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The Qualified Employee in the Digital Age: Challenges and Opportunities

ABSTRACT:

This study aimed to explore the impact of digital qualification on job performance and innovation at the Main Public Library in Djelfa Province. Interviews were used as a data collection tool from a sample of 8 employees. The study found that digital skills are a critical factor in improving productivity; however, the lack of resources and administrative support poses a barrier to achieving the required digital qualification. The findings also showed that digital qualification significantly contributes to increasing innovation, but challenges related to training and resource availability hinder this progress.

Keywords: digital qualification, productivity, digital skills, innovation, challenges in digital qualification.

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El empleado cualificado en la era digital: retos y oportunidades

RESUMEN

Este estudio tuvo como objetivo explorar el impacto de la cualificación digital en el desempeño laboral y la innovación en la Biblioteca Pública Principal de la provincia de Djelfa. Se utilizaron entrevistas como herramienta de recopilación de datos de una muestra de 8 empleados. El estudio encontró que las habilidades digitales son un factor crítico para mejorar la productividad; sin embargo, la falta de recursos y apoyo administrativo plantea una barrera para lograr la cualificación digital requerida. Los hallazgos también mostraron que la cualificación digital contribuye significativamente a aumentar la innovación, pero los desafíos relacionados con la capacitación y la disponibilidad de recursos obstaculizan este progreso.

Palabras clave: cualificación digital, productividad, habilidades digitales, innovación, desafíos en la cualificación digital.

O Funcionário Qualificado na Era Digital: Desafios e Oportunidades

RESUMO

Este estudo teve como objetivo explorar o impacto da qualificação digital no desempenho e inovação no trabalho na Biblioteca Pública Principal na Província de Djelfa. Entrevistas foram usadas como uma ferramenta de coleta de dados de uma amostra de 8 funcionários. O estudo descobriu que as habilidades digitais são um fator crítico para melhorar a produtividade; no entanto, a falta de recursos e suporte administrativo representa uma barreira para atingir a qualificação digital necessária. As descobertas também mostraram que a qualificação digital contribui significativamente para aumentar a inovação, mas os desafios relacionados ao treinamento e à disponibilidade de recursos impedem esse progresso.

Palavras-chave: qualificação digital, produtividade, habilidades digitais, inovação, desafios na qualificação digital.

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INTRODUCTION:

In light of rapid technological advancement, digital transformation has become one of the most critical factors influencing organizational performance and competitiveness. Institutions face significant challenges in equipping their employees to use modern technologies efficiently, as the need to develop digital skills is increasingly important for adapting to a changing work environment. In this context, public libraries are among the institutions that need to keep pace with digital transformation to ensure the provision of modern and effective services. This study aims to explore the challenges and opportunities associated with employee digital qualification at the Main Public Library in Djelfa Province in the digital age.

First: The Methodological Framework of the Study

1. Scientific Problem:

In the fast-paced digital age, the digital qualification of employees has become one of the main factors determining the success and sustainability of organizations. The importance of this qualification is evident in the ability to address challenges posed by modern technology, such as the lack of digital skills among some employees, limited resources for training, and the rapid change in work tools. Many employees lack the knowledge to use modern technology efficiently, while limited resources allocated to training present a significant obstacle. Many institutions struggle with tight budgets that do not allow for the provision of effective training programs. Moreover, the rapid technological changes make it difficult for employees to keep up with the latest tools and software, widening the gap between the required and available skills.

On the other hand, there are significant opportunities that organizations can capitalize on through digital qualification. Digitalization offers new means to improve performance and increase productivity, such as using digital collaboration tools, data analysis, and process automation. Investing in employee qualification can enhance

innovation within the organization, as employees become more capable of creative thinking and offering new solutions.

Thus, digital qualification emerges as a crucial factor in enhancing employees' ability to adapt to rapid changes, contributing to the overall improvement of institutional performance. In this context, organizations must adopt effective strategies to develop their employees' skills, helping them achieve their goals in an increasingly competitive environment.

Therefore, the primary problem arises: **How can organizations equip their employees to face these challenges and capitalize on the opportunities in the digital environment?** This problem branches into the following sub-questions:

1. What are the essential digital skills employees need in a digital work environment?
2. What are the main challenges organizations face in digitally qualifying their employees?
3. How can the impact of digital qualification on employee performance be measured?

2. Study Hypotheses:

.1First Sub-Hypothesis: Employees with advanced digital skills have higher productivity levels.

- *Indicators for the First Sub-Hypothesis:* Performance evaluation, number of tasks completed on time.

Second Sub-Hypothesis: Organizations face significant challenges in qualifying employees due to a lack of resources.

- *Indicators for the Second Sub-Hypothesis:* Training budget, number of available training programs.

Third Sub-Hypothesis: There is a positive relationship between digital qualification and increased innovation within organizations.

- *Indicators for the Third Sub-Hypothesis:* Number of new projects introduced, success rate in implementing innovations.

3. Importance of the Study:

This study contributes to understanding the impact of digital qualification on employee performance, which helps institutions improve their training and development strategies.

4. Objectives of the Study:

1. Determine the level of digital qualification among employees.
2. Examine the relationship between digital qualification and productivity.
3. Explore the challenges faced by institutions in digitally qualifying their employees.

5. Reasons for Choosing the Study:

A. Personal Reasons: The researcher's interest in the field of digital management and its impact on employees.

B. Objective Reasons: The urgent need to qualify employees in light of rapid digital transformations.

6. Definition of Key Concepts in the Study:

A. Digital Qualification:

- **Definition 1:** Refers to the process of developing the necessary skills and knowledge for employees to use digital technology effectively in the workplace. This includes training on software, collaboration tools, and data analysis (Kearns, P. 2018).
- **Definition 2:** Refers to the process of developing the skills and knowledge necessary for employees to use digital technology effectively in the workplace.
- **Operational Definition:** Digital qualification can be defined as a set of training activities aimed at enhancing employees' proficiency in using digital tools and technologies through structured and targeted training programs (Al-Abdullah, S., 2020).

B. Productivity:

- **Definition 1:** Refers to a measure of efficiency in producing goods and services, often calculated as the ratio of output to input. In the work context, it refers to the amount of work completed within a specific period (Solow, R. M. 1957, pp. 312-320).
- **Definition 2:** Productivity refers to a measure of efficiency in producing goods and services, typically measured as the ratio of output to input (Al-Zaabi, M., 2018).
- **Operational Definition:** Productivity can be measured by the number of tasks completed or outcomes achieved within a specified time period compared to the resources consumed.

C. Digital Skills:

- **Definition 1:** Encompass a set of abilities needed for individuals to effectively use technology, including the ability to use computers, the internet, digital applications, and social media tools (Ferrari, A. 2012).
- **Definition 2:** Digital skills encompass a set of capabilities needed for individuals to effectively use technology (Al-Shammari, A., 2019).
- **Operational Definition:** Digital skills are defined as the capabilities that enable employees to efficiently handle digital tools in the workplace.

D. Innovation:

- **Definition 1:** The process of developing new ideas and turning them into marketable products or services. Innovation is associated with the ability to think creatively and apply knowledge in new ways (Schumpeter, J. A. 1934).
- **Definition 2:** Innovation refers to the process of developing new ideas and turning them into marketable products or services (Al-Fahd, R., 2021).
- **Operational Definition:** Innovation is defined as the ability to present new solutions or improvements to existing products or services.

E. Challenges in Digital Qualification:

- **Definition 1:** Refers to the obstacles institutions face when attempting to develop the digital skills of their employees, such as limited financial resources, few training programs, and the rapid pace of technological change (Essen, J. E., 2019).
- **Definition 2:** Challenges in digital qualification refer to the obstacles institutions face when attempting to develop the digital skills of their employees (Al-Otaibi, M., 2022).
- **Operational Definition:** Challenges in digital qualification are defined as factors that hinder the implementation of digital training programs, such as limited budgets or a lack of qualified staff.

Second: Field Procedures of the Study

1- Definition of the Descriptive Method:

- **Definition:** It is a research method aimed at describing phenomena as they are by collecting and analyzing data without influencing it (Al-Assaf, M., p. 45, 2019).
- **Justification for Choosing the Method:** The descriptive method was chosen because it allows for the collection of accurate information about the studied phenomena, helping to understand the phenomenon comprehensively without the researcher's interference, thereby providing reliable data for analysis.
- **Operational Definition:** The descriptive method is defined as a set of systematic procedures followed by the researcher to collect and analyze information related to a specific topic to reach accurate conclusions.

2- Definition of the Purposive Sample:

- **Definition:** It is a type of sample selected based on specific criteria determined by the researcher, including individuals who possess certain characteristics relevant to the studied subject (Al-Saeed, N., p. 78, 2020).
- **Justification for Choosing the Sample:** The purposive sample was chosen because the study requires data collection from individuals with particular experiences or characteristics related to the subject, which increases the accuracy and reliability of the results.
- **Operational Definition:** The purposive sample is a group of individuals selected based on predefined criteria, ensuring they represent the desired characteristics in the study.

3- Definition of the Interview Guide:

- **Definition:** It is a document containing a set of questions and information used by the researcher during interviews to collect data.
- **Justification for Choosing the Interview Guide:** The interview guide was chosen because it provides a structured framework for the interviews, helping the researcher collect accurate and reliable information, ensuring that no essential aspects are overlooked during the discussion.
- **Operational Definition:** The interview guide is defined as a set of specific questions posed by the researcher to the participants, aimed at collecting qualitative information related to the studied topic.

Third: Presentation and Analysis of Interview Data

Profile of the First Respondent:

- **Gender:** Male
 - **Age:** 40
 - **Position:** Branch Manager
1. **What essential digital skills do you think you need in a digital work environment?**
 - I need to improve my skills in using data management and analysis applications, as well as learn how to use advanced office programs like Excel and PowerPoint.
 2. **What challenges do you face in upgrading your digital skills at work?**
 - The biggest challenge is the lack of time for training, in addition to the limited training courses available for the library.
 3. **How do you think the lack of digital skills affects your job performance?**
 - I believe the lack of digital skills slows down task completion and makes me less effective in using available digital tools.
 4. **What digital tools are you currently using at work?**
 - I use basic tools such as email and office software, but I don't use advanced tools.
 5. **What kind of digital training do you think would be useful for you?**
 - Training on using advanced tools for data management and analysis, as well as virtual collaboration tools like Zoom and Teams.
 6. **Do you think the available resources are sufficient to develop your digital skills?**
 - No, the available resources are very limited, and there is an urgent need for more support and training.
 7. **How does digital technology impact innovation in your work?**
 - I don't see much impact currently as I don't use advanced technology, but I believe it could improve creativity if utilized correctly.
 8. **Do you feel there is sufficient support from management for digital skill development?**
 - I don't feel there is enough support. We need more comprehensive training plans available to all employees.

Profile of the Second Respondent:

- **Gender:** Male
 - **Age:** 38
 - **Position:** Branch Manager
1. **What essential digital skills do you think you need in a digital work environment?**

- I need to improve my skills in data analysis and using software for managing the library's daily operations.
- 2. **What challenges do you face in upgrading your digital skills at work?**
 - The biggest challenge is the lack of time to learn new skills, as well as the absence of specialized mentors to guide us.
- 3. **How do you think the lack of digital skills affects your job performance?**
 - It leads to delays in task completion and difficulties in handling electronic reports.
- 4. **What digital tools are you currently using at work?**
 - I use email and spreadsheets, and occasionally some electronic search programs within the library.
- 5. **What kind of digital training do you think would be useful for you?**
 - I need specialized training in using library management software and handling large databases.
- 6. **Do you think the available resources are sufficient to develop your digital skills?**
 - No, we need more financial and technical resources to provide effective training for all employees.
- 7. **How does digital technology impact innovation in your work?**
 - If used well, technology can help simplify processes and increase productivity, but currently, we are not utilizing it enough.
- 8. **Do you feel there is sufficient support from management for digital skill development?**
 - The support is very limited, and there are no regular training plans.

Profile of the Third Respondent:

- **Gender:** Male
- **Age:** 44
- **Position:** Branch Manager
- 1. **What essential digital skills do you think you need in a digital work environment?**
 - I need to learn how to use digital tools to manage books and patrons more efficiently.
- 2. **What challenges do you face in upgrading your digital skills at work?**
 - The challenges relate to the lack of technical equipment in the library and the difficulty of consistent internet access.
- 3. **How do you think the lack of digital skills affects your job performance?**
 - Sometimes, I feel slower than my colleagues in completing tasks that require the use of technology.

4. What digital tools are you currently using at work?

- I use basic programs like Microsoft Word and Excel, but I don't use advanced tools.

5. What kind of digital training do you think would be useful for you?

- Training on using digital library software and data management tools.

6. Do you think the available resources are sufficient to develop your digital skills?

- No, the available resources are insufficient to support digital development in the library.

7. How does digital technology impact innovation in your work?

- Technology can open new horizons if used properly, but it is still underutilized here.

8. Do you feel there is sufficient support from management for digital skill development?

- There is not enough support, and we need clear and sustainable training plans.

Profile of Respondent Four:

- **Gender:** Male
- **Age:** 37
- **Position:** Branch Manager

1. What are the essential digital skills you think you need in the digital work environment?

- I need to develop my skills in using library management software and database management.

2. What challenges do you face in digitally qualifying yourself at work?

- The challenges include lack of training and technical support, as well as insufficient time to learn new skills.

3. How do you perceive the impact of lacking digital skills on your job performance?

- It leads to a slowdown in task execution and an inability to provide innovative services to readers.

4. What digital tools are you currently using in your work?

- I use email and some database search programs, but I need more training.

5. What type of digital training do you think would be beneficial for you?

- Training on the use of digital library management systems.

6. Do you think the current resources are sufficient to develop your digital skills?

- No, the available resources are very limited and do not meet our needs.

7. How does digital technology affect the level of innovation in your work?

- I believe digital technology can contribute to enhancing creativity if used properly.

8. Do you see sufficient support from the management for digital employee qualification?

- There is not enough support, and we need sustainable training plans.

Profile of Respondent Five:

- **Gender:** Male
- **Age:** 37
- **Position:** Branch Manager

1. What are the essential digital skills you think you need in the digital work environment?

- I need to learn how to protect data and manage cybersecurity.

2. What challenges do you face in digitally qualifying yourself at work?

- Limited financial resources and time available for training.

3. How do you perceive the impact of lacking digital skills on your job performance?

- It makes me less efficient and slows down workflow at times.

4. What digital tools are you currently using in your work?

- I use some office software, but I need more training on additional tools.

5. What type of digital training do you think would be beneficial for you?

- Training on information security and data protection.

6. Do you think the current resources are sufficient to develop your digital skills?

- No, the current resources are entirely insufficient.

7. How does digital technology affect the level of innovation in your work?

- I believe it can enhance innovation if more digital tools are provided.

8. Do you see sufficient support from the management for digital employee qualification?

- No, the support is inadequate, and resources are limited.

Profile of Respondent Six:

- **Gender:** Male
- **Age:** 40
- **Position:** Branch Manager

1. What are the essential digital skills you think you need in the digital work environment?

- I need to learn how to use digital collaboration tools like Teams and Zoom, as well as data analysis tools like Excel.

2. What challenges do you face in digitally qualifying yourself at work?

- The main challenges are a lack of time and financial resources, as well as the absence of targeted training programs for us.

3. How do you perceive the impact of lacking digital skills on your job performance?

- It has a significant impact, as I feel unable to fully utilize the digital capabilities available at work.

4. What digital tools are you currently using in your work?

- I use email and some basic tools, but I do not use advanced data analysis tools.

5. What type of digital training do you think would be beneficial for you?

- Training on managing shared files and virtual collaboration, as well as using digital analysis tools.

6. Do you think the current resources are sufficient to develop your digital skills?

- No, the available resources are insufficient to cover the increasing needs for digital training.

7. How does digital technology affect the level of innovation in your work?

- Technology can improve innovation if we have access to appropriate tools and resources.

8. Do you see sufficient support from the management for digital employee qualification?

- There is not enough support; we need specialized training programs and adequate financial and technical resources.

Profile of Respondent Seven:

- **Gender:** Male
- **Age:** 34
- **Position:** Branch Manager

1. What are the essential digital skills you think you need in the digital work environment?

- I need to improve my skills in using office software and digital project management tools.

2. What challenges do you face in digitally qualifying yourself at work?

- The biggest challenge is the lack of training opportunities and the absence of modern technology in the library.

3. How do you perceive the impact of lacking digital skills on your job performance?

- It results in delays in task performance and reduces overall efficiency in completing work.

4. What digital tools are you currently using in your work?

- I use email and basic office programs like Word and Excel.

5. What type of digital training do you think would be beneficial for you?

- Training on project management tools like Trello and Asana, as well as data analysis programs.

6. Do you think the current resources are sufficient to develop your digital skills?

- No, the current resources are insufficient to meet my training needs in this area.

7. How does digital technology affect the level of innovation in your work?

- Technology can help improve efficiency and innovation, but it is not well-utilized currently.

8. Do you see sufficient support from the management for digital employee qualification?

- No, the support is limited and there is not enough focus on developing digital skills among employees.

Profile of Respondent Eight:

- **Gender:** Male
- **Age:** 42
- **Position:** Branch Manager

1. What are the essential digital skills you think you need in the digital work environment?

- I need to learn how to use advanced tools for data management and analysis, as well as digital collaboration tools.

2. What challenges do you face in digitally qualifying yourself at work?

- A lack of time allocated for training and the absence of specialized trainers who can provide specific guidance.

3. How do you perceive the impact of lacking digital skills on your job performance?

- It affects my daily performance, as I face difficulties in managing data and completing tasks efficiently.

4. What digital tools are you currently using in your work?

- I use email and office programs, but I do not use advanced tools sufficiently.

5. What type of digital training do you think would be beneficial for you?

- Training on using project management tools and databases would be extremely beneficial.

6. Do you think the current resources are sufficient to develop your digital skills?

- No, the resources are limited and do not provide enough opportunities to develop our digital skills.

7. How does digital technology affect the level of innovation in your work?

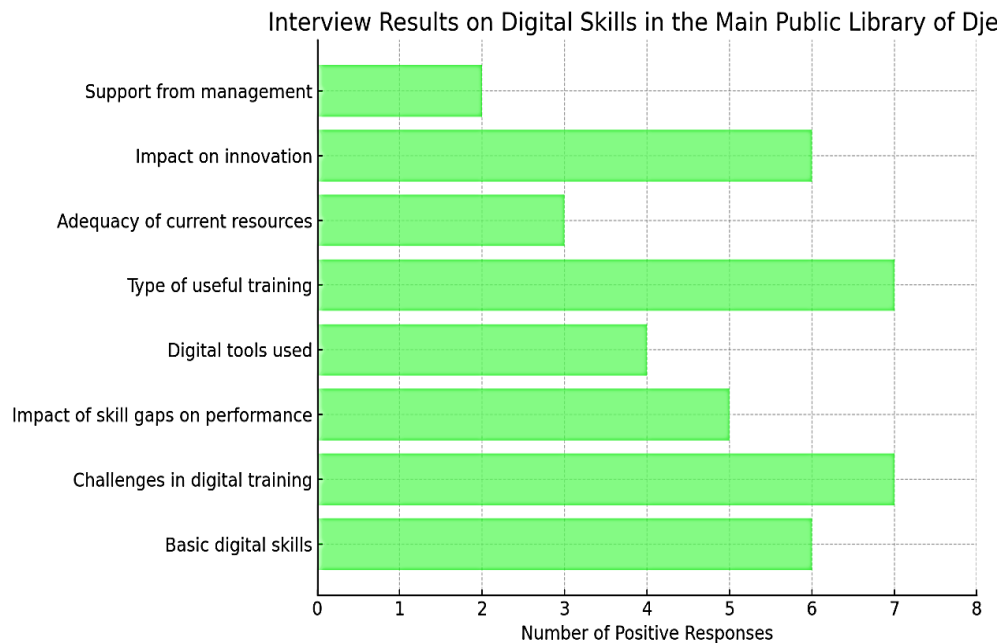
- Technology can improve innovation, but we need more training and support from management.

8. Do you see sufficient support from the management for digital employee qualification?

- There is not enough support; we need regular training programs and better support to develop our digital skills.

Fourth: Results in Light of Interviews and Hypotheses:

A. Results in Light of Interviews:



B. Sociological Reading of Interview Results:

The sociological reading of the results, as illustrated by the chart, reveals several important aspects regarding digital qualification of employees at the Main Library of Public Reading in Djelfa:

- **Basic Digital Skills (6 out of 8):** This result indicates a significant awareness among employees about the importance of possessing basic digital skills in the workplace. This reflects a broad understanding of technological changes that are impacting institutions and suggests that employees are willing to adopt these skills. However, there may be a lack of resources or opportunities to obtain the necessary training.
- **Challenges in Digital Qualification (7 out of 8):** This result points to substantial challenges faced by employees in enhancing their digital skills. From a sociological perspective, these challenges may reflect weak institutional support, such as inadequate budget allocation for training or the provision of appropriate programs. Such challenges could lead to a knowledge gap among employees, potentially exacerbating performance disparities within the institution.

- **Impact of Digital Skill Deficiencies on Performance (5 out of 8):** Nearly half of the respondents confirmed that a lack of digital skills affects their job performance. This result highlights the impact of technology on work division within the institution. Individuals lacking digital skills experience slower task completion compared to their peers, resulting in a performance gap.
- **Digital Tools Used (4 out of 8):** This result shows that the use of digital tools remains limited among employees. From a sociological perspective, this could be interpreted as resistance to change or insufficient training. It may also reflect a lack of appropriate technological infrastructure within the institution to encourage the use of digital tools.
- **Type of Useful Training (7 out of 8):** The large number of respondents who view digital training as beneficial reflects a collective desire to improve performance by enhancing digital skills. Sociologically, this indicates a general trend towards innovation and a willingness to adapt to rapid technological changes in society.
- **Adequacy of Current Resources (3 out of 8):** The small number of employees who believe current resources are adequate suggests a clear deficiency in institutional capabilities to support digital qualification. This may reflect the institution's lack of priority in developing employees' digital capabilities, impacting technological advancement within the institution.
- **Impact on Innovation (6 out of 8):** A significant number of respondents indicate that digital technology could positively impact innovation. From a sociological perspective, this reflects high expectations among employees that improving digital skills can lead to the development of new solutions and increased productivity within the institution.
- **Support from Management (2 out of 8):** The small proportion of respondents who feel that there is adequate support from management indicates a gap between employee expectations and actual institutional support. Sociologically, this could lead to erosion of trust between management and employees, affecting motivation levels and willingness to improve performance.

The sociological reading suggests that while there is awareness among employees about the importance of digital qualification, weak institutional resources and insufficient management support are significant barriers to achieving this goal. These gaps lead to performance disparities among employees and hinder innovation. To improve the situation, the institution should allocate more resources for digital training and increase managerial support to enhance adaptation to modern technological challenges.

C. Results in Light of Study Hypotheses:

Partial Hypothesis 1: Employees with advanced digital skills have higher productivity levels.

Results: Interviews revealed that 6 out of 8 respondents confirmed that possessing basic digital skills helps them complete their tasks more effectively. Additionally, 5 respondents indicated that a lack of digital skills negatively impacts their job performance, partially supporting the first hypothesis. However, the limited availability of training hinders the development of these skills.

Partial Hypothesis 2: Institutions face significant challenges in qualifying employees due to a lack of resources.

Results: 7 respondents pointed out significant challenges in their digital qualification, and only 3 affirmed the adequacy of current resources. These results support the second hypothesis, as the lack of resources emerges as one of the major barriers to employee qualification.

Partial Hypothesis 3: There is a positive relationship between digital qualification and increased innovation within institutions.

Results: 6 respondents indicated that digital training can enhance innovation within the institution. This aligns with the third hypothesis, as digital qualification is seen as a tool to foster creativity and problem-solving.

D. General Results of the Study:

- **Importance of Digital Skills:** The study shows that employees recognize the importance of digital skills in enhancing their job performance. Most participants indicated that possessing basic digital skills is a crucial factor for completing tasks more quickly and efficiently. However, there is a disparity in digital skill levels among employees.
- **Challenges Related to Digital Qualification:** A notable result is that the library faces significant challenges in providing digital qualification to its employees, particularly regarding the lack of resources allocated for training. Most employees reported a lack of continuous training on modern digital tools, which limits their ability to keep up with technological advancements.
- **Lack of Institutional Support:** The results confirmed that there is a pressing need for greater support from management concerning digital qualification of employees. The limited administrative support and resources allocated for digital qualification pose a challenge that hinders the development of employees' digital skills.
- **Impact on Innovation:** The study found a positive relationship between digital qualification and increased innovation within the library. A significant number of employees indicated that improving their digital skills could contribute to enhancing their creativity and providing new solutions, positively reflecting on the level of services provided.
- **Gap Between Available and Required Skills:** The results reinforce the existence of a gap between the digital skills available among employees and those required for optimal performance in a digital work environment. This gap is manifested in the limited use of digital tools within the library, affecting daily work efficiency.
- **Training and Development Opportunities:** Despite the challenges, employees expressed a desire for more training opportunities related to digital qualification. This indicates a strong willingness to develop and improve skills, but the limited availability of training programs hinders achieving this goal.

CONCLUSION

The study reveals significant challenges faced by the Main Library of Public Reading in Djelfa regarding the digital qualification of its employees. Despite these challenges, there are substantial opportunities to improve performance and increase innovation by providing adequate training and enhancing institutional support for employees.

Summary: The study concludes that digital qualification represents a crucial opportunity to enhance employee performance and increase innovation at the Main Library of Public Reading. While there is widespread awareness of the importance of digital skills, challenges related to resource and training limitations impede the desired progress. The study recommends providing greater institutional support for digital qualification, including continuous training programs and increased resources allocated for this purpose. To succeed in the rapidly evolving digital environment, the library should foster innovation and continuously adapt to technological changes.

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