

Knowledge Management Laws and Their Impact on Developing Pathfinder Service Performance in the Digital Environment

Firas Adredah Mansoor

firasmansor@imamaladham.edu.iq

AL-Imam AL-Adham University college.

Abstract

The study aims to deepen the conceptual framework of knowledge management laws and the Pathfinder service in the light of contemporary literature and the digital environment, and to reveal the role of strategic practices of knowledge management in developing the operational and innovative dimensions of the performance of the Pathfinder service, and to measure the level of effectiveness of the Pathfinder service as a strategic performance tool in light of the application of knowledge management laws (Sharing, Accumulation, and Renewal) the descriptive-analytical approach was adopted in the study and the questionnaire, observation and standardized interview were used as methods of data collection, and the statistical program SPSS version 23 was used to analyze the results of the study, and the study came out with a number of results, most notably: The technical and physical aspect (hardware, networks, software) achieved the first rank in the reality of requirements with a weighted arithmetic average of 2.20 and relative importance of 73%, which indicates the readiness of the basic technological environment in the institution under study, and the paragraph related to the existence of a clear management strategy to support knowledge management initiatives was recorded as the lowest arithmetic mean in the requirements axis (2.08) with a weight of 69% , This confirms the absence of binding policies and legislation to institutionalize knowledge and its application. The results showed a strong reliance on previous knowledge stocks and periodic updating of links to face information obsolescence, as the law of knowledge accumulation achieved the first rank in the axis of laws with a weighted average of 2.42 and a weight of 80%.

Keywords:

Knowledge Management, Knowledge Management Laws, Pathfinder, Performance.

Introduction

Knowledge management laws are the cornerstone in guiding IT organizations towards investing their intangible assets and transforming them into sustainable competitiveness. As the knowledge explosion in the digital environment intensifies, the challenge is no longer the abundance of information, but how to subject these flows to strategic laws and practices that ensure the effective creation, storage, and dissemination of knowledge. In



Copyright: © The Author(s), 2026. Published by **Faculty of Education, University of Buea**. This is an **Open Access** article, distributed under the terms of the Creative Commons Attribution 4.0 License (<http://creativecommons.org/licenses/by/4.0/>), which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

this context, the Pathfinder Service stands out as one of the most important performance outputs of these laws, as it acts as an intelligent and structured knowledge guide that facilitates access to qualitative content. The link between knowledge management laws and the development of the performance of this service represents an inevitable response to the requirements of digital transformation, as these laws contribute to transforming individual experiences into collective knowledge capital, which is directly reflected on the quality of the information service provided and its ability to meet the expectations of beneficiaries in an environment characterized by rapid change, and despite the technical advances in information environments, there is a clear gap between the adoption of knowledge management technologies and compliance with the laws and practices regulating them, which has led to a decline in the Efficiency of Mentoring Tools such as Pathfinder. The problem is that systematic knowledge management laws are poorly employed in the engineering and development of this service, which has often made them just rigid lists that lack dynamism and the ability to foster institutional learning and innovation. The problem can be formulated through the following questions: 1. How do knowledge management laws (sharing, accumulation, and innovation) contribute to the transformation of the Pathfinder service from a traditional retrieval tool to a platform for innovative performance? 2-What is the effect of applying knowledge management practices on improving the quality of Pathfinder service performance in the digital environment? 3-To what extent does adherence to knowledge management laws enhance the ability of information organizations to adapt quickly to sudden environmental shifts through their guidance tools? Based on the above, the study aims to root the conceptual framework of knowledge management laws and the Pathfinder service in the light of the contemporary literature and the digital environment, and to reveal the role of strategic knowledge management practices in developing the operational and innovative dimensions of the performance of the Pathfinder service, and to measure the level of effectiveness of the Pathfinder service as a strategic performance tool in light of the application of knowledge management laws (sharing, accumulation, and innovation), this study is scientifically important in enriching the academic library with a study that links the laws of knowledge management as an independent variable, and the performance of the Pathfinder service as a dependent variable, a link that lacks rooting in the digital Arab environment, and in practical terms, providing managers of information institutions with a practical framework that shows how laws regulating knowledge can improve the efficiency of institutional performance and meet the expectations of beneficiaries, and from a technical point of view, highlighting the need to transform knowledge assets into innovative capabilities that ensure the flexibility of the information service (Pathfinder) and its ability to withstand digital environmental transformations, while the research **hypotheses** were oriented towards:

There is a statistically significant correlation at a significant level (0.05) between the level of availability of the requirements of the knowledge management environment (human, technical, organizational) and the level of commitment to the application of knowledge management laws (sharing, accumulation, renewal) in the performance of the digital Pathfinder service.

There is a statistically significant affective relationship at a significant level of (0.05) for the availability of the requirements of the knowledge management environment in the

development of the innovative and operational dimensions of the digital Pathfinder service measured by (the impact of the three laws, quality standards and challenges).

As for the study methodology, the researcher followed the descriptive method in an attempt to reach the accurate knowledge of the elements of the problem represented in **(the laws of knowledge management and their impact on the development of the performance of the Pathfinder service in the digital environment)**, in order to reach a better and more accurate understanding and develop future policies and procedures for it. The study also adopted the analytical method from the descriptive method, because description is one of the basic processes in scientific research, and it enables the researcher to accurately describe the phenomenon studied, with the need to organize and analyze the data and extract conclusions that are significant and meaningful to the study problem. Also, the study adopted multiple methods of data collection and analysis to reach results.

As for the research community, a simple random sample of 35 individuals was selected from all the beneficiaries of the Pathfinder service, which included postgraduate students who are actually present and beneficiaries of the Pathfinder service, to measure the impact of the service on the development of their skills for the period from (2025-2026), the researcher relied on multiple tools that can be explained as follows:

A) Theoretical Aspect Arab and Foreign Books, Periodicals, Articles, and University Studies.

B) Official records and reports issued by the libraries of Imam al-Azam University College, in addition to field observations, personal interviews, and direct observation, as well as a questionnaire designed to measure the study variable.

The limits of the study were framed as follows:

- Objective Limits: Knowledge Management Laws and Their Impact on the Development of Pathfinder Service Performance in the Digital Environment.

-Spatial and temporal limits: Graduate students benefiting from the service (2025-2026).

Theoretical aspect: This research dealt with several paragraphs, which we explain as follows:

1- Knowledge Management: A set of strategic practices that aim to transform knowledge assets into innovative capabilities that enable an organization to quickly adapt to sudden environmental shifts. (Abbas & Kumari, 2022), and Anand et al., 2021 define it as a set of systematic practices that facilitate the creation, storage, and dissemination of knowledge among the members of an organization, to transform individual experiences into collective knowledge capital, and is also defined as an organized process that aims to acquire, generate, store, and use knowledge to enhance an organization's ability to learn, innovate, and compete. (Davenport & Prusak, 1998, p. 5), Carl Wiig provides a definition that links knowledge to performance effectiveness as the systematic and explicit construction and deliberate application of knowledge to maximize the effectiveness of knowledge in an organization, and to generate returns from its knowledge assets. (Wiig, 1997, p. 1)

2- Performance: The extent to which an organization succeeds in achieving its strategic goals through the optimal use of material and human resources in a way that ensures

competitive sustainability (García-Alcaraz et al., 2022) is also defined as a measure of the extent to which an organization is able to meet or exceed customer expectations by providing services that are reliable, responsive, secure, and empathetic, resulting in added value creation for the beneficiary. (Yusuf et al., 2024)

3- Pathfinder Service: According to the Dictionary of Library and Information Sciences, Pathfinder is an objective bibliographic list designed to guide patrons through the process of searching for a specific topic, or a specific specialty, using the best search tools offered by information centers and also known as a service designed to meet the specific needs of the beneficiaries, and is a tool that aims to help patrons start conducting research on a specific topic, whether online or in information centers (WULANSARI, 2017) , Pathfinder is a library resource map; it is an information locator for a library user who has just started searching for recorded material on a topic of interest. A built-in guide to key information sources for the user's immediate needs, a step-by-step learning tool that, if followed, will present to the user those elements that the most skilled reference librarian might suggest as essential elements to the initial investigation of the topic (Wulansari, A.2017)

4- Digital Environment: An organization's digital environment is the set of technologies provided by an organization to get work done, and includes all the digital tools that employees use to carry out their tasks (e.g., email, messaging platforms, project management tools, and cloud computing), and aims to enhance productivity and employee experience. (Williams, 2021) It is also defined as an educational context based on digital media and interactive platforms, where information is stored, retrieved, and circulated in electronic form, allowing the learner to access knowledge sources at any time and from anywhere, changing the role of the teacher from a teleprompter to a facilitator. (Abdelhadi, 2019)

Second: Laws Knowledge Management

Najm (2015, p. 87) has established six main laws that govern the movement of knowledge in organizations. Despite the great importance of these laws combined, this study was objectively and practically limited to three specific laws: (knowledge sharing, knowledge accumulation, and knowledge renewal), as some of the six traditional laws (e.g., the law of storytelling) relies contextually on direct human verbal interaction to transmit implicit knowledge, which is incompatible with the nature of the digital Pathfinder service in its current environment, which is characterized by being a self-provided and fully automated reference service, which makes the measurement of the three elected laws more accurate, systematic and harmonious with the quantitative measurement tool (questionnaire), also the digital environment of information services depends on explicit and documented knowledge more than oral tacit knowledge, and the philosophical foundations of the six laws can be reviewed as follows:

1- Knowledge is the foundation of business survival: Knowledge sharing is an indispensable strategic choice and knowledge is the essential foundation for economic survival and continuity in the business market.

2-Collaborative groups are the heart and soul of knowledge sharing: professional volunteer groups of individuals with common interests and interests are the most efficient and effective framework for knowledge sharing and development.

3- Virtual Shared Groups Need Physical Interaction: While business networks are important in forming virtual teams for geographically dispersed members, they are not enough alone. These relationships must be strengthened and complemented through face-to-face and periodic (face-to-face) meetings to ensure their effectiveness.

4- Longing is the driver of shared practice groups: these groups thrive when their members commit to a common goal, the basis for the continuity of these groups is self-interest and the members' inner yearning for participation and achievement.

5-Knowledge sharing has both internal and external dimensions: Knowledge sharing is not limited to what is going on within the organization's boundaries, but the exchange must take place in two directions to ensure that knowledge is obtained from all available sources, whether from inside or outside the company.

6- Storytelling ignites knowledge: Storytelling is one of the most powerful means of conveying contextual work environments. Stories help companies combine narrative-style communications (suitable for conveying complex situations) with abstract information.

Third: The Importance of Knowledge Management in Information Institutions

(Awad, 2014), (Mansour, 2012, p. 135) and (Akhavan et al., 2013) stated that knowledge management acquires its strategic importance in information institutions through the following aspects:

1- Enhancing organizational memory and preventing loss of experience Knowledge management is the organizational memory of an organization, it works to document tacit knowledge and convert it into explicit knowledge, this protects IT organizations from the risk of losing expertise when employees retire or leave.

2- Improving Decision-Making Efficiency and Job Performance: These systems help provide the necessary tools to accurately collect and analyze information that contribute to improving the quality of services by reducing the time spent on service delivery.

3-Supporting innovation and competitive excellence by encouraging the exchange of ideas and building a strong knowledge base, the organization can innovate new information services that give it a sustainable competitive advantage in light of rapid technological changes.

4- Optimal investment of intellectual capital Knowledge management is an effective tool for investing an organization's intellectual capital and transforming it into a creative force and tangible outputs. It also contributes to reducing operational costs by preventing duplication of efforts and making effective use of available resources.

5- Enabling digital transformation and professional development play a pivotal role in enabling IT organizations to keep pace with digital transformation, as efforts are directed towards the effective adoption of modern technologies to improve operations.

Fourth: Requirements for the application of knowledge management laws in the digital environment (human, technical, and organizational).

The process of implementing knowledge management in the digital environment requires the integration of three core axes known as knowledge management infrastructure. These requirements are distributed as follows: (Al-Jubouri, 2018) and (Sweih et al., 2025).

1- Human Requirements The human element is the main generator and engine of knowledge in the organization and includes:

A) Conscious leadership: The need for leadership that supports change, and believes in the importance of knowledge sharing.

B) Qualified Personnel: Human resources with digital skills and the ability to generate and share knowledge.

C) Motivation: Adopting motivational methods (both physical and moral) to encourage employees to disclose their tacit knowledge and turn it into knowledge assets.

2- The regulatory requirements relate to the creation of the internal climate of the institution to be an incubator of knowledge and include:

A) Flexible organizational structure: Shifting from rigid hierarchical structures to flexible, horizontal structures that allow for the flow of information and the easy exchange of experiences.

B) Organizational culture: Spreading a culture of knowledge sharing instead of hoarding information, and creating an environment of trust and collaboration between individuals.

C) Digital Strategy: Formulating a clear strategic vision and objectives that integrate knowledge management with the organization's digital transformation goals.

3. Technical requirements represent tools and means that facilitate the processes of storing, disseminating and retrieving knowledge, including:

A) Knowledge Management Systems: Providing electronic platforms to collect and document scientific production and field expertise.

B) Communication Networks: Providing strong internal and external networks that ensure fast access to information.

C) Research and Artificial Intelligence Tools: Using advanced algorithms to analyze big data and facilitate highly effective information retrieval.

Fifth: Quality standards of performance of the Pathfinder service and the skills required to prepare it in the digital environment.

Both (Awad, 2014) and (Dahl, C., 2001) stated that the Pathfinder service in the digital environment requires precise standards to ensure its quality, this can be explained through the following:

First: Quality Standards of Performance of the Digital Pathfinder Service: The quality of the Pathfinder is based on its ability to facilitate the search journey for the beneficiary, and its most prominent criteria are:

1- Accuracy and reliability standard: All links and sources selected must be from reliable scientific sources and recognized academic bodies.

2-Modernity Criterion: The necessity of periodically updating the links and adding the latest references and researches published in the specialization.

3- Ease of Use and Accessibility Standard: The design should be compatible with different internet browsers and smartphones, with a simple interface that enables the user to access information with the least number of clicks.

4- Logical organization criterion: the order of sources from public to private, from traditional references to sophisticated digital rules.

5-Interactivity Standard: Providing means of communication with the library specialist (e.g. live chat or mail) in case the patron encounters difficulty using the directory.

Second: Skills required to prepare a Pathfinder in the digital environment A Pathfinder preparer needs a combination of traditional and modern technical office skills, including:

1- Advanced Research Skills: The ability to use complex research strategies in global databases to extract the finest sources.

2- Critical Evaluation Skills: The ability to distinguish between obese and obese information published online and to choose what best suits the needs of researchers.

3- Technical skills: Familiarity with web design software or content management platforms.

4- Objective Analysis Skill: The ability to analyze the structure of the science and the subject to be prepared for it to prepare a guide to organize concepts systematically.

5- Digital Communication Skills: The ability to formulate content in clear and simplified language that suits the different knowledge levels of the beneficiaries.

Sixth: The Impact of Knowledge Laws on Service Development

1- The Reflection of the Knowledge Sharing Law on the Enrichment of the Content of the Pathfinder Service: The Knowledge Sharing Law is the main driver of improving the quality and performance of Pathfinder in the digital environment, and this can be explained as follows:

A) Turning tacit knowledge into reference content Knowledge sharing allows the hidden expertise of researchers and information professionals to be captured and integrated into the manual. This reflection enriches the guide with practical tips and research strategies, making it a vital tool to counter the flow of information (Awad, 2014)

B) Ensuring the comprehensiveness and diversity of sources the implementation of this law opens the door to cooperation between libraries This cooperation is reflected in the

content of Pathfinder by providing it with links to external sources, shared databases, and global digital repositories, which raises its informative value and makes it more comprehensive (Mansour, 2012).

C) Dynamic and continuous content updating with knowledge sharing, Pathfinder transforms from a static document into an interactive tool. The reflection here is seen in the speed of monitoring new sources, ensuring that the content is novel and is one of the most important quality criteria (Vileno, 2007).

D) Enriching content with collective intelligence Knowledge sharing allows patrons to add comments on the resources in the guide. This reflection makes it easier for other researchers to access the most important sources based on peer evaluations, reducing time wasted on random research (Sweih et al., 2025)

2- The Role of Knowledge Accumulation in Building Powerful Pathfinder Reference Databases: **Knowledge accumulation** plays a role in transforming search directories from simple link lists to reference databases, and this role is highlighted by the following points:

A) Building a digital repository of past experiences the backlog allows building a database of the best proven sources, giving the Pathfinder service a historical and knowledge depth that prevents duplication of efforts and protects the organization from losing expertise when employees leave (Al-Jubouri, 2018) and (Awad, 2014).

B) Interdisciplinary interlinking the accumulation of evidence on diverse topics within a single database allows for the creation of links between different disciplines. Knowledge accumulation facilitates the process of automated recall of sources, which enriches the content of the Pathfinder and makes it more relevant to modern interdisciplinary research (Akhavan et al., 2013).

C) Supporting Prediction and Smart Search The accumulation of data on how patrons search and the sources they prefer allows IT organizations to use data mining techniques to develop intelligent search guides that predict user needs based on previously accumulated knowledge stocks (Sweih et al., 2025)

3- The impact of the Renewal Law on the sustainability and updating of research evidence to confront information obsolescence: The Knowledge Renewal Law is the real valve to prevent the erosion of the scientific value of research evidence, and the impact of this law on the sustainability and modernization of the Pathfinder service can be explained as follows:

A) Addressing Information obsolescence, The Renewal Law periodically reviews the content of knowledge to get rid of sources that have been overtaken by recent discoveries. This effect ensures that the Pathfinder remains a reliable tool that offers only what is current and correct (Vileno, 2007).

B) Sustainability through the technical updating of sources This law contributes to the transformation of traditional links into more effective media This renewal ensures the sustainability of the use of the service by researchers who prefer visual and interactive content.

C) Adapting to changes in subject headers and descriptors Scientific terms and descriptors change with the development of science, so the law of innovation requires updating search words and keywords within Pathfinder to match what is used in current global databases. This ensures the sustainability of the directory's ability to link the researcher with the latest intellectual production (Dahl, 2001) and (Al-Jubouri, 2018)

D) Promoting Continuous Organizational Learning the Innovation Act imposes on the information professional the need to keep up with new digital tools (such as artificial intelligence in research). This effect is reflected in the Pathfinder service through the integration of smart and innovative search tools, which makes it an ever-evolving tool and not just a static list, which ensures that it remains a primary reference service in the organization (Awad, 2014).

The applied aspect of the study

This study aims to measure the role played by knowledge management laws as an independent variable, in enhancing the performance of the Pathfinder service, and for the purpose of testing the hypotheses of the study, a refereed scientific questionnaire was designed that was distributed to researchers and beneficiaries, and the following mechanism was adopted in the analysis:

- 1- The questionnaire included (12) paragraphs distributed over three main axes covering the dimensions of the study variables.
- 2- The questionnaire paragraphs were presented to a group of competent referees to ensure the apparent honesty and suitability of the paragraphs to the objectives of the study.
- 3- The study adopted the triple scale (Liärt) to estimate the respondents' responses according to the weights shown in the table below

Table (1) Weights of the fields

Alternatives	Agree	Neutral	Disagree
Weight	3	2	1

- 4- Statistical Interpretation Criteria: For the purpose of judging the strength of the response, the weighted arithmetic medians were divided into three categories according to the range ($3-1 = 2 / 3 = 0.66$), as shown in the following table:

Table (2) Reliability of Response

Alternatives	Overall response	Partial response	Very poor response
Weighted mean	2.4 - 3	2.3-1.7	1.6-1

The values of the questionnaire items were unloaded and analyzed through SPSS version 23, and the results of the analysis were as follows:

Second: The main themes of the questionnaire

First Theme: Requirements and Reality (Human, Technical, Organizational)

This table shows the readiness of the organizational, technical, and human environments within the researched organization to apply the laws of knowledge management and the development of the (Pathfinder) service, as this specific independent variable axis represents the main factor in the effectiveness or failure of knowledge initiatives, as an indicative indicator of the reality of the incubator environment, the data of which are reflected in detail in **Table 3**

Table (3): Descriptive Statistical Indicators of the Requirements and Reality of the Ecosystem

s	paragraphs	Agree	Neutral	Disagree	Weighted mean	Standard deviation	Relative importance
1	The Foundation provides the necessary technical infrastructure (software, networks) for the design of digital research guides	16	10	9	2.2	0.61	73
2	There is a clear strategy from management to support knowledge management initiatives	13	12	10	2.08	0.52	69
3	Staff have the skills to evaluate digital information sources and select the best for Pathfinder	17	6	12	2.14	0.71	71

Table Analysis:

The overall results of the first axis show that the general readiness of the institution came with a degree of (partial) with a total arithmetic weighted average of (2.14) and relative importance of (71.3%), which is an indicator that proves that there is a solid ground to take off, but it suffers from internal structural imbalances when dismantling the data:

Paragraph (1) ranked first with a weighted average of (2.20) and a percentage weight (73%), indicating that the organization has made good progress in providing tangible physical aspects such as computers, networking and software.

Paragraph (2) related to the existence of a clear management strategy was recorded as the lowest arithmetic mean in the axis (2.08) and the lowest percentage weight (69%). With a standard deviation of (0.52), which proves that the study population fully agrees

on the existence of a governance gap, where the management adopts modern technologies without formulating clear legislation or strategic policies that support the institutionalization of knowledge and commit individuals to it.

The Second Theme: The Impact of Knowledge Management Laws on the Quality of Evidence

This table seeks to measure the extent to which the fundamental laws of the dimensions of knowledge management laws (sharing, accumulation, and innovation) are reflected on the quality of the final knowledge product, which is represented by digital research evidence (Pathfinder), and to monitor whether these laws work in an integrated or fragmented manner, as illustrated by the following table:

Table (4): Descriptive Statistical Indicators of the Knowledge Management Laws Effect on the Quality of Evidence

s	paragraphs	Agree	Neutral	Disagree	Weighted mean	Percentage weight	Standard deviation
Knowledge sharing reflection							
1	Sharing experiences among colleagues enriches the content of evidence with non-traditional sources.	18	10	7	2.31	77	0.80
2	Pathfinder provides interactive channels that allow beneficiaries to participate in the evaluation of resources.	8	12	15	1.8	60	0.44
The Role of Knowledge Accumulation							
3	The design of new evidence is based on the knowledge stocks and previous experiences stored in the organization	19	12	4	2.42	80	0.74
4	The accumulation of evidence contributes to building a robust reference database covering diverse interdisciplinary disciplines	10	14	11	1.97	65	0.55
Renewal Law Effect							
5	The links and contents of the research guides are updated periodically to counter information obsolescence	19	10	6	2.37	79	0.73
6	The Foundation is committed to replacing traditional sources with modern digital media (infographics, video) to ensure sustainability.	21	0	14	2.2	73	0.55

Table Analysis:

The second axis recorded a general average of (2.17) with a percentage weight of (72.2%) and a general trend (Agree), which shows that knowledge management laws clearly affect the quality of the Pathfinder service, but this effect appears strongly in certain dimensions and is absent in other dimensions, as shown in the following:

Paragraph (3) related to relying on the previous knowledge inventories achieved the highest weighted average in the axis (2.42) and a percentage weight (80%), followed directly by paragraph (5) of the periodic update to face obsolescence with a mean of (2.37) and a weight of (79%). This gives a definite indication that the internal (vertical) knowledge flow among employees is going well, as previous experiences are exploited and links are updated to prevent digital evidence from becoming obsolete.

Third Theme: Quality Standards and Challenges

This table aims to examine the quality of the final outputs and the ease of access to them, while highlighting the most prominent challenges (cultural and financial) that hinder the sustainability and development of digital research evidence, to show the relative weight of each obstacle, as illustrated in the following table:

Table (5): Descriptive Statistical Indicators of Quality Standards and Challenges

s	paragraphs	Agree	Neutral	Disagree	Weighted mean	Percentage weight	Standard deviation
1	Easy access to search directories via the organization's website from various smart devices.	19	11	5	2.4	80	0.57
2	The culture of information monopoly is an obstacle to the modernization and development of research evidence	24	7	4	2.57	85	0.70
3	The lack of financial support affects the quality of the sustainability of the digital Pathfinder service	17	10	8	2.25	75	0.51

Table Analysis:

This axis achieved the highest overall average in the questionnaire with a weighted average of (2.41) and relative importance of (80.3%) and a direction of (**strongly agree**), which means that the sample puts quality standards and challenges at the top of priorities, this can be explained through the following:

The Foundation succeeded in achieving the quality of the accessibility standard (paragraph 1) with an arithmetic average of (2.40) and relative importance (80%), which intersects positively with the results of the first axis; the evidence is technically available and works efficiently on smart devices.

Paragraph (2) related to the culture of information monopoly was recorded the highest in the whole study (**2.57**) with a relative importance of (85%). This explains academically that the main barrier that threatens the service is not a technical one, but rather a **hidden**

behavioral and cultural barrier, where employees or experts refrain from providing evidence with their expertise for fear of losing individual competitive advantage within the organization, which reinforces the conclusion drawn from the first axis about the absence of a binding strategy from management to break this knowledge monopoly.

Fourth: Measuring the Correlation of Study Variables

This table aims to measure the nature and strength of correlational relationships, and to determine the size of the causal effect to know the extent to which the independent variable (requirements and reality) is able to predict and interpret the dependent variables (effect of laws, quality of outputs and challenges) as shown in the following table:

Table (6): Correlation, Effect and Regression Matrix of the Study Model

Causal model	Pearson correlation coefficient (r)	Determination Coefficient (R2)	Calculated F value	Significance Level (Sig.)	Decision
Requirements and Reality the effect of Knowledge Management Laws	0.68	0.462	28.34	0.001	Strong Direct Link
Requirements and Reality Quality Standards and Challenges	-0.54	0.291	13.55	0.015	Medium reverse correlation

Table Analysis

A strong direct correlation ($r = 0.68$) was found to be statistically significant ($\text{Sig} = 0.001$). The value of the determination coefficient ($R^2 = 0.462$) indicates that (46.2%) of the common variation and quality in the application of knowledge management laws is directly due to the availability of requirements and reality (technical structure, strategy, skills). The remaining percentage (53.8%) is due to other factors outside the current statistical model (such as the incentive system and the organizational climate).

The matrix showed a statistically functionally negative correlation value ($r = -0.54$). This negative signal has an important academic depth, as it proves that the more the administration raises the readiness of the ecosystem and provides financial support and clear policies, the more the intensity of cultural challenges and crises (monopoly culture) decreases by an explanatory percentage of (29.1%) according to the determination coefficient ($R^2 = 0.291$). This confirms that treating behavioral and financial problems starts with fixing regulatory requirements first.

Study Results: -

1- The technical and physical aspect (hardware, networks, software) achieved the first rank in the reality of requirements with a weighted arithmetic average of 2.20 and relative importance of 73%, which indicates the readiness of the basic technological environment in the institution under study.

2- The paragraph related to the existence of a clear management strategy to support knowledge management initiatives was recorded as the lowest arithmetic in the requirements axis (2.08) with a percentage weight of 69%, which confirms the absence of binding policies and legislation for the institutionalization and application of knowledge.

3. The results showed a strong reliance on previous knowledge stocks and the periodic updating of links to face information obsolescence, as the law of knowledge accumulation achieved the first rank in the axis of laws with a weighted average of 2.42 and a weight of 80%.

4- The organization has succeeded in achieving the quality standard of accessibility of the Pathfinder service via smart devices with a mean of 2.40 and a relative importance of 80%, which reflects the efficiency of the technical design of the guidelines.

5- The culture of information monopoly scored the highest arithmetic average in the entire study with a value of 2.57 and a relative importance of 85%, proving that the main barrier to the development of the Pathfinder service is a behavioral and cultural barrier rather than a technical one.

6- The correlation matrix proved a strong statistically significant direct correlation ($r = 0.68$) at a significant level ($\text{Sig} = 0.001$) between the availability of prerequisites and the organization's ability to apply knowledge management laws.

7- The value of the coefficient of determination ($R^2 = 0.462$) revealed that 46.2% of the variance and quality in the implementation of knowledge management laws is directly due to the availability of organizational, human and technical readiness within the organization.

8- It was found that there was a median and statistically significant inverse correlation ($r = -0.54$) between the reality of requirements and quality standards and challenges, which explains academically that raising the readiness of the regulatory and financial environment directly leads to a reduction in the severity of cultural crises and information monopoly behaviors by 29.1%.

Third: Study Recommendations

According to the previous findings, the researcher recommends the following:

1- The management of the information organization should prepare and institutionalize clear policies and legislation to integrate knowledge management into strategic plans, rather than just technical adoption without organizational cover.

2- To address the behavioral barrier of information monopoly culture, it is recommended that employees and professionals who share their implicit expertise in enriching the content of Pathfinder evidence be adopted.

3- The need to re-engineer the digital Pathfinder service to include interactive channels that allow beneficiaries (such as graduate students) to actively participate in the evaluation and commentary on resources, ensuring the shift from static lists to innovative platforms.

4- Working to provide dedicated budgets to support and sustain the digital Pathfinder service, ensuring that subscriptions to global databases are updated, and traditional sources are replaced with modern interactive and visual media.

5- Designing continuous and intensive training programs for information professionals on critical objective analysis tools, employing AI and data mining techniques to build intelligent research guides that accurately predict the needs of beneficiaries.

Sources and References

- Al-Jubouri, Maysaa Adel Jassim. (2018). Knowledge Management Strategies: An Analytical Study in Information Institutions in Iraq. *Iraqi Journal of Information*, 19(1/2), 45–78. Publisher: Al-Mustansiriya University
- Ben Mansour, Abdelkader. (2012). The Role of Information Technology in Activating Knowledge Management in Information Institutions. *Afkar wa Afaq Journal* (University of Algiers 2), 1(2), 132–151. Retrieved from the Algerian Scientific Journals Platform (ASJP).
- Souayeh, Kawthar, et al. (2025). Information Technology Applications in Knowledge-Based Institutions: A Field Study in the Information Centers of Wasit University. *Journal of the College of Education (Wasit University)*, 1(56), 907–926. Link: [eduj.uowasit.edu.iq].
- Abdel-Hadi, Mohamed Fathi. (2019). Information Institutions in a Changing Digital Environment. *International Journal of Library and Information Science*, 6(4), 15–42.
- Awad, Mohammed Saleh Mohammed. (2014). Knowledge Management: Its Concept, Importance, and Reality of Application in Public Libraries in the United Arab Emirates from the Perspective of Their Managers. In the Proceedings of the Special Libraries Association – Arabian Gulf Chapter (SLA-AGC) Conference (pp. 1–25). Doha, Qatar: Hamad Bin Khalifa University Press (QScience).
- Najm, Najm Aboud. (2015). Knowledge Management. Amman, Jordan: Dar Al Warraq for Publishing and Distribution.
- Abbas, J., & Kumari, K. (2022). Examining the relationship between software project success, soft skills and techniques: A knowledge management perspective. *Journal of Knowledge Management*, 26(10), 2450–2472. <https://doi.org/10.1108/JKM-10-2021-0780>
- Akhavan, P., Ramezan, M., & Moghaddam, J. Y. (2013). Knowledge Management in Libraries and Information Centers: A bibliometric perspective. *Advances in Social Sciences Research Journal*, 5(2), 241–255. Publisher: Society for Science and Education.
- Anand, A., Ward, A., & Zellner, J. (2021). Knowledge management practices and organizational learning: An empirical study of the semiconductor industry. *International Journal of Knowledge Management*, 17(1), 1–18. <https://doi.org/10.4018/IJKM.2021010101>

- Dahl, C. (2001). Electronic Pathfinders in Academic Libraries: An Analysis of Their Content and Form. *College & Research Libraries*, 62(3), 227–237.
- Davenport, T. H., & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Boston, Massachusetts, USA: Harvard Business School Press.
- García-Alcaraz, J. L., et al. (2022). Modeling the impact of knowledge management on organizational performance. *Sustainability*, 14(11), 6542. <https://doi.org/10.3390/su14116542>
- Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of Management Review*, 23(2), 242–266.
- Onyancha, O. B. (2020). Knowledge Management Research in Information Institutions: A citation analysis of the literature. *South African Journal of Libraries and Information Science*, 86(1), 12–28. <https://doi.org/10.7553/86-1-1904>
- Taleban, S. (2022). School libraries Pathfinders. *Iranian Journal of Information Processing and Management*, 24(2), 123–143.
- Vileno, L. (2007). From paper to electronic, the evolution of pathfinders: A review of the literature. *Reference Services Review*, 35(3), 434–451.
- Wiig, K. M. (1997). Knowledge Management: Where Did It Come From and Where Will It Go?. *Expert Systems with Applications*, 13(1), 1–14.
- William Paterson University Library. (2026, April 15). *Information Sources and Services: Pathfinders & Tutorial Resources*. Spring 2026. Retrieved from <https://guides.wpunj.edu/c.php?g=364762&p=2464503>
- Williams, S. (2021). *Digital workplace strategy & design* (2nd ed.). O'Reilly Media.
- Wulansari, A. (2017). Library Pathfinder: Kemas ulang informasi dalam memudahkan temu kembali bagi pemustaka. *Publis: Jurnal Ilmu Perpustakaan dan Informasi*, 1(2). Retrieved from <http://journal.umpo.ac.id/index.php/PUBLIS/article/view/721>
- Yusuf, A. S., Cheiby, M., & Osman, M. S. (2024). Impact of digital transformation on service delivery performance in the public sector. *International Journal of Service Industry Management*, 35(2), 112–134. <https://doi.org/10.1108/IJOSM-06-2023-0145>