

THE IMPACT OF DIGITALIZATION ON IMPROVING ORGANIZATIONAL PERFORMANCE: A FIELD STUDY OF THE UNIVERSITY SERVICES DIRECTORATE IN BECHAR

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Abstract

In the era of digital transformation, digitalization has become a fundamental element in improving organizational performance. It contributes to simplifying processes, accelerating procedures, and enhancing the quality of services provided. Digitilization reflects the growing role of technology in managing and administering institutions, including educational and service institutions. The University Services Directorate in Béchar, being an institution responsible for providing a suitable environment for students through university housing, represents an ideal model for studying the impact of digitalization on organizational performance. This study seeks to understand how digitalization can positively transform the directorate's performance by improving process efficiency, enhancing communication among employees, and reducing administrative errors.

Keywords: *Digitalization, Organizational Performance, University Services.*

INTRODUCTION

Digitalization is a crucial element in enhancing institutional efficiency and improving organizational performance in the face of rapid technological developments. It contributes to facilitating administrative processes, improving service quality, and reducing time gaps. Institutions no longer rely on traditional methods but have adopted digital computing technologies to enhance their interaction with the internal and external environment with greater flexibility and speed.

Digitalization goes beyond the mere conversion of paper-based processes to electronic ones, as it involves the integration of technological systems to improve management efficiency, support decision-making, and enhance communication among employees. Service institutions, such as the University Services Directorate in Béchar, benefit greatly from this transformation, contributing to improving organizational performance and ensuring the provision of high-quality services to students and employees.

This study aims to shed light on the impact of digitalization on improving the organizational performance of the University Services Directorate in Bechar, which plays a vital role in providing services to university students in Algeria. The study highlights the importance of digitalization in facilitating administrative processes, enhancing interdepartmental communication efficiency, and organizing resources. It also highlights the role of digitalization in overcoming traditional challenges such as bureaucracy and administrative errors, contributing to improving time and resource management and increasing transparency. The study aims to understand the impact of digitalization on organizational performance and identify the factors influencing the success or failure of digital transformation.



Research Problem

In the midst of the rapid shift towards digitalization across various institutions worldwide, educational and service institutions face significant challenges in adopting and effectively applying modern technology. Despite the numerous opportunities that digitalization offers to improve organizational performance, the research problem stems from the need to understand the extent to which digitalization impacts the improvement of organizational performance at the University Services Directorate in Béchar, and to identify the factors contributing to the success or failure of this transformation. Hence, the main research problem is:

How does digitalization affect the improvement of organizational performance at the University Services Directorate in Béchar?

Research Questions

- How does digitalization affect the efficiency of administrative processes at the University Services Directorate in Béchar?
- What is the role of digitalization in improving the quality of services provided to students at the directorate?
- What challenges does the University Services Directorate in Béchar face in effectively implementing digitalization?

Research Hypotheses

- Digitilization contributes positively to improving the efficiency of administrative processes within the University Services Directorate in Béchar.
- Digitalization leads to an improvement in the quality of services provided to students, enhancing their satisfaction and loyalty to the institution.
- The University Services Directorate in Béchar faces multiple challenges in implementing digitalization, such as a lack of specialized human resources and technological infrastructure.

Research Objectives

- Analyze the impact of Digitilization on the efficiency of administrative processes at the University Services Directorate in Béchar.
- Evaluate the role of Digitilization in improving the quality of services provided to students.
- Identify the challenges faced by the directorate in adopting digitalization and propose solutions to overcome them.
- Measure the extent to which digitalization impacts the reduction of administrative errors and the improvement of data accuracy.

Research Methodology

This study adopts a descriptive-analytical approach. Data will be collected through questionnaires directed to employees at the University Services Directorate in Béchar. This data will be analyzed using appropriate statistical tools to understand the impact of digitalization on organizational performance and identify the relationships between the studied variables.

Research Instruments

Questionnaire: A questionnaire will be designed to be directed to employees at the directorate to measure the impact of digitalization on organizational performance and the level of internal communication.



Research Community and Methodology

In this study, we adopted a complete enumeration method that targets all members of the statistical population. This is due to the limited number of employees in the University Services Directorate of Béchar, which is 61 employees. This size made it logical to adopt a complete enumeration method to ensure coverage of all individuals and obtain accurate and comprehensive data.

After distributing the questionnaires to all employees, 53 questionnaires were retrieved. After collecting and entering the data, we conducted a thorough review of the retrieved questionnaires, which resulted in the exclusion of 5 questionnaires due to incompleteness or unsuitability for analysis. Thus, we finally had 48 valid questionnaires that were used in the final analysis of the study.

Conceptual Framework

The conceptual framework of the study is an important part of analyzing the impact of Digitilization on the performance of institutions. It relies on defining the conceptual and theoretical framework for studying the factors affecting the performance of public institutions. The following is an overview:

1. Digitilization: Concept and Development:

Definition of Digitilization: Digitilization is defined as the process of converting data and information from traditional to digital form using modern technology. This term is associated with an increased reliance on electronic means in managing information and making organizational decisions, contributing to improving the overall efficiency of institutions and achieving organizational objectives¹.

Historical Development of Digitilization: Digitilization emerged as a response to the need to accelerate the pace of work and improve the management of internal operations of institutions. In recent years, institutions have undergone a shift from traditional systems to more advanced systems using technologies such as databases and advanced computer programs².

Application of Digitilization in Public Institutions: In public institutions such as the University Services Directorate of Béchar, Digitilization plays a vital role in improving the workflow, by simplifying administrative procedures and enhancing the efficiency of communication between employees. Digitilization also contributes to saving time and reducing the effort exerted in transactions³.

2. Job Performance: Concept and Importance

a. Definition of Job Performance:

Job performance refers to how employees carry out their daily tasks, which is a key indicator of an organization's success. Job performance is related to the quality and effectiveness of the processes carried out within the organization⁴.

b. Criteria for Improving Job Performance: Job performance is improved through providing continuous training for employees, developing organizational structures, and utilizing modern technology such as Digitilization to improve the speed of processes and reduce administrative errors⁵.

¹ Ahmad Faraj Ahmad, Digitilization within institutions, information inside or outside. United Kingdom: Imam Muhammad bin Saud Islamic University, Issue 4, 2009, p. 11.

² McQuail, D. McQuail's Mass Communication Theory (4th edition), Sage, London. 2000, pp. 16–34.

³ Mustafa Hajazi, Effective communication in human relations and administration, the university institution for studies, publishing and distribution, 3rd edition, 2000, p. 6.

⁴ Li, Lin, (2011), "Research Evaluation of Construction Studies Abroad on Job Performance International conference on future computer science and Education", Department of physical Education in, China pp.240-266.

⁵ Badria Mahmoud Muhammad Ibrahim, The impact of training on developing the skills of employees, an applied study on the Institute of Information Systems at the Police Apparatus, Master's Thesis, Sadat Academy for Administrative Sciences, Cairo, 2006, p. 31.



3. The Relationship Between Digitilization and Improving Job Performance

a. The Impact of Digitilization on Administrative Efficiency:

One of the most important aspects contributed by Digitilization is increasing administrative efficiency. Digitilization enables directorates such as the University Services Directorate of Béchar to organize information and analyze data more effectively, contributing to faster and better decision-making⁶.

b. Improving the Accuracy and Speed of Processes:

Digitilization plays a major role in improving the accuracy and speed of data processing, as tasks are performed more accurately thanks to electronic systems. These systems limit the possibility of human error and reduce the time required to perform operations.

c. Enhancing Communication Between Employees:

Digitilization contributes to strengthening internal communication channels between employees, through the use of email systems and digital collaboration platforms. Improving communication between members of the organization is an important factor in accelerating the exchange of information and increasing efficiency⁷.

4. Challenges Related to the Implementation of Digitilization

a. Resistance to Change:

One of the most prominent challenges faced by institutions when implementing digitilization is employee resistance to change. The digital transformation requires continuous training and development for employees to adapt to new systems⁸.

b. Technological Infrastructure:

The implementation of digitilization relies heavily on the availability of a solid technological infrastructure. In many institutions, financial constraints may hinder the development of this infrastructure⁹.

In this section, we will analyze the theories that explain the study of the impact of Digitilization on improving institutional performance, focusing on the University Services Directorate of Béchar as a model. Organizational and technological theories will be used to explain how Digitilization affects administrative and institutional performance. Four main theories will be addressed: the theory of technology diffusion, systems theory, organizational change theory, and human capital theory.

1. Application of the Theory of Technology Diffusion in the Study

In the context of the University Services Directorate of Béchar, this theory can be used to explain how digital technology is adopted to improve job performance. When studying the factors that influence the adoption of Digitilization, the degree of awareness of employees and management of the importance of technology, their acceptance of it, and the extent to which it is effectively implemented in improving administrative processes can be analyzed¹⁰.

⁶ Brynjolfsson, E., & McAfee, A. "The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies." W.W. Norton & Company 2014.

⁷ Zuboff, S. "In the Age of the Smart Machine: The Future of Work and Power." Basic Books 1988.

⁸ RIM, Z. (2006). Comprendre le changement organisationnel à travers les émotions. Montréal, Canada: Université du Québec à Montréal. p 37

⁹ Vial, G.. "Understanding Digital Transformation: A Review and a Research Agenda." The Journal of Strategic Information Systems, 28(2), 118-144. 2019.

¹⁰ Rogers, E. M.. Diffusion of Innovations (5th ed.). Free Press. 2003.

2. Application of Systems Theory in Digitilization

Systems theory explains how Digitilization affects the overall system of the institution. In the University Services Directorate of Béchar, the impact of Digitilization on communication between different departments within the directorate can be analyzed. Digitilization contributes to better coordination between different job roles, which enhances the efficiency of processes and reduces administrative errors. This indicates that Digitilization does not only affect a specific part of the institution but the entire system¹¹.

3. Application of Organizational Change Theory in the Study

When applying this theory to the study of the University Services Directorate of Béchar, the challenges faced by the directorate in the "unfreezing" stage can be understood, such as employee resistance to change or lack of training. Once this stage is overcome, digital change can lead to improved administrative processes and increased speed and quality of services provided to students.

4. The Impact of Digital Training (Human Capital Theory)

When looking at the University Services Directorate of Béchar, it becomes apparent that the success of Digitilization depends on the readiness of the human capital within the institution. Enhancing digital skills through training contributes to reducing administrative errors and increasing operational efficiency¹².

Field Study

Table 1: Distribution of Respondents by Gender

Gender	Frequency	Percentage
Male	23	47.92
Female	25	52.08
Total	48	100

The table shows that the sample size of the study was 48 individuals, distributed by gender. The data reveals that 52.08% of the sample were female, while 47.92% were male. This indicates a relatively balanced gender distribution in the sample, with a slight majority of females. These proportions provide a balanced distribution that allows for a fair analysis of opinions and results in terms of the impact of gender on job performance and the adoption of digital technology in the University Services Directorate of Béchar.

From a sociological perspective, this distribution reflects the social structure within the institution. The increased percentage of females in the study may indicate the evolving role of women in the service and administrative sector, where women's presence has become more pronounced, enhancing their opportunities to contribute effectively to administrative and digital processes.

This distribution also indicates shifts in social culture that grant women a wider space to work in educational and service sectors. In institutions like the University Services Directorate, this gender diversity may contribute to a better work environment and promote diversity of thought and technical skills, especially in the context of the rapid digital transformation that requires diverse teams to increase the effectiveness and sustainability of digital processes.

The researcher concludes that the relative balance in gender distribution reflects a diverse work environment and enhances the feasibility of future analysis to determine the extent to which these

¹¹ Katz, D., & Kahn, R. L. *The Social Psychology of Organizations* (2nd ed.). Wiley. 1978

¹² Becker, G. S. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*. University of Chicago Press. 1964.

diversities affect job performance and the use of digital technology, with a focus on the roles that gender plays in this context.

Table 2: Distribution of the Sample by Age

Age Range	Frequency	Percentage (%)
Less than 30 years	3	6.25
31-40 years	27	56.25
41-50 years	14	29.17
Over 50 years	4	8.33
Total	48	100

The table shows the distribution of the sample based on age. The 48 participants were divided into four age groups:

Under 30: This group constitutes the smallest portion of the sample at 6.25% (3 individuals).

31-40: This age group is the largest, comprising 56.25% of the sample (27 individuals).

41-50: This group accounts for 29.17% of the sample (14 individuals).

Over 50: This group makes up the remaining 8.33% of the sample (4 individuals).

It's evident that the majority of participants fall within the 30-40 age range, representing over half of the sample. The younger and older age groups constitute smaller proportions.

from a sociological perspective" This age distribution likely reflects the typical age structure of the workforce in service-oriented institutions like the University Services Directorate. The predominance of the 30-40 age group is often attributed to this being a prime period in one's career, combining professional experience with adaptability to digital technologies.

The 29.17% of participants in the 41-50 age group suggest a significant presence of individuals with more extensive administrative experience. However, they might face certain challenges in adapting to digitalization compared to younger counterparts.

The smaller proportions of individuals under 30 and over 50 years old can be explained as follows:

Under 30: This group is typically more open to technology and possesses a higher capacity to adapt to digital systems.

Over 50: This group might be less engaged with modern technology, potentially requiring additional training and support.

The researcher concludes that this age distribution reflects a diversity of experience levels. This enhances our understanding of the specific needs of each age group in terms of using digital technology in the workplace. The most numerous group, those aged 30-40, is likely to be pivotal in driving the organization's digital transformation. Meanwhile, older age groups might require additional training programs to improve their adaptability to digital systems.



Table 3: Shows the distribution of the sample based on educational level.

Educational Level	frequency	percentage
Middle School	0	0
High School	16	33.33
Bachelor's Degree	14	29.16
Master's Degree	16	33.33
Doctorate	1	2.08
Master's Degree	1	20.8
Total	48	100

The table presents the educational breakdown of the 48 participants in the study. It highlights the diversity of educational levels within the institution, providing valuable insights into the connection between educational qualifications and the adoption of technology and digital processes. This distribution can be analyzed as follows:

- 1. High School and Master's Degrees (33.33% each):** The significant proportion of individuals holding high school diplomas indicates that a considerable portion of the workforce possesses a moderate level of education. This might necessitate intensive training to enhance their proficiency in using technology and digital tools. Conversely, the equal percentage of individuals with Master's degrees reflects a strong foundation of higher qualifications. These employees possess advanced abilities to comprehend complex operations and adapt to digital transformations, thereby supporting the institution's capacity to tackle technological challenges.
- 2. Bachelor's Degree (29.16%):** The 29.16% of individuals with Bachelor's degrees signifies a substantial portion of the workforce with a moderate university education. This contributes to improved job performance and effective technology adoption as these individuals possess adequate knowledge to handle new systems.
- 3. Higher Levels (Doctorate and Master's) 2.08% each:** Although a smaller proportion, the 2.08% of individuals holding Doctorate or Master's degrees can play a pivotal role in managing technical operations and overseeing digital transformation. Their deep academic knowledge and ability to develop effective strategies are valuable assets in driving digital change.
- 4. Absence of Middle School Level (0%):** The absence of individuals with a middle school education indicates the institution's reliance on a workforce with at least a high school diploma. This reflects the need for a more qualified workforce to handle complex technological systems, as a middle school education might be insufficient for such tasks.

The researcher concludes that the institution exhibits a diverse educational landscape that enhances its capacity to embrace digitalization and technology. The presence of individuals with higher qualifications such as Master's and Bachelor's degrees is a positive indicator of the institution's readiness for digital transformation. These individuals possess the necessary knowledge to understand and adapt to digital processes. However, the significant proportion of individuals with high school diplomas suggests a need for additional training to ensure that all employees can contribute effectively to the digital transformation.



Table 4: Professional Experience in the Field of Digitilization

Experience Range	Frequency	Percentage (%)
Less than 5 years	19	39.58
6-10 years	11	22.92
More than 11 years	18	37.5
Total	48	100

This table presents the distribution of 48 individuals based on their years of professional experience in the field of Digitilization . It offers insights into how digital experience influences job performance and the adoption of technology within the University Services Directorate in Béchar.

1. **Less than 5 Years of Experience (39.58%):** A significant 39.58% of the sample has less than 5 years of experience in Digitilization . This indicates that a large portion of the staff are still developing their digital skills and may require additional training and qualification to become proficient in using modern technologies. This necessitates further investment in technical education and training by the directorate.
2. **6 to 10 Years of Experience (22.92%):** Approximately 22.92% of the sample has between 6 to 10 years of experience in Digitilization . These employees possess moderate experience, placing them in a better position than the first group in terms of implementing Digitilization . This group can be considered a core element in guiding digital processes within the directorate, as they have sufficient experience to provide technical support and train less experienced colleagues.
3. **More than 11 Years of Experience (37.5%):** A substantial 37.5% of the staff has over 11 years of experience in Digitilization , reflecting the presence of advanced expertise within the directorate. This group is considered a leader in implementing digital processes and overseeing their efficient execution. This group could be responsible for developing technological systems and directing digital strategies within the directorate, ensuring the integration of digital systems into workflows.

The researcher concludes that the table reveals a balanced distribution of experience levels in the field of Digitilization . A majority of employees have either less than 5 years or more than 11 years of experience, indicating a gap between the less experienced and more experienced groups. To accelerate the adoption of Digitilization and achieve better results, the directorate should focus on training the less experienced group and developing their digital skills. Meanwhile, the more experienced groups can play a vital role in guiding digital processes and supporting new employees. Additionally, the directorate has a base of highly qualified staff in the field of Digitilization , which enhances the possibility of significantly improving job and administrative performance by leveraging this expertise.

Analysis Based on the Hypothesis:

Hypothesis 1: Digitilization contributes positively to improving the efficiency of administrative processes within the University Services Directorate in Béchar.



Table 5: Indicates the extent to which respondents believe that the use of digital technology has improved the efficiency of administrative processes and coordination within the directorate.

Response	Frequency	Percentage (%)
Yes	42	87.5
No	1	2.08
To some extent	4	8.33
Don't know	1	2.08
Total	100	100

Strong Positivity: The majority of respondents (87.5%) answered "Yes," indicating that most participants believe that the use of digital technology has indeed improved the efficiency of administrative processes. This high percentage reflects a general consensus among employees on the role of Digitilization in enhancing job performance.

Partial Hesitation: 8.33% of the sample responded "To some extent," suggesting that some individuals recognize the role of Digitilization in improvement but may perceive room for further enhancements. This could reflect varying personal experiences or differences in the level of technology adoption across departments or individuals.

Rejection and Doubt: The small percentage that responded "No" (2.08%) and "Don't know" (2.08%) reflects a minority of individuals who either did not see any improvement or did not have sufficient knowledge to judge. This group may be more conservative in accepting digital technology or may have limited experiences with Digitilization .

1- Technological Change and Organizational Acceptance: These results indicate a high level of acceptance of the impact of Digitilization on administrative processes within the directorate. Institutions often face challenges in adopting technological changes, but the results of the table show that most employees in the directorate have a positive experience with Digitilization , reflecting widespread acceptance of it as a tool for improving performance.

2- Cultural and Organizational Factors: In the context of government institutions like the University Services Directorate, digital change is a challenge linked to cultural and organizational changes. The high percentage that acknowledged the improvement in processes indicates that the organizational culture in the directorate is moving towards adapting to Digitilization , enhancing the effectiveness of technology in managing administrative processes.

3- Impact of Digitilization on Administrative Efficiency.

Process Improvement: The high percentage of respondents who answered "Yes" confirms that Digitilization has positively impacted administrative processes within the directorate. This improvement may include faster procedures, reduced administrative bureaucracy, and increased accuracy and reliability of administrative data and information.

Error Reduction: Digitilization typically leads to a reduction in human errors in administrative processes through more accurate and transparent systems. This is reflected in the positive responses recorded by 87.5% of respondents who noticed a significant improvement in administrative processes.

Communication and Coordination Procedures: Digitilization may have also contributed to improved coordination between different departments and employees in the directorate through faster and more efficient communication systems. This enhances the speed of information sharing and decision-making.



4. Challenges and Opportunities for Improving Job Performance

Future Improvements: 8.33% of participants believe that Digitilization has improved performance "to some extent," indicating the need for further improvements. These improvements may relate to providing more training for employees in the use of technology or improving the technical infrastructure to ensure sustained effectiveness.

Non-Beneficiary Group: It is essential to consider the experience of the 2.08% who answered "No" or "Don't know." These individuals may face difficulties in dealing with digital systems or may not have full access to technology. This highlights the importance of assessing the distribution of technological resources and supporting all employees to maximize the benefits of Digitilization .

Researcher's Conclusion:

The results generally indicate that Digitilization has played a pivotal role in improving the efficiency of administrative processes within the University Services Directorate in Béchar. This improvement is part of a broader digital transformation within the institution, enhancing its overall performance.

Table 6: The extent to which Digitilization has contributed to accelerating work procedures within the directorate.

Response	Frequency	Percentage (%)
To a great extent	37	77.08
To a moderate extent	6	12.5
To a small extent	4	8.33
Did not contribute	1	2.08
Total	48	100

High Adoption Rate of Digitilization : The results show that the majority of the sample (77.08%) confirm that Digitilization has significantly contributed to accelerating work procedures within the University Services Directorate in Béchar. This means that Digitilization is not just a technological addition, but has played a key role in improving the speed and dynamics of workflow.


Moderate and Minor Contributions: 12.5% of participants believe that Digitilization has contributed to accelerating procedures to a moderate extent, while 8.33% believe that its contribution was minor. This could be due to varying levels of experience in dealing with digital systems or differences in the nature of work between different departments within the directorate.

Rejection or No Contribution: Only 2.08% of participants believe that Digitilization has not contributed to accelerating procedures. This small percentage may reflect a lack of full interaction with digital systems or perhaps a lack of training in their use.

2. Sociological Analysis of the Organizational Impacts of Digitilization

Digital Transformation in Government Institutions: The University Services Directorate in Béchar is an example of a government institution that has begun to adopt Digitilization as part of its strategy to improve performance. The positive results from the vast majority indicate that the directorate has successfully introduced digital technology in an effective manner and has significantly contributed to accelerating procedures and improving daily workflow.

Variability in Impacts: The analysis shows that there is a variation in the level of impact of Digitilization on different employees and departments, as 20.83% believe that the contribution of Digitilization is either moderate, minor, or even non-existent. This variation may be due to the



nature of the work, as some administrative tasks may be more complex and require more time to fully benefit from digital systems.

Adapting to Technology: The results of the table reflect a high degree of adaptation to digital technology among the directorate's employees, which enhances the role of Digitilization in improving work efficiency. Digital transformation is not limited to introducing new tools, but requires the adoption of an organizational culture that supports innovation and change.

3. The Impact of Digitilization on Accelerating Work Procedures

Administrative Procedures and Digitilization : It is clear that Digitilization has significantly improved the speed of implementing administrative procedures, as shown by the 77.08% who acknowledged its major role. Digitilization has been able to reduce the time required to complete tasks, reflecting an improvement in operational efficiency. This may include automating routine procedures, reducing paperwork, and accelerating communication and data transfer processes.

Reducing Time and Effort: Through automation and the use of digital systems, the need for paper transactions has been reduced, and the time spent on manual procedures has been reduced. This shift has led to a noticeable improvement in the quality and speed of service.

Improving Data Accuracy: The use of Digitilization in work procedures not only contributes to accelerating work but also increases the accuracy of processes. Digital systems enable employees to perform tasks with greater speed and accuracy, reducing the chances of errors and increasing the efficiency of administrative processes.

4. Potential Challenges

Technological Gaps: For individuals who believe that Digitilization contributed minimally (8.33%) or not at all (2.08%), this may reflect challenges related to technical infrastructure or a lack of training. These small percentages indicate the presence of individuals or departments that may not have fully benefited from the digital transformation due to the incompatibility of the digital system with the nature of their work or a lack of technical support.

Training Disparities: The analysis shows that there are some gaps in the extent to which all employees benefit from Digitilization . There may be a need to provide intensive and ongoing training to help employees use digital systems more efficiently, especially in departments that have not seen significant improvement.

Researcher's Conclusion: The results reflect that Digitilization has played a pivotal role in accelerating work procedures within the University Services Directorate in Béchar. The vast majority of employees have witnessed a tangible improvement in the speed of task execution thanks to digital systems. However, attention should be paid to improving the utilization of Digitilization in departments that have not seen significant improvement.

Hypothesis Verification: "Digitilization contributes positively to improving the efficiency of administrative processes within the University Services Directorate in Béchar." Based on the results of the tables, we can analyze the extent to which the hypothesis has been achieved based on the collected evidence. Yes, the hypothesis has been largely realized. Digitilization has proven to contribute to improving the efficiency of administrative processes within the directorate, especially in terms of improving job performance, facilitating access to information, and enhancing coordination between departments. However, to achieve full improvement, it is necessary to address the challenges related to skill shortages and infrastructure. To increase the impact of Digitilization in the future.



Analysis in Light of the Hypotheses:

Analysis in light of the second hypothesis: Digitilization leads to an improvement in the quality of services provided to students, which enhances their satisfaction and loyalty to the institution.

Table 7: The extent to which you feel that the services provided to students have improved with the adoption of Digitilization .

Response	Frequency	Percentage (%)
Yes	40	83.33
No	0	00
To some extent	7	14.58
Don't know	1	2.08
Total	48	100

The large percentage who see an improvement in services (83.33%): They confirm that Digitilization has led to improved services provided to students. This high percentage reflects widespread satisfaction with the impact of Digitilization on student services, indicating that Digitilization has had a tangible positive impact in most aspects.

The moderate percentage "to some extent" (14.58%): They believe that the improvement was partial. This means that improvement exists but is not complete, which may indicate the presence of some challenges in implementation or technological limitations that restrict the full effectiveness of Digitilization .

Absence of negative responses (0%): None of the participants expressed a negative opinion regarding the impact of Digitilization . This result indicates a general consensus that Digitilization has not negatively affected student services.

Lack of awareness or engagement (2.08%): Only one person said that they "don't know" whether Digitilization has improved services, reflecting a lack of knowledge or interaction with digital tools.

Digital transformation and social acceptance: The large percentage that sees improved services reflects widespread social acceptance of technology in daily life, especially in educational institutions. This indicates that Digitilization has become an integral part of improving services and facilitating student life, reflecting a shift in institutional culture towards embracing technology.

Variability in digital experience (14.58%): They reflect social variability in access or effective use of technology. This percentage may be due to differences in technical expertise or the ability to adapt to technology.

Limited interaction with technology (2.08%): Reflects a lack of engagement or full understanding of technology. This may indicate the need to improve communication and training to ensure that everyone benefits from digital tools.

Researcher's conclusion: The statistics show that Digitilization has a clear positive impact on improving student services, with a slight variation in the degree of full benefit. It is clear that there is widespread acceptance of Digitilization as a tool to improve performance, but there is some social variation in adapting to it, which necessitates enhancing awareness and training to ensure the integration of Digitilization with all segments of society.



Table 8: Shows the extent to which it is believed that students have become more satisfied with the services provided and the process of obtaining information thanks to the use of digital platforms.

Response	Frequency	Percentage (%)
Yes	44	91.66
No	00	00
To some extent	4	8.33
Don't know	00	00
Total	48	100

The high percentage confirming student satisfaction (91.66%): 44 out of 48 individuals confirm that students have become more satisfied with the services provided and the process of obtaining information thanks to the use of digital platforms. This high percentage shows that digital technology has a clear and positive impact on improving the student experience within the directorate.

Partial improvement in satisfaction (8.33%): Four individuals believe that the improvement is partial or limited. This suggests that digital platforms may not have covered all needs or that some students may still face challenges in using these tools effectively.

Absence of negative opinions (0%): None of the respondents expressed a negative opinion about the impact of digital platforms on student satisfaction, reflecting a consensus that the digital transformation was generally positive in improving services.

Absence of "I don't know" answers (0%): No one expressed a lack of knowledge or neutrality, indicating that all respondents are fully aware of the impact of digital platforms on student satisfaction, which reinforces the importance of Digitilization .

Digital transformation and increased social satisfaction (91.66%): The high percentage that believes students have become more satisfied indicates a positive social shift toward accepting and using technology as part of daily life. Digitilization has enhanced quick and direct access to information, which contributes to improving trust between students and administration.

Variation in digital adaptation (8.33%): Individuals who believe that the improvement was "to some extent" may reflect differences in technological experience among students or departments. The reason for these differences may be related to students' technical skills or the ability of systems to meet all user needs.

Consensus on satisfaction and absence of negative opinions (0%): The absence of negative opinions indicates a social consensus that Digitilization has had a positive impact on improving services, reflecting a development in organizational culture and improved communication.

Full awareness of the digital impact (0% "I don't know"): The absence of neutral responses reflects a high level of technological awareness among employees and students, as everyone is aware of the benefits of Digitilization in improving access to information and increasing satisfaction.

Researcher's conclusion: The analysis indicates a social and cultural shift within the educational institution towards widespread acceptance of technology, with the emergence of some minor challenges that reflect a variation in adaptation to Digitilization . However, there is a strong consensus on the positive impact that digital platforms have created in improving the quality of services and student satisfaction.

The hypothesis has been largely verified: as Digitilization has led to a tangible improvement in the quality of services by increasing the efficiency of administrative processes and accelerating

procedures, which clearly enhances student satisfaction. However, to ensure long-term loyalty, aspects that have not seen improvement must be addressed. It can be said that the hypothesis has been largely achieved, but with some aspects that need further work to be fully realized.

Analysis in Light of the Hypotheses:

Analysis in light of the third hypothesis: The University Services Directorate in Béchar faces multiple challenges in implementing Digitilization , such as a lack of specialized human resources and technological infrastructure.

Table 9: Shows the main challenges facing the directorate in adopting Digitilization .

Challenge	Frequency	Percentage (%)
Lack of human competencies	18	37.5
Lack of infrastructure	18	37.5
Lack of financial resources	2	4.16
Resistance to change from employees	9	18.75
Other	01	2.08
Total	48	100

Equal main challenges: Lack of human competencies and lack of infrastructure (37.5% each): They believe that the lack of human competencies and the lack of infrastructure are the two main challenges facing the directorate in adopting Digitilization . This high percentage reflects that challenges related to technical skills and technological infrastructure equally hinder progress in Digitilization . This indicates the need to develop human resources and provide modern technological infrastructure to support the digital process.

Resistance to change from employees (18.75%): They believe that resistance to change from employees is a major challenge. That is, adapting to Digitilization is not just about material or technical resources, but requires a cultural change and managerial skills to lead change.

Lack of financial resources (4.16%): This low percentage considers the lack of financial resources to be a challenge. That is, the available budget is not as big an obstacle as the lack of competencies and infrastructure represent the main challenges.

Other challenges (2.08%): Only one person mentioned other challenges, indicating that the rest of the participants believe that the main problems are related to competencies, infrastructure, and cultural change.

Lack of human competencies and lack of infrastructure (37.5% each): There are two main challenges in the institution related to the educational and technological gap. The first is the lack of specialized human competencies required to manage digital systems, reflecting a need for training and professional development. The second is the lack of appropriate infrastructure, such as high-speed internet and computers, which negatively affects the effectiveness of digital transformation and limits the benefits of technology.

Resistance to change from employees (18.75%): Indicates that resistance to change is considered a social challenge within institutions, as it reflects a desire to continue with traditional methods and fear of job loss. Organizational culture also plays an important role in this resistance, which requires effective change management focused on raising employee awareness of the benefits of Digitilization and training them to adapt to it.

In essence, the analysis highlights the following key challenges:



Lack of technical skills: Employees require training to effectively use digital tools.

Inadequate infrastructure: The necessary technology and resources are lacking.

Resistance to change: Employees may resist change due to cultural or personal reasons.

Limited financial resources: While not the primary concern, financial constraints can hinder progress.

Addressing these challenges is crucial for the successful implementation of Digitilization within the directorate.

Lack of Financial Resources (4.16%):

The low percentage of people who see financial resources as the main problem means that financial resources do not pose a major obstacle compared to problems related to competencies and infrastructure. This indicates that the challenge is not in the availability of money as much as it is in directing it towards developing infrastructure and training.

Other Challenges (2.08%):This indicates that they may be specific to a particular type of work or a specific Digitilization process, but they are not prevalent enough to affect the overall Digitilization process.

Researcher's Conclusion:

The analysis shows that digital transformation requires changes in organizational culture and adaptation to the digital work environment. Developing competencies and training on the use of technological tools is a fundamental step to overcome these challenges. Also, the lack of infrastructure requires investment in technology to ensure support for digital processes.

Table 10: Shows that training employees to use Digitilization is an essential part of achieving job performance.

Response	Frequency	Percentage (%)
Yes	38	79.16
No	2	4.16
To some extent	8	16.66
Don't know	00	00
Total	48	100

The majority sees training as essential for achieving job performance (79.16%):

38 out of 48 participants confirmed that training employees to use Digitilization is a critical element in improving job performance. This high percentage indicates a general awareness of the importance of training in achieving institutional success, especially when adopting new technology.

A moderate percentage sees improvement "to some extent" (16.66%): 8 individuals believe that training on Digitilization contributes partially to improving job performance, meaning that some people may see that there are additional factors besides training that affect performance, such as infrastructure or financial resources.

A few doubt the importance of training (4.16%):Two people believe that training is not necessary to improve job performance, and this is a small percentage that reflects a minority viewpoint that may rely on personal experience or believe that the technology is simple enough not to require intensive training.



Absence of "I don't know" responses (0%):

None of the respondents expressed a neutral opinion, meaning that everyone has a specific view on the impact of training on job performance.

Sociological Analysis:

Social Consensus on the Importance of Training (79.16%): The large percentage that sees training as essential for improving job performance indicates a social consensus on the importance of preparing employees to adapt to technology. This suggests that the organizational culture within the institution recognizes the importance of developing digital skills to achieve institutional goals, and reflects a general willingness to embrace Digitilization through training.

Limited Improvement (16.66%): Individuals who believe that training contributes "to some extent" may reflect social or organizational differences within the institution, where training may be available but not sufficient to achieve the desired impact on performance. The reason may also be that Digitilization needs other factors to achieve optimal performance, such as improvement in infrastructure or administrative support.

Resistance or Lack of Need for Training (4.16%): People who believe that training is not necessary reflect potential resistance to change or may consider the technology to be simple and can be learned quickly without the need for training. This group may need more awareness of the benefits of intensive training to ensure optimal use of technology.

Clear Awareness of Training (0% don't know): The absence of responses reflects a high degree of awareness among participants about the importance of training in the context of Digitilization. Everyone has a clear opinion about the role of training in improving job performance.

Researcher's Conclusion: The analysis reveals a strong social consensus on the importance of training, with some variations in views about its full impact. The group that sees training as "to some extent" useful indicates that there are other factors that play a role in improving performance, which calls for considering infrastructure and technical support alongside training. The hypothesis has been largely verified, as the results showed that the University Services Directorate in Béchar faces clear challenges related to the lack of specialized human competencies, weak technological infrastructure, and the need for changes in organizational culture. Based on the analysis, it can be said that the hypothesis has been largely verified, but the directorate needs to develop practical strategies to overcome these challenges and achieve full digital transformation.

RECOMMENDATIONS:

Enhance continuous training on Digitilization : Ensure that all employees are able to use digital tools effectively, enhancing the sustainability of digital transformation and increasing productivity in the institution.

Improve the institution's digital infrastructure: Develop a comprehensive and flexible digital environment that facilitates the Digitilization process and supports the job performance of employees at all levels.

Manage change and confront resistance to technology: Create an organizational culture that supports technological change, where all employees become contributors to adopting Digitilization and enhancing job performance through continuous adaptation.

4. **Stimulating the development of human competencies in the field of Digitilization :**

Improving the level of digital expertise among employees and creating a qualified workforce capable of meeting the growing digital challenges in the future.

5. **Integrating technology with administrative policies and operational processes:**

Achieving seamless integration between technology and administrative policies to ensure the sustainability of Digitilization and enhance the efficiency of institutional performance.

6. Leveraging big data to improve performance:

Enhancing job performance through predictive analytics and using data to improve efficiency and guide growth strategies.

7. Increasing investment in research related to Digitilization and its impact on job performance:

Improving institutional knowledge about Digitilization and its impact on work, and supporting future strategic planning.

8. Adopting flexible and open strategies for future changes:

Building a digital system capable of adapting to future transformations in technology and the institutional environment, ensuring sustainability and continuous innovation.

CONCLUSION:

This study confirms that Digitilization is a major driving force for improving job performance in public institutions. However, this process requires a comprehensive strategy that includes developing human competencies, updating infrastructure, and effectively managing cultural and social change within the institution. By implementing the recommendations derived from this study, the University Services Directorate in Béchar can achieve a sustainable digital transformation that contributes to enhancing efficiency, raising the level of job satisfaction, and increasing productivity in the work environment.

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