41,7

16	3-7	Support / Awareness	3.3	%55.5	%44.5
17	4-7	Support / Communication	2.75	%45.8	%54.2
18	5-7	Support / Documented Information Gap	3.33	%55.5	% 44.5
19	8	Process Gap	3,6	%60	%40
20	1-9	Monitoring, Measurement, Analysis, and Evaluation Gap	2.83	%47.2	%52.8
21	2-9	Internal Control	3	%50	%50
22	3-9	Management Review	3.12	%52	%48
23	1-10	Improvement Gap	3,09	%51,5	%48,5
24	2-10	Continuous Improvement	3	% 50	% 50
Total of achieved assessment results			84.12	1393.8	1006.2
The maximum limit for application and full documentation of the requirement			6	100	100
Assumed total for application and full documentation			144	2400	2400
Amount of gap in application and documentation of total requirements			59.88	1006.2	1393.8
Percentage of total results				%58.08	%41.92

Source: Prepared by the researchers based on data analysis.

Analysis of the results of implementing the requirements of the international standard (ISO/IEC 30401:2022) and the application gaps Table 1 shows the final results of the checklists, where the application and documentation rate of the requirements was achieved at 58%. The non-application gap rate was 41.92%. This gap indicates a significant risk to the components of the university and its colleges. As shown in Figure 2.

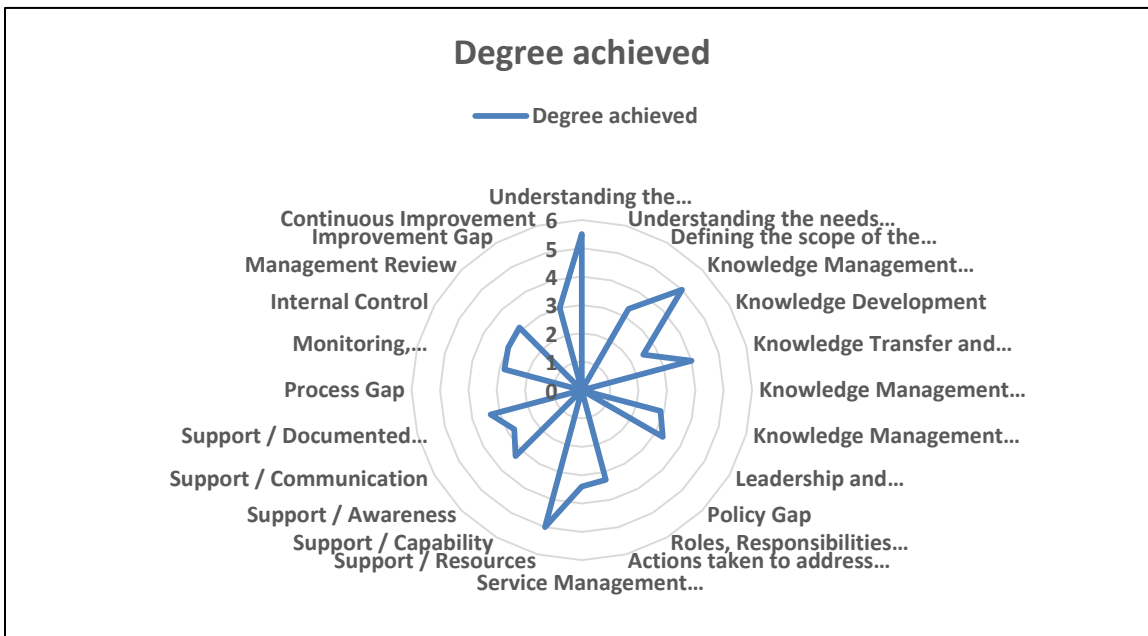


Figure 1: The total level of application and documentation of the knowledge management system requirements according to the standard specification (ISO/IEC 30401:2022) at Al-Ameed University

The effective analysis process relies on models and charts that help diagnose the factors affecting various phenomena accurately and clearly. Among these tools, the Pareto chart (also known as the ABC distribution curve) is a commonly used technique for graphically classifying information from most to least relevant. This method aims to identify the most important problems that deserve focus and solve them urgently.

The Pareto chart is based on the Pareto principle, also known as the 80/20 rule, which states that 80% of the results come from 20% of the causes. Therefore, this chart assists identify the few factors that contribute significantly to causing problems, which allows for effective decisions to be made to solve them. It helps identify the most important causes or problems that represent most of the problems. To create a Pareto chart, there are several procedures, the most important of which are:

1. Clearly define the problem or issue you want to research.
2. Then we collect the relevant data for each category or element.
3. The data or elements are arranged in descending order based on their contribution to the problem.
4. Extract the adjusted percentage using the law (part/whole × 100).
5. Perform the cumulative percentage calculation, which reflects the extent to which each area contributes to the overall problem.
6. Draw the chart. Create a vertical bar chart with categories on the horizontal axis and frequencies or amounts on the vertical axis using a spreadsheet program or data visualization tool. Make sure to label and measure the bars correctly.
7. Interpret and analyze: Analyze the Pareto chart to identify the “low-vitality” factors that contribute the most to the problem. Focus on addressing these variables to have the most significant impact on changing the situation.

Through these procedures, the results are as shown in Table 3.

Table 3: Summary of the preparation of the results of the checklists for Pareto analysis of the results of the level of conformity and documentation for the requirements of the international standard specification (ISO/IEC 30401:2022) at Al-Ameed University

No.	The Requirement No.	Required Name	Gap %	Adjusted %	Cumulative Percentage
1	2-4-4	Knowledge Development	%68.4	6.79	6.79
2	4-7	Support/Communication	%54.2	5.39	12.18
3	1-9	Monitoring, Measurement, Analysis, and Evaluation Gap	%52.8	5.25	17.43
4	5-4	KM Culture	%52.4	5.21	22.64
5	2-9	Internal Control	%50	4.97	27.61
6	2-10	Continuous Improvement	% 50	4.97	32.58
7	1-10	Improvement Gap	%48,5	4.82	37,40
8	3-9	Management Review	%48	4.45	41.58
9	1-6	Actions Taken to Address Risks and Opportunities Gap	%45,3	4.50	46.35
10	1-5	Leadership and Commitment Gap	%45	4.47	50.82
11	3-4	Defining the Scope of the KM System	%44,5	4.42	55.24
12	5-7	Support/Documented Information Gap	% 44.5	4.42	59.66

13	3-7	Support/Awareness	%44.5	4.42	64.08
14	2-5	Policy Gap	%42,6	4.23	68.31
15	2-6	Service Management Goals and Plans to Achieve Them Gap	%42,2	4.10	72.41
16	2-7	Support/Capability	%41,7	4.05	76.46
17	4-4-4	Knowledge Management Enablers	%40	4.11	80.57
18	8	Process Gap	%40	3.98	84.55
19	2-4	Understanding Stakeholder Needs and Expectations	%38.9	3.79	88.34
20	3-5	Roles, Responsibilities and Authorities Gap	%37,5	3.73	91.87
21	3-4-4	Knowledge Transfer and Transformation	%33.4	3.32	95.39
22	1-4-4	Knowledge Management/General Item	%16,7	1.86	97.25
23	1-7	Support/Resources	%16.7	1.86	99.11
24	1-4	Understanding the University and its Context	%8.4	0.89	100
		Total	1006.2	%100	

Source: Prepared by the researchers based on data analysis.

Through Table 3, which included restructuring the items in descending order of their size according to the Pareto analysis procedures and the level of gaps in terms of identifying the most influential minority, the results showed that requirement (4-4-2) represented a percentage of 68.4%, which is the gap that must be started to be reduced and is related to developing knowledge, as this helps to achieve 6.79% of the international specification, followed by requirement (7-4) with a percentage of 54.2%, which is support/communication, followed by requirement (9-1) related to the monitoring, measurement, analysis, and evaluation gap with a percentage of 52.8%, followed by requirement (4-5) with a percentage of 54.2%, which is the knowledge management culture, and then requirements (9-2, -102) with a percentage of 50% each. After them came the requirement (10-1) which is related to the improvement gap with a percentage of 48.5%, followed by requirement (9-3) with a percentage of 48%, which is represented by the management review. After them came the requirement (6-1) which is related to the gap in the procedures taken to address risks and opportunities with a percentage of 45.3%, followed by requirement (1-5) with a percentage of 45%, which is represented by leadership and commitment. Then came the three requirements which are (4-3, 6-5, 7-3) with a percentage of 44.5% each. After them came the requirement (5-2) which is related to the policy gap with a percentage of 42.6%, followed by requirement (6-2) with a percentage of 42.2%. After them came requirement (7-2) with a percentage of 41.7%, requirements (4-4-4, 8) with a percentage of 40% each, then requirement (4-2) with a percentage of 38.9%, then requirement (5-3) with a percentage of 37.5%, and requirement (4-4-3) with a percentage of 45.83%, then requirement (1-17) with a percentage of 44.50%, and requirement (1-13) with a percentage of 44.45%, and after them came requirements (9-4, 18-1) with a percentage of 33.4%, and requirements (4-4-1, and 7-1) with a percentage of 16.7%, then the last requirement was (4-1) with a percentage of 8.4% and related to understanding the university and its context, which obtained the lowest gap percentage.

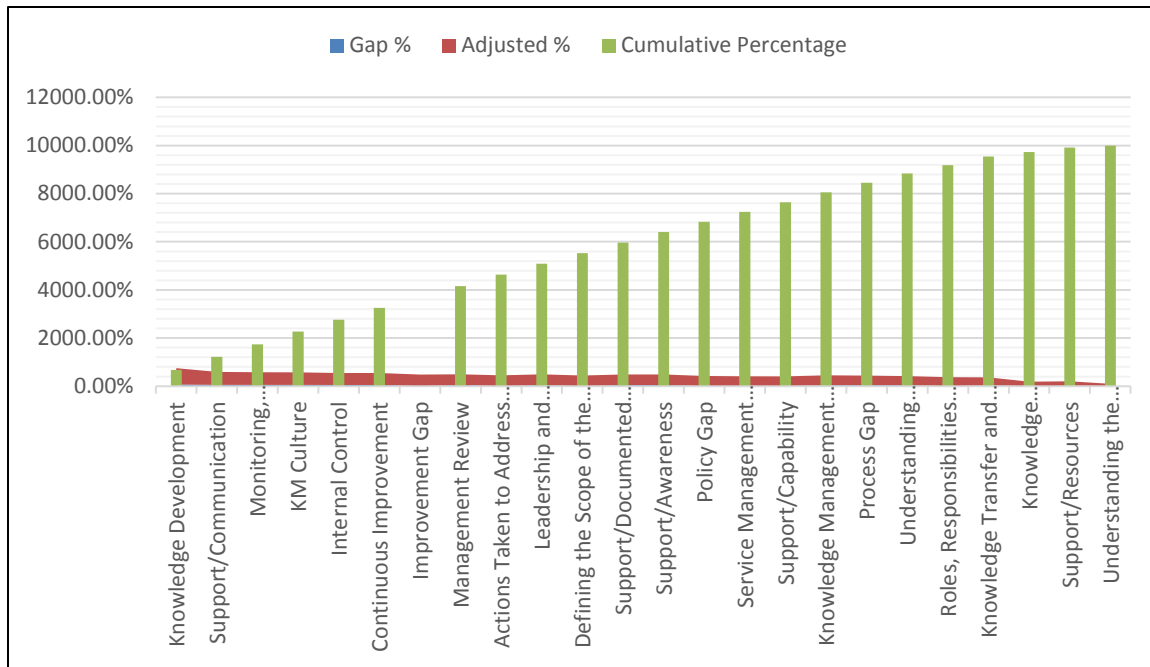


Figure 2: Pareto analysis of the level of gaps in terms of identifying the most influential minority at Al-Ameed University

The horizontal line that divides the chart into two parts at a ratio of 80:20 shows the contribution of each requirement its role in the weakness of the knowledge management system at Al-Ameed University and the overall impact of the specification requirements. This analysis can be used in the process of improving the ability of Al-Ameed University to implement the knowledge management system according to the international standard specification (ISO/IEC30401:2022) as shown in Figure 2. It can also be noted from the same table that the highest gap is the requirement (knowledge development) (4-4-2) at a rate of 68.4% compared to the total gaps in the requirements, the adjusted percentage (6.79) and ends with the requirement (understanding the university and its context) at a rate of 8.4%. The adjusted percentage (0.83%).

Figure 3 presents an Ishikawa diagram providing a detailed explanation of the gaps for each main and sub-requirement in the implementation and documentation of the international standard requirements (ISO/IEC 30401:2022) in general, as well as the implementation and documentation gaps for all the standard requirements within the knowledge management system at Al-Ameed University.

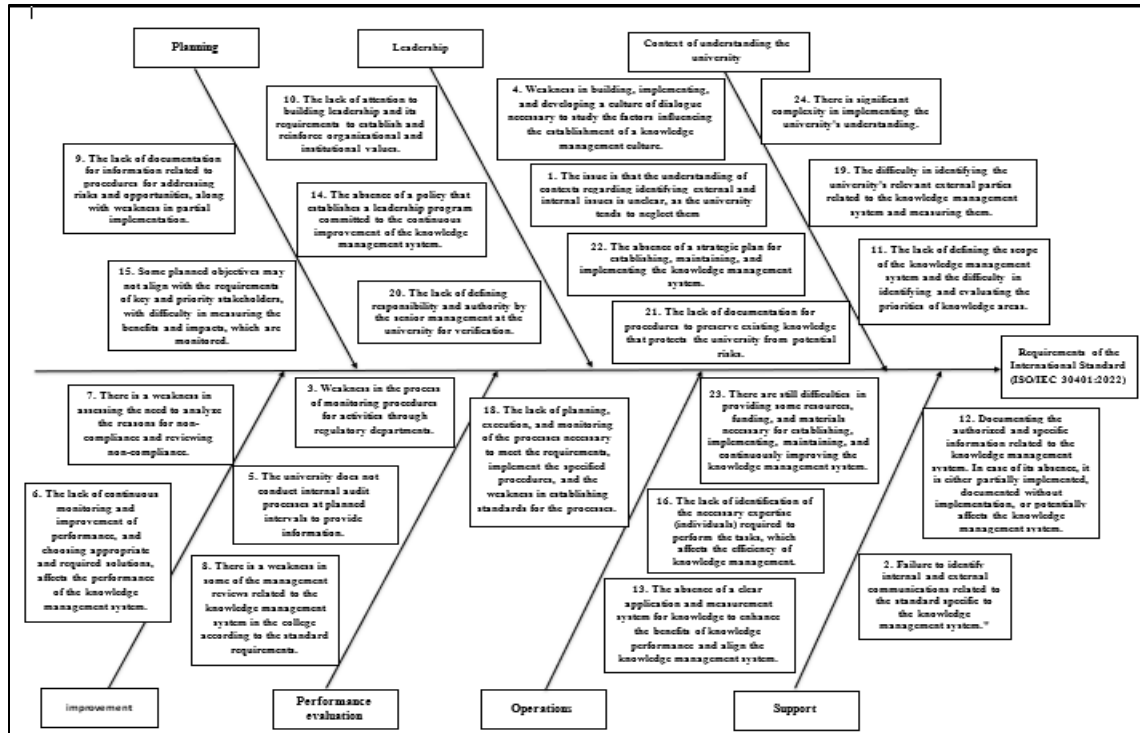


Figure 3: The overall level of gaps in the requirements of the Knowledge Management System according to the International Standard (ISO/IEC 30401:2022) at Al-Ameed University.

The source: Prepared by the researchers based on data analysis.

It is observed from Figure 4 that the percentage of gaps for each requirement reveals that the requirement (4-4-2) has the highest gap at 68.4%, representing the requirement with the most significant gap that needs to be addressed. Conversely, the requirement (4-1) has the lowest gap at 8.9%. The total of these gaps represents the overall gap in the implementation and documentation level of the Knowledge Management System according to the International Standard (ISO/IEC 30401:2022).

The primary and secondary potential causes for the weak performance of the requirements compared to the International Standard (ISO/IEC 30401:2022) are illustrated in Table 4.

Table 4: Possible main and secondary reasons for the gap in the international standard (ISO/IEC 30401:2022)

No	Main reasons	Secondary causes
1	Weakness in the context of university work	Weak understanding of stakeholders' needs and expectations
		Weakness in defining the scope of the knowledge management system
		Weakness in developing, transferring, and transforming knowledge
		Weakness in knowledge management enablers
2	Weakness in leadership	Weakness in knowledge management culture
		Weak leadership and commitment
		Weak knowledge management policies
		Weak roles, responsibilities, and authorities

3	Weakness in planning	Procedures to address risks and opportunities
		Weakness in not setting information security objectives and plans to achieve them
		Weakness in adopting procedures to target risks and opportunities
4	Weakness in support	Weakness in providing resources
		Weakness in capacity and efficiency
		Weakness in awareness and education
		Weakness in communication and contacts
		Weakness in documented information in terms of creation, updating, control, and validity
5	Weakness in operations	Weakness in planning, implementing, and monitoring operations
		Weakness in controlling planned changes
		Weakness in reviewing external sources
		Monitoring, measuring, analyzing, and evaluating
6	Weakness in performance evaluation	Weakness in the internal audit process in terms of planning, implementation, risk assessment, and treatment.
		Weakness in management review
7	Weakness in improvement	Poor corrective actions for non-conformities
		Poor training of staff
		Poor continuous improvement policy

Source: Prepared by the researchers.

Table 4 shows some of the main and secondary reasons for the gap in the non-application and documentation of the requirements of the international standard (ISO/IEC30401:2022), which start from the context of understanding the university as a system and end with continuous improvement.

Figure 5 also illustrates some of the primary and secondary causes of the gap in the implementation and documentation of the requirements of the International Standard (ISO/IEC 30401:2022).

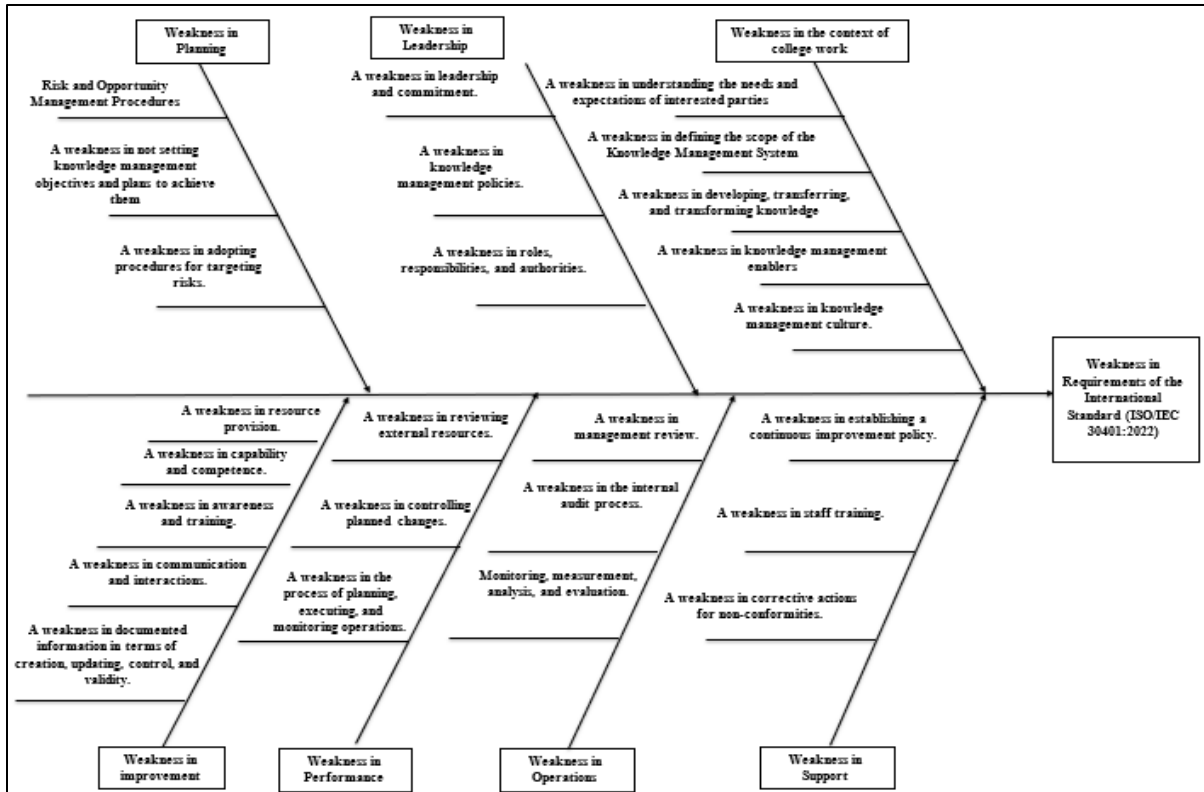


Figure 5: Some of the main and secondary reasons for the gap in the non-application and documentation of the requirements of the international standard (ISO/IEC 30401:2022).

Source: Prepared by the researchers.

5. Conclusion:

Based on the results of the current research, the conclusions drawn from the results of the practical aspect can be determined, which are as follows: The results of the field visits and interviews with specialists at Al-Ameed University regarding the application and commitment to the international specification related to developing the educational process and improving the level of its outputs showed an initial readiness to apply the specification for KMSs (ISO/IEC30401:2022). Al-Ameed University generally suffers from a weak understanding of the needs and expectations of stakeholders, despite an acceptable level of awareness and understanding of the university's work context. Evidence of weak understanding includes not adequately meeting the needs of stakeholders such as student complaints about the lack of services or the quality of educational materials. Faculty members' dissatisfaction with the work environment or professional development opportunities. Criticism from external parties, such as funding agencies or the local community. It was found that there were fundamental gaps in the analysis of the requirements of the knowledge management system at the university under study, which negatively affected the effectiveness of the system's implementation and the achievement of its objectives. These gaps include weak analysis of knowledge transfer channels, the absence of an evaluation of management support for the knowledge management system, and failure to take into account compatibility with the strategy and organizational structure. In addition, the relevant areas and contexts were not adequately analyzed, such as the needs of faculty and students in terms of knowledge sharing and learning processes, the university's lack of analysis of the requirements and characteristics of different disciplines, and finally, the absence of an assessment of the cultural conditions within the university, which may have hindered the acceptance of the system by faculty and students.

Knowledge management practices at Al-Ameed University suffer from fundamental gaps, despite the clear need to define the scope of the knowledge management system. These gaps are represented by the lack of analysis of knowledge transfer channels at Al-Ameed University, as the communication channels between faculty members were not adequately evaluated, as well as the knowledge exchange channels between students, and also the channels for accessing educational resources. The university also does not adequately analyze the management's support for the knowledge management system, as the management's commitment to implementing the system is not accurately evaluated. The necessary resources are not allocated appropriately. Likewise, there is a lack of training and support required for employees.

Al-Ameed University should begin implementing the plan to reduce the gaps in all instances of non-conformity and documentation. The process should start with the requirement that it recorded the highest gap of 68.4% and conclude with the one with the lowest gap, which is 8.4% and deemed of lesser importance. This process should be carried out in phases within a specified timeframe.

As for answering the second question, which was: "What is the size of the gap between the actual state of the knowledge management system at Al-Ameed University and the application of the knowledge management system according to the International Standard (ISO/IEC 30401:2022)?" The answer, based on the results of the compliance checklists for the 24 standard requirements, showed a compliance rate of 58.08% and a non-compliance rate of 41.92%.

Authors Declaration:

Conflicts of Interest: None

-We Hereby Confirm That All The Figures and Tables In The Manuscript Are Mine and Ours. Besides, The Figures and Images, which are Not Mine, Have Been Permitted Republication and Attached to The Manuscript.

- Ethical Clearance: The Research Was Approved by The Local Ethical Committee in The University.

References:

- Barnes, S. (2022). How radical KM is knowledge management: Referencing ISO knowledge management systems requirements standard 30401. *Business Information Review*, 39(2), 51–55.
- Boonchan, G., Sinthamrongruk, T., & Khamaksorn, A. (2022). Knowledge Management in the Royal Thai Army: ISO30401: 2018 Knowledge Management Systems Perspective. *2022 Joint International Conference on Digital Arts, Media and Technology with ECTI Northern Section Conference on Electrical, Electronics, Computer and Telecommunications Engineering (ECTI DAMT & NCON)*, 151–156.
- Bougoulia, E. (2023). *Knowledge management maturity assessment frameworks: A holistic approach and a proposal for a novel integrated KMM model*.
- Carlucci, D., Kudryavtsev, D., Santarsiero, F., Lagrutta, R., & Garavelli, A. C. (2022). The ISO 30401 Knowledge Management Systems: a new frame for managing knowledge. Conceptualisation and practice. *Knowledge Management Research & Practice*, 20(6), 975–986.
- Carlucci, D., Kudryavtsev, D. V., & Bratianu, C. (2022). Guest editorial "Knowledge management systems in the digital age." In *Knowledge management research & practice* (Vol. 20, Issue 6, pp. 793–796). Taylor & Francis.
- Cocca, P., Schiuma, G., Viscardi, M., & Floreani, F. (2022). Knowledge management system requirements to support Engineering-To-Order manufacturing of SMEs. *Knowledge Management Research & Practice*, 20(6), 814–827.

- Collison, C. J., Corney, P. J., & Eng, P. L. (2019). *The KM cookbook: Stories and strategies for organisations exploring knowledge management standard ISO30401*. Facet Publishing.
- Dneprovskaya, N. V., & Shevtsova, I. V. (2023). A knowledge management system in the strategic development of universities. *Бизнес-Информатика*, 17(2 (eng)), 20–40.
- Hashemi, H., Aligholi, S., & Mohammad, N. (2023). Required factors for Implementing of Knowledge Management System Based on ISO 30401: Operational Approach. *Journal of Knowledge Retrieval and Semantic Systems*, 10(36), 189–223.
- Hashemi, H., Roshan, S. A. Q., Salarzahi, H., & Yaghoubi, N. M. (2022). ISO 30401 Validation as a New Basis in Research and Value Creation of the Knowledge Management. *Scientific Journal of Strategic Management of Organizational Knowledge*, 5(1), 1-42.
- Hsieh, P. J., Lin, C., & Chang, S. (2020). The evolution of knowledge navigator model: the construction and application of KNM 2.0. *Expert Systems with Applications*, 148, 113209.
- Kudryavtsev, D., & Sadykova, D. (2019). Towards architecting a knowledge management system: Requirements for an ISO compliant framework. *The Practice of Enterprise Modeling: 12th IFIP Working Conference, PoEM 2019, Luxembourg, Luxembourg, November 27–29, 2019, Proceedings 12*, 36–50.
- Maximo, E. Z., Pereira, R., Malvestiti, R., & de Souza, J. A. (2020a). ISO 30401: The standardization of knowledge. *International Journal of Development Research*, 10(06), 37155–37159.
- Maximo, E. Z., Pereira, R., Malvestiti, R., & de Souza, J. A. (2020b). ISO 30401: The standardization of knowledge. *International Journal of Development Research*, 10(06), 37155–37159.
- Millar-Schijf, C. C. J. M., Lockett, M., & Mahon, J. F. (2016). Knowledge intensive organisations: on the frontiers of knowledge management: Guest editorial. *Journal of Knowledge Management*, 20(5), 845–857.
- Mızrak, F., & Akkartal, G. R. (2023). Strategic management of digital transformation processes in the aviation industry: Case of Istanbul Airport. In *Cases on Enhancing Business Sustainability Through Knowledge Management Systems* (pp. 154–177). IGI Global.
- Mohamed, H. A. E., Elhosseiney, O., & Elyamany, A. (2019). Knowledge Management: Investigating Egyptian Construction Companies Best Practices. *International Journal of Civil Engineering and Technology (IJCIET)*, 10(10), 244–258.
- Nagy, E. S. (2019). Knowledge management systems application experiences and practices in academic libraries: an exploratory study with a proposed framework for implementation. *Scientific Journal of Libraries, Documents and Information*, 3(6), 109–149.
- Nonaka, I., & Takeuchi, H. (2019). *The wise company: How companies create continuous innovation*. Oxford University Press.
- Oliveira, D., Nascimento, D., & Dalkir, K. (2016). The evolution of the intellectual capital concept and measurement. *Ciência Da Informação*, 45(3).
- Orth, R., Will, M., Pavim, A. X., de Oliveira Gomes, J., & da Costa, C. C. F. (2023). Towards A Knowledge Management Standard For The Network Of The Senai Innovation Institutes. *Anais Do Congresso Internacional de Conhecimento e Inovação–Ciki*.
- Pawlowsky, P., Pflugfelder, N. S., & Wagner, M. H. (2021). The ISO 30401 knowledge management systems standard—a new framework for value creation and research? *Journal of Intellectual Capital*, 22(3), 506–527.

- Saeed, S. J. , & Khalil, A. S. (2022). Analysis of the Requirements of Knowledge Management Systems According to the Specification ISO 30401:2018 in the Oil Projects Company. *Journal of Techniques*, 4(4), 191–196.
- Saeed, S. J., & Khalil, A. P. D. A. S. (2023). Effect Knowledge Management Systems According to the Specification ISO 30401: 2018 in the participation of employees in decision-making Analytical research in the Oil Projects Company in Iraq. *Al-Kut University College Journal*, 8(1).
- Saeed. S. J, & Khalil. A. S. (2023). The possibility of applying knowledge management systems according to Specification ISO 30401:2018 And its role in the transparency of decisions Analytical study in the Oil Projects Company. *Al-Maamoun College Journal*, 139, 139–158.
- Safira, N., & Andhika, R. (2024). Analysis Of Knowledge Management Maturity Level Based On ISO 30401 And Quality Management System To Reduce The Number Customer Complaints. *International Journal of Science, Technology & Management*, 5(3), 702–708.
- Vold, T., Haave, H., & Kaloudis, A. (2020). On work relevance of adult education: A case study narrative. *Electronic Journal of Knowledge Management*, 18(2), pp105-120.