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The Role of Knowledge Management Practices in Achieving Digital Transformation: A Case Study of Sour El Ghozlane Municipality, Algeria

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Abstract:

This study aims to investigate the impact of knowledge management practices on the implementation of digital transformation in the municipality of Sour El Ghozlane, Bouira Province, Algeria. To achieve the objectives of the study, the researchers designed a questionnaire that was distributed to 100 administrative employees. A total of 85 valid questionnaires were retrieved and analyzed using the Statistical Package for the Social Sciences (SPSS). The study adopted a descriptive and analytical approach. The findings revealed several key results, most notably the existence of a positive correlation and a statistically significant impact of knowledge management practices on the implementation of digital transformation in the institution under study. Specifically, knowledge management practices accounted for 58% of the variation in the level of digital transformation implementation.

Keywords: Knowledge generation, knowledge application, knowledge storage, knowledge distribution, digital transformation.

JEL Classification Codes: M10.

INTRODUCTION:

As a result of the rapid technological advancements witnessed worldwide, governments and institutions are striving for digital transformation to maximize the benefits of modern technology, improve the performance of their systems, and enhance the services offered to the public. This transformation involves digitizing various operations and keeping pace with technological developments across different sectors.
Knowledge management is a key element for digital transformation, enabling organizations to be agile, adaptable, and quickly access information. It allows them to leverage knowledge repositories and utilize them to achieve their goals, enhancing their ability to implement digital transformation and drive towards excellence and success.

Research Problem:

Knowledge management practices have become essential for achieving successful digital transformation across all fields, fostering development, sustainability, and enhancing economic and social growth.

How do knowledge management practices influence the implementation of digital transformation at the Municipality of Sour El-Ghazlane?
This main problem encompasses the following sub-questions:

- How extensively is knowledge management practiced in the organization being studied?
- What is the degree of digital transformation implementation in the organization under study?
- What is the influence of knowledge management practices on the implementation of digital transformation in the organization under study?

Study Hypotheses:

- **First Hypothesis:** There is a high level of digital transformation implementation in the organization under study.
- **Second Hypothesis:** There is a high level of knowledge management practice in the institution under study.
- **Third Hypothesis:** There is no statistically significant impact between knowledge management practices (knowledge acquisition, knowledge generation, knowledge storage, knowledge distribution, knowledge application) and the

implementation of digital transformation at a significance level ($\alpha \geq 0.05$) in the organization under study." This hypothesis includes the following sub-hypotheses:

- **First Sub-hypothesis:** " There is no statistically significant impact between practices knowledge acquisition and the implementation of digital transformation at a significance level ($\alpha \geq 0.05$) in the organization under study."
- **Second Sub-hypothesis:** There is no statistically significant impact between practices knowledge generation and the implementation of digital transformation at a significance level ($\alpha \geq 0.05$) in the organization under study."
- **Third Sub-hypothesis:** There is no statistically significant impact between practices knowledge storage and the implementation of digital transformation at a significance level ($\alpha \geq 0.05$) in the organization under study."
- **Fourth Sub-hypothesis** There is no statistically significant impact between practices knowledge distribution and the implementation of digital transformation at a significance level ($\alpha \geq 0.05$) in the organization under study."
- **Fifth Sub-hypothesis:** There is no statistically significant impact between practices knowledge application and the implementation of digital transformation at a significance level ($\alpha \geq 0.05$) in the organization under study."

Study Objectives:

The study aims to achieve the following:

- Define the concepts of knowledge management and digital transformation, along with their underlying dimensions.
- Evaluate the implementation of knowledge management practices within the organization under study.
- Assess the level of digital transformation implementation within the organization under study.
- Emphasize the significance of adopting knowledge management practices in facilitating the implementation of digital transformation.
- Demonstrate the influence of knowledge management practices on the implementation of digital transformation in the organization under study.
- Investigate the nature of the correlation between knowledge management practices and the implementation of digital transformation in the organization under study.

Study Significance:

The importance of this study lies in its contribution to scientific knowledge in the field of specialization, focusing on the conceptual framework of knowledge management practices and digital transformation. The study also highlights both theoretical and practical aspects, in addition to offering suggestions and recommendations aimed at enhancing the organization's capabilities.

Study Methodology:

Considering the study's nature and goals, a descriptive approach was used to explore theoretical aspects concerning knowledge management and digital transformation. Following this, an analytical method was applied, utilizing diverse statistical methods to analyze survey data and derive findings.

Previous studies:

- **Saad Nafea Al Mutairi (2017):** It aimed to assess the reality of knowledge management practices and their impact on the company's responses to various crises. The results indicated that overall knowledge management practices significantly influenced each stage of crisis management.
- **Bouzara Safia, Boukhatem Lakhdar (2019):** Conducted a study titled "Knowledge Management Practices in Algerian Institutions: A Case Study of Algerian Telecommunications in Tébessa". This study evaluated and measured knowledge management as one of the most important modern practices in Algerian and global institutions, concluding that effective implementation was lacking and that practices did not meet the required standards at Algerian Telecommunications in Tébessa.
- **Badria Mohammed Abdul Rahman Al-Shahri, Asia Yaqoub Al-Hadi Abdul Khair (2023):** Conducted a study titled "The Role of Knowledge Management Practices in Digital Transformation: A Field Study on the General Security Sector in Asir Region". This study aimed to investigate the role of knowledge management practices in digital transformation among civilians in the General Security sector. The study found several results, including the presence of a significant relationship between knowledge management practices and digital transformation.

Hese studies collectively provide insights into the application and impact of knowledge management practices in various organizational contexts, shedding light on their role in crisis management, organizational performance.

1- The Study's Theoretical Foundation:

1-1-Concept of Knowledge Management

- Knowledge management involves identifying, collecting, categorizing, organizing, storing, sharing, disseminating, and accessing knowledge within an organization. (Seresty, 2014, p. 110)

-And it is defined as the processes , tools, and procedures jointly developed and implemented by organization stakeholders to acquire, store, and distribute knowledge that reflects in administrative operations to achieve superior applications for long-term competitiveness and adaptation. (Al-Kubaisi, 2005, p. 42)

1-2-Knowledge Management Practices:

1-2-1-Knowledge Acquisition: Knowledge acquisition involves capturing, purchasing, discovering, and extracting knowledge from various sources (experts, specialists, competitors, customers, databases, or organizational archives).

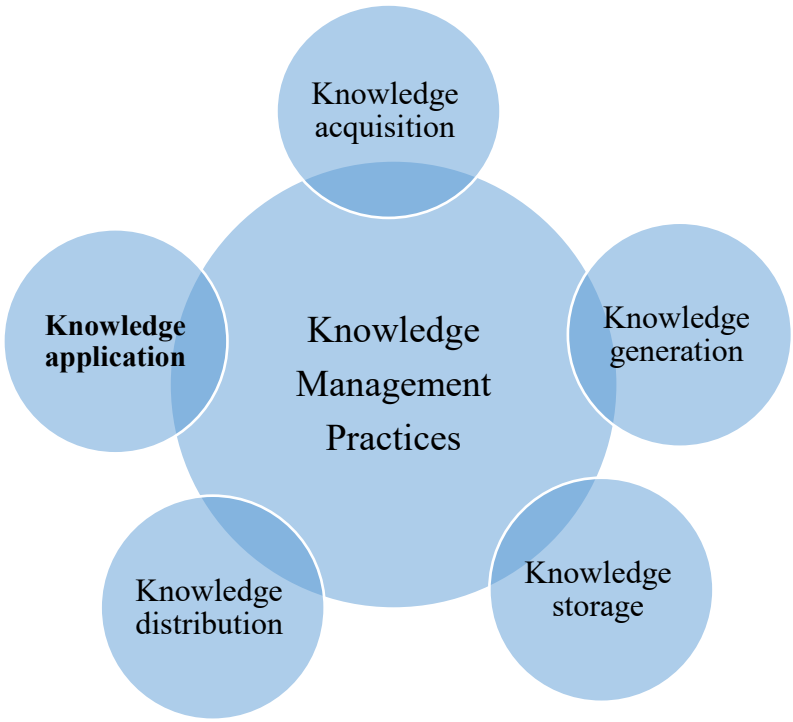
1-2-2-Knowledge Generation: The process of knowledge generation involves creating or developing new explicit and tacit knowledge from available data and information.

1-2-3- Knowledge storage: refers to the process of systematically collecting and organizing knowledge, making it available and retrievable when needed. This involves using various technologies to store data and information, whether in digital or physical formats, to preserve knowledge and facilitate future access and utilization**.**

1-2-4-Knowledge Distribution: Distribution is the process of delivering, disseminating, flowing, and transferring knowledge, involving various methods such as project teams, internal information networks, training.

1-2-5-Knowledge Application: is the process of effectively using acquired knowledge in practical or real-world contexts to solve problems, make decisions, and achieve desired goals. This involves utilizing both explicit and tacit knowledge gained through learning, experience, and research to enhance performance, improve processes, and add value to organizations and communities.

Figure (01): Knowledge Management Practices



Sours: Prepared by the researchers.

1-2- Concept of Digital Transformation:

-Digital transformation is "the process of converting the business model of government institutions or private sector companies into a model that relies on digital technologies for service delivery, product manufacturing, and human resources management." (Qurein, June 2022, p. 303)

-Digital transformation is also defined as "the change associated with applying digital technology to radically change the way work is done, to serve beneficiaries faster and better. It is also an integrated organizational transformation aimed at facilitating and improving administrative processes to achieve digital maturity." (Khawatera, 2021, p. 109)

1-3-Requirements for Implementing Digital Transformation:

Its requirements manifest in the following: (Nasser Qarqut, April 2023, p. 240)
1-3-1- Human Resources: Human resources constitute a vital aspect without which organizations find it difficult to implement digital transformation. This necessitates providing qualified personnel capable of using and analyzing data to make effective decisions. Planning and implementing visions require human competencies, scientific expertise, and practical experience, along with a commitment to change and development.
1-3-2- Processes: Processes consist of a series of interconnected activities or tasks that produce specific services or products for beneficiaries. Organizations must establish an effective technical foundation to develop internal and external processes, ensuring optimal implementation of digital transformation. This includes internal and external alignment in process execution with controls in place.
1-3-3- Technologies: refer to the set of tools, systems, and technological platforms used for developing and operating software and services. They include computers, operating systems, software, storage media, networks, internet infrastructure, cloud technology, and others that support communication, processing, storage, and provision of digital services.
1-3-4-Digital Culture: Digital culture encompasses values and a distinct set of behaviors that define how things are acquired and done within an organization. It provides a peaceful culture, guiding principles, and an implicit code of conduct that directs individuals to act appropriately and make choices that enhance the organization's goals and strategy. (Ahmed, 2024, p. 77)

2- The Methodological Framework of the Study:

2-1- Data Collection Tools and Processing Methods:
The data gathering method utilized was through a questionnaire. Approach, using a form prepared for this purpose, divided into three sections:

- **First Section**: Includes demographic variables of the study sample such as gender, age, educational level, and experience.
- **Second Section:** Discusses aspects of the independent variable (Knowledge Management Practices), such as knowledge acquisition, generation, storage, distribution, and application, with a total of 20 items included.
- **Third Section:** ncludes aspects of the dependent variable (Digital Transformation), including human resources, digital culture, processes, and technologies, comprising 16 items.

The study employed a five-point Likert scale for all dimensions, where each statement in the questionnaire includes a range of ratings. This scale helps determine the direction of responses from the sample individuals regarding the study's axes, as illustrated in the following table:

Table No. (01): Direction of Sample Individuals' Responses According to the Five-Point Likert Scale

The answer	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
The points	1	2	3	4	5
Reference Mean Average	[1.00 - 1.79]	[1.80 - 2.59]	[2.60 - 3.39]	[3.40 – 4.19]	[4.20- 5.00]
Level of Implementation	Very Weak	Weak	Moderate	High	Very High

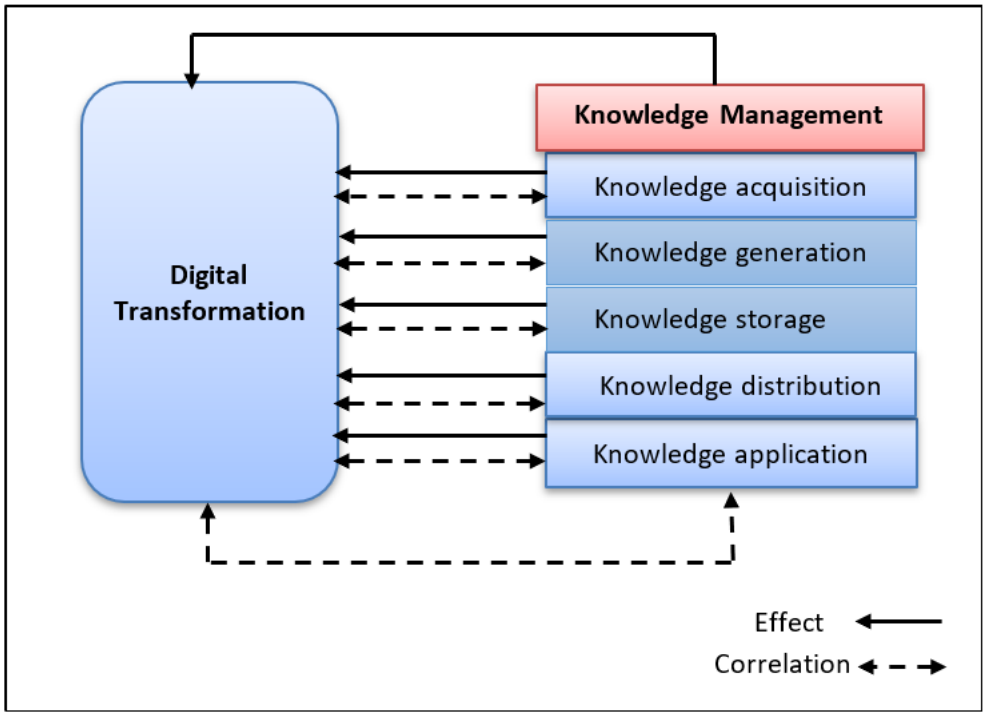
Sours: Prepared by the researchers.

The data collected from the questionnaire underwent analysis using SPSS software version 22, employing various statistical methods. Including frequencies, percentages, mean, standard deviation, Cronbach's alpha test, Pearson correlation test, simple regression test, and multiple regression test.

2-2-Population and Sample of the Study:
The study includes all employees working at Sour El-Ghozlane Municipality in Bouira.
Province, totaling 180 employees. A simple random sample of 100 employees .The survey was circulated among the sample, yielding 85 valid responses, reflecting an 85% response rate.

2-3- Study Model:
Figure No. (02) illustrates the study model, depicting the independent variable (Knowledge Management Practices) and the dependent variable (Digital Transformation).

Figure (02): Study Model



Sours: Prepared by the researchers.

2-4-Reliability of the Study Tool:
The questionnaire was provided to a panel of experts to gather their feedback on its clarity, validity, and relevance of its items to the study dimensions. To test the tool's reliability, Cronbach's alpha coefficient was used.

Table (02): Cronbach's Alpha Coefficient Values

Dimensions	Number of Items	Cronbach's Alpha Coefficient
Knowledge Management	20	0.824
Digital Transformation	16	0.840
All the statements	36	0.903

Source: Prepared by the researchers based on SPSS outputs.

Based on Table (01) and calculating the Cronbach's Alpha coefficient value for the study dimensions, which was (0.903), this value is high and exceeds (0.7), which is the minimum acceptable threshold. This suggests that it improves the reliability of the tool utilized in the study and verifies its validity.

2-5- Normality Test:
For hypothesis testing purposes, a Kolmogorov-Smirnov test was performed to identify the distribution type. The table presents the outcomes of the normality assessment using the Kolmogorov-Smirnov test:

Table (03): Results of the Kolmogorov-Smirnov (K-S) Normality Test

Dimensions	Number of Items	Significance Level (sig)
Knowledge Management	20	0.200
Digital Transformation	16	0.099
All the statements	36	0.200

Source: Prepared by the researchers based on SPSS outputs.
Based on Table (03), we find that all survey dimensions follow a normal distribution because the significance level **(sig ks)** for both dimensions is greater than the significance level (0.05). Therefore, parametric tests can be used.

3- Results and Discussion:

3-1- Statistical Analysis of Study Dimensions:
3-1-1- Analysis of the First Study Question: How extensively is knowledge management practiced in the organization

being studied ?
The following table contains statistical indicators for sample responses regarding the extent of knowledge management practices in the study institution, presented as follows:

Table (04): Arithmetic Mean and Standard Deviation of the Independent Variable (Knowledge Management Practices)

N	Phrases	Arithmetic Mean	Standard Deviation	Application Degree
01	Management works on supporting employees' creative ideas.	3.04	1.200	Moderate
02	Management provides employees with access to necessary knowledge.	3.80	1.033	High
03	Management organizes training sessions for employees to keep up with technological.	3.58	0.520	High
04	Management provides employees with the necessary technology to access knowledge.	3.79	0.465	High
Knowledge Acquisition		4.28	0.382	**Very High**
05	Management provides sufficient incentives for employees to develop skills and acquire new knowledge.	4.07	0.704	High
06	Management encourages employees to take initiative, innovate, and find solutions to various problems.	3.73	0.521	High
07	Management leverages the experience of senior employees to develop the skills of other employees.	3.89	0.970	High
08	Management encourages dialogue and conversations among employees to exchange ideas and knowledge.	3.94	0.520	High
Knowledge Generation		4.28	0.406	**Very High**
09	Knowledge and information are stored electronically to facilitate retrieval when needed.	4.06	0.496	High
10	Problems and their solutions are documented and stored for future reference.	3.68	0.493	High
11	Management provides a database for all employees.	3.80	0.552	High
12	Opinions and experiences expressed by experts and technicians are recorded, saved, and stored.	4.06	0.713	High
Knowledge Storage		4.17	0.391	**High**
13	Management relies on electronic methods to disseminate and distribute knowledge.	3.73	1.016	High
14	Management publishes newsletters and periodicals regularly to develop and disseminate knowledge and experiences using administrative technological means.	3.53	1.201	High
15	Management relies on training employees by their experienced senior colleagues to enhance their knowledge.	4.02	0.636	High
16	Management works on fostering a culture of sharing and exchanging knowledge and experiences among employees.	3.96	0.566	High
Knowledge Distribution		3.88	0.633	**High**
17	Management provides the material and human resources to implement and apply knowledge and benefit from it.	4.00	0.577	High
18	Management utilizes acquired knowledge and expertise to improve its services.	3.71	0.651	High
19	Employees have sufficient authority to implement the knowledge and expertise acquired in their work.	3.60	0.493	High
20	Applying knowledge contributes to creating diversity of knowledge within the organization.	3.74	0.833	High
Knowledge Application		4.09	0.441	**High**
Knowledge Management Practices		4.13	0.337	**High**

Source: Prepared by the researchers based on SPSS outputs.
From table number (04), we observe that the overall orientation of the sample towards knowledge management practices shows a strong positive inclination, with an arithmetic mean of (4.13)and a standard deviation of (0.337) . The sample's

orientation towards both Knowledge acquisition and generation demonstrated a notably high level of implementation, indicating robust knowledge management practices overall.

The rankings of knowledge management practices dimensions are as follows:
-**Knowledge acquisition and generation**: Both top the list with an average of (4.28) and standard deviations of (0.382) and (0.406), respectively, indicating a very high level of application. This confirms that the study institution enables its employees to generate and acquire necessary knowledge from various sources (technological, experts, archives, journals, publications, dialogue sessions).
-Knowledge storage: Ranked second with an arithmetic mean of (4.17) and a standard deviation of (0.391) , and a high level of application. This indicates that the study institution stores knowledge using databases and electronic archiving (computing devices), in addition to implicit knowledge stored among employees due to their experience and interaction.
-Knowledge application: Ranked third with an arithmetic mean of (4.09) and a standard deviation of (0.441) , indicating a high level of application. This suggests that the study institution integrates acquired and stored knowledge into its operational practices.
-Distribution of knowledge: Ranked fourth with an arithmetic mean of (3.88) and a standard deviation of (0.633) , indicating a high level of application. This suggests that the study institution disseminates knowledge through various means, whether using technological tools or through training employees and their interaction with experienced individuals.
3-1-2-Analysis of the second study question: What is the level of digital transformation implementation in the study institution ? The following table presents the statistical indicators of sample respondents' answers regarding the level of digital transformation implementation in the study institution, as follows:

Table (05): Arithmetic Mean and Standard Deviation of the Dependent Variable (Digital Transformation)

N	Phrases	Arithmetic Mean	Standard Deviation	Levels
21	Employees have basic skills to use technological tools.	3.69	0.598	High
22	Employees use technological tools (computer - internet) to perform assigned tasks.	3.68	0.582	High
23	Management trains employees to use modern technological tools.	4.05	0.738	High
24	Management has the ability to adapt to digital transformation variables.	4.09	0.648	High
Human Resources		4.18	0.469	**High**
25	Management has experts in the field of information technology.	3.84	0.670	High
26	Management conducts awareness and education campaigns about technology and digital transformation.	3.64	0.484	High
27	There is awareness of the importance and risks associated with the digital transformation process.	4.13	0.632	High
28	Management encourages its employees to use modern technologies in their work.	3.59	0.603	High
Digital Culture		4.27	0.380	**Very High**
29	Administrative procedures are simplified to adapt to digital transformation.	3.79	0.558	High
30	Available technology has contributed to reducing processing time and costs.	4.09	0.684	High
31	Simplifying work procedures achieves speed in completion.	4.06	0.605	High
32	There are programs to simplify and facilitate work procedures.	3.68	0.539	High
Processes		4.17	0.381	**Very High**
33	Management uses various technologies to accomplish its tasks.	4.06	0.661	High
34	The available hardware and software cover all the tasks performed by management.	3.67	0.521	High
35	Management has a digital infrastructure.	3.62	0.556	High
36	Management has teams responsible for managing the technical system.	3.62	0.577	High
Technologies		4.22	0.414	**High**
Digital Transformation		4.21	0.325	**Very High**

Source: Prepared by the researchers based on SPSS outputs.

From table number (05), it is evident that the overall orientation of the sample towards the level of digital transformation implementation is very high, with a arithmetic mean of (4.21) and a standard deviation of (0.325). The sample's orientation towards each dimension (digital culture, technologies) also showed very high levels, indicating a significant application of digital transformation overall in the study institution.
The dimensions of the digital transformation axis are ranked as follows:
-digital culture: Ranked first with an arithmetic mean of (4.27) and a standard deviation of (0.380) , indicating a very high level. This suggests that the study institution fosters a strong digital culture among its employees, which aids in the implementation of digital transformation.
- **technologies:** Ranked second with an arithmetic mean of (4.22) and a standard deviation of (0.414), also indicating a very high level. This indicates that the study institution has an integrated technological system of hardware, software, and necessary technologies for accomplishing tasks.
- human resources: Ranked third with an arithmetic mean of (4.18) and a standard deviation of (0.469) , showing a high level. This indicates that the study institution has qualified employees capable of using technological means effectively, thereby facilitating digital transformation within the institution.
- **operations**: Ranked fourth with an arithmetic mean of (4.17) and a standard deviation of (0.381), indicating a high level. This suggests that the study institution simplifies administrative procedures and utilizes technology to achieve efficiency, improve service, and reduce costs.

3-2- Hypothesis testing of the study:
3-2-1- Testing the first hypothesis:
-Through table number (04), we observe that the overall orientation of the sample towards knowledge management practices is highly favorable, with a arithmetic mean of (4.13) and a standard deviation of (0.337). This positive indicator suggests effective knowledge management practices across all dimensions, thereby **confirming the validity of the first hypothesis.**
3-2-2- Testing the second hypothesis:
Through table number (05), we observe that the overall orientation of the sample towards the level of digital transformation implementation is very high, with a arithmetic mean of (4.21) and a standard deviation of (0.325). This **confirms the validity of the second hypothesis**.
3-2-3- Testing the sub-hypotheses of the study:
To test the sub-hypotheses of the study, simple linear regression and multiple regression tests were used to verify the impact of knowledge management practices on digital transformation implementation in the institution under study. The following table summarizes the results of the simple regression test to examine the effect of practices such as knowledge acquisition, knowledge generation, knowledge storage, knowledge distribution, and knowledge application on digital transformation implementation in the institution under study.

Table (06): Results of Simple Regression Analysis

Dependent Variable	Independent Variable	Impact Degree B	Coefficient of Determination R^2	Correlation Coefficient R	F	sig
Digital Transformation	Knowledge Acquisition	0.368	0.187	0.433	19.11	0.00
	Knowledge Generation	0.347	0.188	0.433	19.17	0.00
	Knowledge Storage	0.552	0.441	0.664	65.57	0.00
	Knowledge Distribution	0.310	0.362	0.602	47.17	0.00
	Knowledge Application	0.506	0.471	0.686	73.87	0.00

Source: Prepared by the researchers based on SPSS outputs.

- Testing the First Sub-hypothesis: "There is no statistically significant impact at a significance level of ($\alpha \geq 0.05$) of knowledge acquisition practices on the implementation of digital transformation in the organization under study."
The analysis of Table (06) indicates a weak positive correlation between knowledge acquisition practices and the level of digital transformation implementation in the study institution. The correlation coefficient (R) is 0.433, with a statistical significance level of ≤ 0.05. The coefficient of determination (R^2) is 0.187, suggesting that 18.7% of the variance in digital transformation implementation can be explained by variations in knowledge acquisition practices.

The regression coefficient (B) is 0.368, indicating that a one-unit increase in knowledge acquisition practices results in a 0.368 increase in digital transformation implementation. The calculated F-value is 19.11, indicating a statistically significant effect of knowledge acquisition practices on digital transformation implementation at a significance level of ≤ 0.05.

Based on these results, the null hypothesis is rejected in favor of the alternative hypothesis, indicating a statistically significant effect of knowledge acquisition practices on digital transformation implementation in the study institution at a significance level of ≤ 0.05.

-**Testing the Second Sub-hypothesis:** "There is no statistically significant impact at a significance level of ($\alpha \geq 0.05$) of knowledge generation practices on the implementation of digital transformation in the organization under study."

Based on the analysis from Table (06), there is evidence of a weak positive correlation between knowledge generation practices and the level of digital transformation implementation at the study institution. The correlation coefficient (R) is 0.433, with a statistical significance level of ≤ 0.05. The coefficient of determination (R^2) is 0.188, indicating that 18.8% of the variance in digital transformation implementation can be explained by variations in knowledge generation practices.

The regression coefficient (B) is 0.347, suggesting that a one-unit increase in knowledge generation practices leads to a 0.347 increase in digital transformation implementation. The calculated F-value is 19.17, with a significance level of ≤ 0.05, indicating a statistically significant effect of knowledge generation practices on digital transformation implementation.

Based on these results, the null hypothesis is rejected in favor of the alternative hypothesis, indicating a statistically significant effect of knowledge generation practices on digital transformation implementation at a significance level of ≤ 0.05.

-**Testing the Third Sub-hypothesis:** "There is no statistically significant impact at a significance level of ($\alpha \geq 0.05$) of knowledge storage practices on the implementation of digital transformation in the organization under study."

Based on the analysis from Table (06), there is evidence of a moderate positive correlation between knowledge storage practices and the level of digital transformation implementation at the study institution. The correlation coefficient (R) is 0.664, with a statistical significance level of ≤ 0.05. The coefficient of determination (R^2) is 0.441, indicating that 44.1% of the variance in digital transformation implementation can be explained by variations in knowledge storage practices.

The regression coefficient (B) is 0.552, suggesting that a one-unit increase in knowledge storage practices leads to a 0.552 increase in digital transformation implementation. The calculated F-value is 65.57, with a significance level of ≤ 0.05, indicating a statistically significant effect of knowledge storage practices on digital transformation implementation.

Based on these results, the null hypothesis is rejected in favor of the alternative hypothesis, indicating a statistically significant effect of knowledge storage practices on digital transformation implementation at a significance level of ≤ 0.05.

-Testing the Fourth Sub-hypothesis: "There is no statistically significant impact at a significance level of ($\alpha \geq 0.05$) of knowledge distribution practices on the implementation of digital transformation in the organization under study."

Based on the analysis from Table (06), there is evidence of a moderate positive correlation between knowledge distribution practices and the level of digital transformation implementation at the study institution. The correlation coefficient (R) is 0.602, with a statistical significance level of ≤ 0.05. The coefficient of determination (R^2) is 0.362, indicating that 36.2% of the variance in digital transformation implementation can be explained by variations in knowledge distribution practices.

The regression coefficient (B) is 0.310, suggesting that a one-unit increase in knowledge distribution practices leads to a 0.310 increase in digital transformation implementation. The calculated F-value is 47.17, with a significance level of ≤ 0.05, indicating a statistically significant effect of knowledge distribution practices on digital transformation implementation.

Based on these results, the null hypothesis is rejected in favor of the alternative hypothesis, indicating a statistically significant effect of knowledge distribution practices on digital transformation implementation at a significance level of ≤ 0.05.

-**Testing the Fifth Sub-hypothesis:** "There is no statistically significant impact at a significance level of ($\alpha \geq 0.05$) of knowledge application practices on the implementation of digital transformation in the organization under study."

Based on the analysis from Table (06), there is evidence of a moderate positive correlation between knowledge application practices and the level of digital transformation implementation at the study institution. The correlation coefficient (R) is 0.686, with a statistical significance level of ≤ 0.05. The coefficient of determination (R^2) is 0.471, indicating that 47.1% of the variance in digital transformation implementation can be explained by variations in knowledge application practices.

The regression coefficient (B) is 0.506, suggesting that a one-unit increase in knowledge application practices leads to a 0.506 increase in digital transformation implementation. The calculated F-value is 73.87, with a significance level of ≤ 0.05, indicating a statistically significant effect of knowledge application practices on digital transformation implementation.

Based on these results, the null hypothesis is rejected in favor of the alternative hypothesis, indicating a statistically significant effect of knowledge application practices on digital transformation implementation at a significance level of ≤ 0.05.

3-2-4-Hypothesis Test Three: 'There is no statistically significant effect at a significance level (0.05) ≥ α of knowledge management practices (knowledge acquisition, knowledge generation, knowledge storage, knowledge distribution, knowledge application) on digital transformation implementation in the studied institution.

Table (07): Results of Multiple Regression

Independent Variable	Impact Degree B	Coefficient of Determination R^2	Correlation Coefficient R	F	sig
Knowledge Management Practices	0.735	0.580	0.762	114.77	0.00

Source: Prepared by the researchers based on SPSS outputs.

Based on Table (07), it is evident that there is a strong positive correlation between knowledge management practices and the level of digital transformation implementation in the studied institution, with a correlation coefficient R of (0.762) at a significance level ≤ (0.05). Therefore, the relationship between the variables is positive and strong. The coefficient of determination R^2 was (0.580), indicating that the independent variables of knowledge management dimensions collectively explain 58% of the variance in the dependent variable, digital transformation. This means that 58% of the variation in digital transformation implementation is explained by variations in knowledge management practices. The impact coefficient B was (0.735), indicating that a one-unit increase in knowledge management practice leads to a (0.735) increase in digital transformation implementation level. The significance of this effect is confirmed by the calculated F value of (114.77) at a significance level of (0.00), which is significant at (0.05) level.

These results indicate that knowledge management practices significantly contribute to influencing digital transformation implementation, thus rejecting the null hypothesis and accepting the alternative hypothesis, meaning: There is a statistically significant effect at a significance level (0.05) ≥ α of knowledge management practices on digital transformation implementation in the studied institution.

Conclusion:

Through this study, after analyzing the data, testing the hypotheses, and examining knowledge management practices and their impact on digital transformation implementation in the studied institution, we have found the following:

- ❖ Knowledge management plays a crucial role in the application of digital transformation through the acquisition, generation, storage, and application of knowledge, which are essential processes in the digital age.
- ❖ Digital transformation has become an urgent necessity for entering the knowledge world and keeping pace with the developments witnessed globally under globalization.
- ❖ The dimensions of knowledge management practices in the institution under study are highly implemented. The sample's orientation towards both knowledge acquisition and knowledge generation shows a very high level of application. Meanwhile, the application of knowledge storage, application, and distribution also shows a high level of implementation.
- ❖ The application of digital transformation in the institution under study has reached a very high level, where the sample's orientation towards each dimension (digital culture, technologies) is very high. Similarly, the application of both (human resources, processes) is also high.
- ❖ There is a weak negative correlation between knowledge acquisition practices and the level of digital transformation application in the institution under study.
- ❖ There is a weak negative correlation between knowledge generation practices and the level of digital transformation application in the institution under study.
- ❖ There is a moderate positive correlation between knowledge storage practices and the level of digital transformation application in the institution under study.
- ❖ There is a moderate positive correlation between knowledge distribution practices and the level of digital transformation application in the institution under study.
- ❖ There is a moderate positive correlation between knowledge application practices and the level of digital transformation application in the institution under study.

❖ There is a strong positive correlation between knowledge management practices and the level of digital transformation application in the institution under study.

Recommendations:

- Adopt knowledge management practices as one of the pillars that institutions must adopt and rely on for digital transformation application.
- Focus on training and preparing employees involved in delivering digital services.
- Encourage and motivate employees to adapt to digital transformation.
- Provide all necessary material, human and conducive environment resources to achieve successful digital transformation.
- Create electronic awareness among employees, citizens, and build what is known as the electronic community.
- Establish advanced technological infrastructure and expand the use of digital technology.
- Work on adopting and enhancing the digital economy.

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