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Valorising Research Outputs through Digital Repositories: Toward Strategic Visions for the Entrepreneurial University

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Abstract

The importance of valuing the results of scientific research is increasing in the policies of countries and institutions of higher education and scientific research, as it is considered one of the fundamental drivers for strengthening the knowledge economy and achieving academic leadership. Therefore, universities today are required to develop effective mechanisms for publishing, marketing, and technology transfer by building integrated infrastructures that support this approach. In this context, institutional digital repositories are regarded as a strategic tool to reinforce this direction through their role in making scientific output accessible and increasing its visibility, thereby achieving a broader impact in its interaction with the economic and social environment. This study aims to highlight the role of institutional digital repositories in valorising scientific research outputs, and to explore strategic insights that support the move toward the concepts of the entrepreneurial university. The study adopted a descriptive-analytical method to provide a theoretical overview of the topic and to analyse the content of the digital repository of Emir Abdelkader University in Constantine. The results of the study showed that institutional digital repositories contribute to raising rates of accessibility and usage, achieving good standings in global rankings, and having a positive impact on the external environment, which in turn supports the shift toward the concepts of the entrepreneurial university. The study recommends the necessity of paying attention to university libraries as they are responsible for institutional digital repositories, integrating these strategies within the university's institutional plans, and adopting unified standards to measure the impact of valorisation, thereby helping to establish the university's position as a driver of development and innovation

Key words: Digital Repositories, Research Output, Scientific Valorisation, Entrepreneurial University

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Introduction

Valuing scientific research outputs is a core pillar in supporting the knowledge economy and enhancing academic competitiveness, as knowledge production is no longer an end in itself but must be transformed into added value with economic, social, and intellectual impact (Santos-Hermosa, 2023). This trend gains increasing importance amidst the global digital transformation, which has provided vast opportunities for disseminating research, expanding its accessibility, and enhancing its societal and institutional impact (Meesad, 2024).

In this context, digital repositories have emerged as one of the most important mechanisms adopted by universities and academic institutions to collect, preserve, make available, and ensure sustainable access to scientific output. Their importance is not limited to preserving academic content but extends to their role in increasing citation rates, enhancing academic visibility, and facilitating research collaboration at local and international levels. Studies indicate that digital repositories, if managed according to clear policies and advanced technical standards, can be a strategic pillar in achieving the goals of the entrepreneurial university. (Grammenis, 2023)

The concept of the entrepreneurial university is a model for practices aimed at valuing scientific research outcomes and outputs by transforming academic scientific knowledge into products and services that contribute to economic and social development (Etzkowitw, 2020). From this perspective, it can be said that digital repositories are a supportive platform for this model, offering capabilities for preserving, managing, disseminating knowledge, ensuring access, and facilitating its reuse.

It is observed that initiatives supporting the establishment of digital repositories in Algerian universities lack a strategy for their effective utilization to achieve the entrepreneurial university model, despite recent trends in Algerian universities towards activating practices and initiatives focused on transforming scientific knowledge into products that decisively contribute to economic and social development. Therefore, our study aims to highlight the services offered by digital repositories that support the valorisation of scientific research outcomes as a pillar for realizing the entrepreneurial university model.

1. Methodological Dimension of the Study
1.1 Research Problem

Despite the rapid expansion of digital repositories within higher education institutions, their strategic use in the valorisation of scientific research outputs continues to face multiple challenges, particularly within the Arab academic context. While international studies confirm that digital repositories represent effective tools to increase accessibility, enhance citation indicators, and facilitate research collaboration

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(Santos-Hermosa, 2023), regional reports and studies point to the limited exploitation of this potential in Arab universities.

The research gap appears in the lack of studies linking the functions of digital repositories to the concept of the entrepreneurial university, and in the absence of evaluations of their contributions to the valorisation of research outputs in ways that reinforce this model of university. Additionally, there is a need to analyse its role within the strategic vision of higher education institutions, and its use as an instrument for strengthening competitiveness and innovation.

In this light, the present study seeks to address this gap through an in-depth analysis of the role of digital repositories in supporting the transition toward the entrepreneurial university. It also aims to propose practical and applicable insights, within the Arab academic environment, that may enhance the status of university libraries by making use of digital repositories as engines of the fast-evolving transformations that push universities toward the entrepreneurial model. Accordingly, our central question is: What are the contributions of digital repositories in reinforcing the transition toward the entrepreneurial university? And how are these concepts and practices reflected in Algerian universities?

From this central question, these sub-questions emerge:

1) What are the dimensions and meanings of valorising scientific research outputs?
2) What role do digital repositories play in the valorisation of scientific research outputs within universities?
3) What is the relationship between the valorisation of scientific research outputs and the entrepreneurial university model?
4) How can digital repositories be leveraged to support the shift toward the entrepreneurial university?
5) What are the challenges that hinder this role, and what strategies can be adopted to overcome them?

1.2 Research Objectives

This study aims to analyse the role of digital repositories in the valorisation of research outputs, and to explore strategic perspectives that may consolidate the entrepreneurial university model within the national academic context. Specifically, the objectives are to:

1) Examine the role of digital repositories in promoting the valorisation of research outputs within universities.
2) Explore mechanisms and strategies for using digital repositories to support the transition toward the entrepreneurial university.
3) Identify the challenges and barriers that limit the effectiveness of digital repositories in achieving optimal valorisation of scientific production.

1.3 Significance of the Study

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The significance of this study stems from the principle of strategic orientations in higher education and research, which emphasizes transforming universities into drivers of economic and social development. This requires an integrated environment that effectively valorises research outputs to reinforce this orientation. Within this context, digital repositories are no longer merely tools for archiving academic production, but a fundamental pillar in valorising research outputs and increasing their societal and economic impact (Santos-Hermosa, 2023; Meesad, 2025).

The study also seeks to highlight the importance of digital repositories in the Arab and Algerian context, where linking universities with the knowledge economy has become a priority. This highlights the necessity to shed light on digital repositories as both infrastructural and epistemic assets that accompany and support this transition. Moreover, through its findings, the study aspires to provide a practical basis for policymakers and universities to develop effective strategies for managing and adopting digital repositories, and supporting the vision of integrating universities into the knowledge economy.

From the applied perspective, this study can serve as a reference for university libraries and research units in adopting international best practices in managing digital repositories, while adapting them to the institutional and cultural specificities of Arab universities.

1.4 Methodology

1.4.1 Research Approach

This study relied on the documentary method, the descriptive method, and the case study method, as these were appropriate for it. The approach focused on collecting documents and data related to the subject, subjecting them to analysis and interpretation in order to reach results about the profound transformations affecting the function of valorising research outputs and the supporting mechanisms embodied in institutional digital repositories. The analysis specifically examined these transformations within the Algerian higher education environment, through a case study of the institutional repository of the University of Emir Abdelkader in Constantine, complemented by interviews to deepen understanding of how such dynamics contribute to advancing the shift toward the model of the entrepreneurial university.

1.4.2 Scope and Boundaries of the Study

Thematic scope: Institutional digital repositories and their role in valorising the intellectual production of universities in ways that strengthen the transition toward the entrepreneurial university model.

Spatial scope: The institutional repository of Emir Abdelkader University in Constantine.

Temporal scope: The study extended over three months, covering both the theoretical and fieldwork aspects, from December to February 2025.

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1.4.3 Data Collection Methods and Tools

The study relied on intellectual production available through the internet to inform the theoretical aspect as well as to support the fieldwork.

The primary research tool was the interview, conducted with the supervisor of the institutional repository at the central library, along with the supervisor responsible for the outputs of the research laboratories. The interview guide was structured into four main axes, each supported by targeted questions:

- 1st axis: Definition of the university's institutional repository.
- 2nd axis: Vision and objectives of the repository.
- 3rd axis: Intellectual production and its valorisation through the repository.
- 4th axis: Challenges and future prospects for supporting the concepts of the entrepreneurial university.

In addition, the study included a direct examination of the repository itself through its online platform, which provided a basis for analysing the fieldwork aspect and assessing thestate of the digital repository.

2. The Conceptual Framework of the Study
2.1 Valorisation of Research Outputs

Valorisation of research outputs is understood as the process that aims to transform research results from being merely theoretical academic production into resources with practical, economic, social, or cognitive value, which can be mobilized for economic or societal development, and consequently strengthening both the societal and scientific impact of the knowledge produced.

Because of the multidimensional nature of the term, it has been given various definitions in the academic context. For instance, CADEUL defines it as "the act of adding value to current research activities and their results by, on the one hand, giving them a utilitarian value, that is, making them practical and, on the other hand, a 'transactional value' reflected in the marketing of knowledge, skills, and research outputs. This step is of high importance for research institutions, as it is the point at which their research efforts are rewarded."

Valorisation has been approached from two main dimensions:

✓ The economic dimension, which focuses on transforming research results into innovations and products that are transferred into industry. This direction is emphasized primarily in the United States and Japan.

✓ The non-commercial dissemination dimension, which highlights the need to circulate and share knowledge widely. It is this second orientation that our study seeks to emphasize.

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In this sense, Collin-Lachaud and Géraldine (2020) describe it as "a set of activities aimed at increasing the value of research results, and more broadly, at advancing knowledge. Valorisation is not limited to the commercial exploitation of research results; it also rests on disseminating and exchanging knowledge across all fields of knowledge."

Thus, the valorisation of research outputs occurs through multiple channels that enable universities to assume leadership within the knowledge society. In this regard, Chatelin and Lacroix identify five key sectors of scientific productivity connected to valorisation:

- Conference publications.
- Documentation of scientific and technical information.
- Economic valorisation in its multiple dimensions.
- Media promotion.
- Training of faculty members.

The growing attention to valorisation is due to the goals it achieves for both universities and society. These include:(BenBouzide, 2020)

1) Encouraging innovation and development across scientific fields.
2) Achieving collaboration between research laboratories and both public and private partners.
3) Contributing to the transformation and development of the socio-economic environment.
4) Supporting economic development and the creation of innovative enterprises.
5) Generating additional financial resources to support scientific research.
6) Protecting intellectual property.
7) Increasing visibility and recognition by responding to societal expectations and affirming the mission of the university along with stressing and recognizing completed researches.
8) Introducing the university and its researchers to build collaborations with peers and to promote the visibility and reputation of its scientific outputs.

2.2 The Entrepreneurial/Productive University in the Context of the Knowledge Economy

2.2.1 The Concept of the Entrepreneurial/Producing University

The concept of the entrepreneurial university reflects the depth of transformations affecting the roles of universities in societies grounded in the knowledge economy. This context requires a shift from the traditional academic role of education and basic research toward a dynamic and strategic role centred on innovation.

According to Guerrero et al. (2016), an entrepreneurial university is characterised by its ability to generate knowledge, build alliances, modernize its organizational structures, and adopt an institutional culture that promotes sustainable innovation. Its role extends beyond this to create economic and social impacts through the valorisation of research outputs.
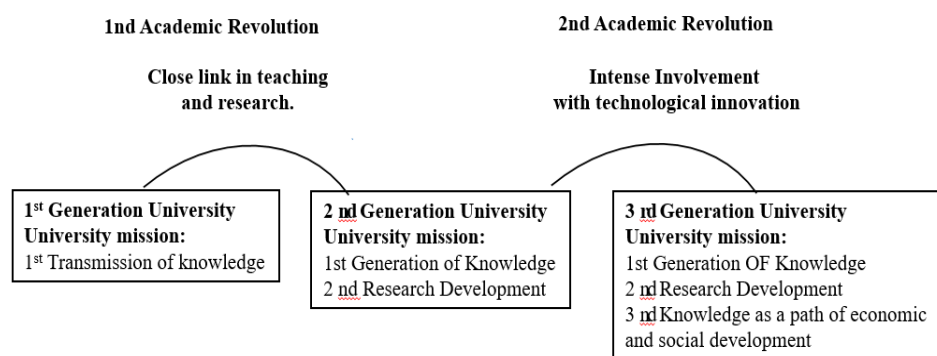
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Çabiri and Qosja (2023) argue that this model seeks to create an entrepreneurial culture within universities, which supports innovation and pursues the marketing and application of scientific production. They note that "the entrepreneurial university means providing technology transfer offices and scientific clusters. It offers an emerging perspective aimed at achieving broader social and economic benefits within the university's ecosystem, by cultivating entrepreneurial in orderto generate job opportunities. This process includes engaging students, graduates, and entrepreneurs, while providing entrepreneurship centres, accelerators, student business plan competitions, and collaboration networks with industry and alumni."

Thus, universities today are called upon to deepen their societal role by aligning their research with the needs of economic and social development. They serve as pivotal partners for actors in the knowledge society. In this respect, Etzkowitz and Leydesdorff (2000) highlighted the university's role through their Triple Helix model, which combines university, industry, and government as a foundational mechanism for advancing the transition toward knowledge- and innovation-based economies.

Çabiri and Qosja (2023) also point to the evolution of the concept of the university across generations, reaching the entrepreneurial/producing university concept. It is illustrated in the following figure:

Figure 1. The Three Generations of Universities

Source: Çabiri, K., & Qosja

2.2.2 Objectives of the Entrepreneurial University
- To build a learning environment that fosters entrepreneurship.
- To develop cross-sectoral relationships with industry and policy makers.
- To find non-traditional sources of funding for research and development projects.
- To transform research outputs into economic assets, such as through the creation of start-ups or the granting of licenses.(Etzkowitz, 2000)

2.3 Institutional Digital Repositories

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2.3.1   The Concept of Institutional Digital Repositories

Institutional digital repositories represent the modern model of scholarly communication, aimed at facilitating the digital transformation of university libraries and enabling them to provide high-quality information services to their communities. They do so by providing functions that support open access to knowledge.

Lynch (2013) defines them as "a set of services that a university offers to its members for the management and dissemination of the digital materials created by the institution and its members."

The term of the institutional repository also refers to "a new system for preserving and sharing the digital academic work produced by students and members in various educational institutions, and it was conceived as a solution to the limitations of the current model of scholarly communication dominated by commercial publishers with profit motives." (Khan, 2023)

Therefore, the institutional digital repository is an integrated electronic environment designed to receive, collect, preserve, and organize academic and research content using unified describing standards that ensure ease of access and retrieval in research processes (Utulu, 2019). It is also seen as an interactive system that facilitates the exchange of digital resources between institutions, making use of open protocols such as OAI-PMH to enable automated harvesting and integration with other systems (González-Pérez, 2021).

In this sense, repositories are "electronic platforms that aim to enhance open access to diverse research materials, increase the visibility of academic contributions, and support open science practices as well as institutional commitments to community engagement." (Hall, 2025)

From these definitions, it becomes evident that institutional digital repositories constitute a modern model of publishing and scholarly communication within the framework of the open-access movement. They now represent a foundational component of the knowledge infrastructure and digital transformation driving fourth-generation universities, in light of their potential to valorise research outputs and contribute to economic and social development.

2.3.2   Functions of Institutional Digital Repositories

- Collection and preservation of research content: storing scientific documents, data, and e-journals in a secure infrastructure that ensures their long-term integrity and retrievability. (Grammenis, 2019).

- Open access and sharing: making documents available in formats readable by both humans and machines, while removing subscription barriers to facilitate knowledge dissemination and accelerate scientific innovation (González-Pérez, 2021).

- Long-term preservation: applying reference models such as OAIS to ensure digital assets remain accessible despite generational changes in technology and file formats.
- Metadata description and enrichment: adopting international standards such as Dublin Core and metadata schemas to enhance precision of description and access across diverse research contexts (Otto, 2023).
- Support for research collaboration: providing collaborative tools and graphical interfaces that facilitate researcher interaction, peer feedback, and direct review within the repository environment (Utulu, 2021).
- Integration with distributed learning systems: connecting repositories with e-learning platforms and knowledge resources within a distributed learning ecosystem that supports reuse and customization according to the needs of learners and researchers (Otto, 2023).

2.4 Digital Repositories, Valorisation of Research Outputs, and the Entrepreneurial University: Relationship and Roles

The OECD (2015) points out that open science is the gateway to the knowledge economy, as it contributes to building a knowledge infrastructure. It stresses that effective valorisation of research, particularly non-commercial valorisation, is essential, which requires a supportive environment including funding, intellectual property protection, and appropriate digital infrastructure.

In the same line, Grammenis & Mourikis (2019) emphasize that digital repositories are a strategic tool, since they enable rapid and open access to research outputs, thereby increasing citation rates and usage, while enhancing the academic and social impact of universities. Similarly, Santos-Hermosa (2023) recommends integrating digital infrastructures such as institutional repositories to strengthen open access and expand opportunities for leveraging research knowledge.

From this perspective, institutional digital repositories play a decisive role in broadening the impact and accessibility of scientific research. They provide a comprehensive digital infrastructure that stores, displays, and manages research outputswhether articles, theses, datasets, or other scholarly documents. Their value manifests through four main dimensions (Bioud, 2015):

1) Increasing academic visibility and impact.
2) Enhancing administrative efficiency and facilitating processes.
3) Supporting institutional assessment and rankings.
4) Ensuring digital preservation and sustainability.

These diverse functions align closely with the entrepreneurial university model, as they enhance its ability to transform academic knowledge into tangible value. Greater visibility and higher citation rates strengthen academic reputation and competitiveness, while administrative integration and institutional

evaluation embed research into institutional developmentplans. Meanwhile, digital preservation ensures the continuity of knowledge, a cornerstone of a sustainable knowledge economy.

Thus, digital repositories are connected to the entrepreneurial university model, whose foundation lies in the valorisation of research outputs. Transforming knowledge into real-world impact constitutes the essence of this model. As Klofsten and al (2020) affirms, "the entrepreneurial university becomes a key player in the knowledge economy by integrating research outputs into the economic system." Similarly, Guerrero et al. (2016) underline that the relationship between the entrepreneurial orientation of universities and their research and innovation capacities acts as a vital driver for translating research into effective outcomes (such as innovation and growth).

In sum, the entrepreneurial university represents an active environment for converting research into real applications that benefit both society and the economy, moving beyond traditional academic functions. Within this transformation, digital repositories stand as one of the essential pillars, as they directly contribute to valorising scientific outputs and reinforcing the vision of the entrepreneurial university.

We can highlight their supportive role in this transition through four key contributions:

1) Enhancing access and impact: repositories increase the visibility of research in both academic and industrial spheres, which fosters opportunities for applying results and its transformation to tangible outcomes.
2) Connecting universities with external partners: by providing open research content, which facilitates partnerships and broadens the use of knowledge.
3) Building a digital knowledge infrastructure: through digital preservation and data sustainability, repositories strengthen universities' capacity to develop future-oriented solutions and innovations.
4) Supporting institutional evaluation and transparency: by systematically documenting research outputs, repositories make the process of knowledge valorisation more visible and methodologically assessable.

Accordingly, institutional digital repositories are pivotal instruments that enable the entrepreneurial university to translate research into genuine social and economic applications.

3. Fieldwork Dimension of the Study
3.1 Discussion of the Study Results
3.1.1 First Axis: Defining the University's Digital Repository

The University of Emir Abdelkader is among the first Algerian universities to show a strong interest in developing its libraries. This is reflected in the creation of its first digital library and the digitization of

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its information services. This commitment was later reinforced with the establishment of the institutional digital repository in 2019.

According to the responses of the repository supervisor, the initiative initially came from a professor specialized in Library and Information Science at the university. His initiative was further supported by the library of the Faculty of History and Islamic Civilization, and eventually adopted by the university for several reasons:

- ✓ The accelerating orientations of the Ministry of Higher Education and Scientific Research to modernize the sector in pursuit of the fourth-generation university.
- ✓ The digital transformation taking place within higher education aimed at improving services and their quality.
- ✓ The awareness of the University of Emir Abdelkader that digital repositories are a fundamental pillar for promoting research outputs, and a key tool for supporting integrated digital infrastructures that manage the university's intellectual life and improve digital information services.

Given the importance of digital repositories, the interview responses highlight that a dedicated team was assigned to manage the repository. This team is based in the Computing Centre and is composed of specialists in information technology and librarianship. They include highly qualified library science professionals of both first and second levels, affiliated with the university library. Their responsibilities include:

- ✓ Technical maintenance and regular updating of the repository.
- ✓ Monitoring the data and statistics related to repository usage.
- ✓ Registering the repository in international directories and on the national platform.
- ✓ Collecting the university's outputs into the digital repository.
- ✓ Monitoring the deposit process and ensuring compliance with indexing and metadata standards.
- ✓ Encouraging researchers to archive their work through the repository.
- ✓ Evaluating the documentary content before making it available, ensuring consistency with copyright regulations.

3.1.2 Second Axis: Vision and Objectives

From the responses of the librarians, the vision behind creating the digital repository lies in the valorisation of research results because of the benefits it brings to the university and its reputation. This vision is translated into specific objectives, as highlighted by the supervisor of the repository at the central library:

- ✓ Centralizing the preservation of intellectual production bygathering the university's scholarly record in one place and making it accessible through a central portal.
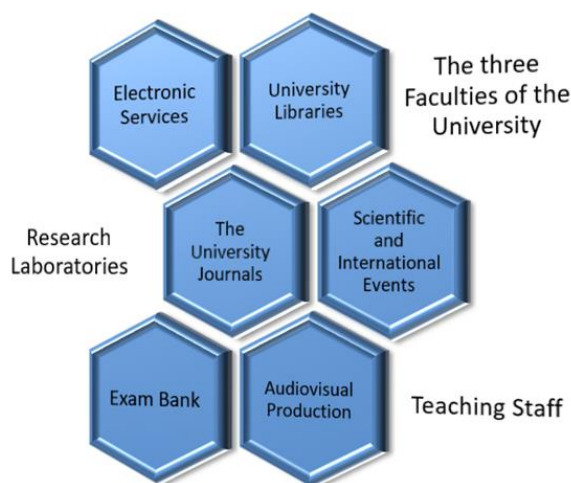- ✓ Enhancing the national and international visibility of the university.

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- ✓ Enabling the university to secure advanced positions in global rankings.
- ✓ Achieving the university's digital transformation across all its structures to improve the quality of digital services for its academic, national, and international community.
- ✓ Joining the consortium of digital repositories through the AL HAL platform (Algerian Hyper Article en Ligne).
- ✓ Attaining the status of a fourth-generation university, a goal supported by the establishment of integrated digital transformation, in which institutional repositories play a central role.

3.1.3 Third Axis: Intellectual Production and Its Valorisation through the Digital Repository

Based on the interview responses and the examination of the repository through its online portal, it is evident that the deposit process is categorized into major collections, as illustrated in the following figure:

Figure 2. The groups expressing their contribution to feeding the digital repository

(Prepared by the researcher)

Based on the figure presented above, it becomes clear that the university administration and those in charge of the digital repository play a crucial role in engaging all actors within the university to enrich the repository with intellectual assets. Through the identified groups, the repository is supplied with data, information, and scientific output generated within the university's walls. This can be further clarified in the following table.

Table 1. Types of Intellectual Output Deposited in the Institutional Repository

Groups	Intellectual Output Accessible Through Them
University Libraries	Doctoral theses, Master's dissertations, the shared catalog, manuscripts, newsletters, resources for students with special needs, class yearbooks, collections of senior scholars.

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University Faculties andTheir Departments	Proceedings of international and national conferences, seminars and training sessions, university publications, faculty-authored books, Master's dissertations, and academic articles.
Scientific Journals	Five journals, including Al-Mi'yar Journal, among others.
Research Laboratories	Research projects and their final reports, as well as publications issued by the laboratories.
Audiovisual Space	A repository of images related to various university activities, such as testimonies of freedom fighters about the revolution, students' scientific, cultural, and sports club activities, visits and agreements, "University in Service of Society and Sustainable Development," the Memory of Emir Abdelkader space, entrepreneurship and business incubator initiatives, and records of the university's rankings and visibility.
Teaching Staff	Data on university professors: name, surname, department, along with their Google Scholar link.
Exam Bank	Questions and answers related to exams.
Electronic Services	Encrypted distance learning platform (lectures and courses), university website, central library website, and a secured digital space.

(Prepared by the researcher)

The interview responses confirm that the primary focus lies in enriching the digital repository with all intellectual production that reflects the intellectual life of the university. The diversity of deposited outputs demonstrates the university's commitment to establishing a comprehensive institutional repository through which a wide range of information and data generated within the university are made available. This aligns with the new generation of repositories that move beyond merely preserving traditional resources such as dissertations and research reports, to include diverse forms of data and information such as researchers' profiles, professional and cultural activities, and research laboratory publications. In doing so, the repository becomes a living database that mirrors the intellectual, research, and academic activity within the university.

In this regard, Taher Hussain Khan (2023) stresses that there is broad consensus that a fully integrated institutional repository should not only encompass the scholarly outputs of faculty members and students (both research and teaching-related), but also document the institution's own activities, including event records, presentations, experimental datasets, and field notes collected by its members in support of research.

The efforts of Emir Abdelkader University were made to valorize its intellectual production by promoting, disseminating, and ensuring open access to its scholarly outputs. This contributes to building partnerships and collaborative projects with other universities, while also positioning the university as an active player within society by providing a knowledge base that supports joint initiatives with civil society actors. Such efforts are consistent with the vision of the university as a driver of sustainable development. Ezeani and Ezema (2011) further highlight that an institutional repository creates an ideal environment for scientific publishing, making the research output of an institution more visible at the global level, which enhances the university's credibility and intellectual capital.

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At any institution, repositories serve crucial roles in shaping identity, documenting achievements, and consolidating values. This justifies the national efforts to preserve, promote, and disseminate cultural and public heritage using the tools of the digital age. Seen as a repository of institutional memory, the digital repository acts as a source of strength and trust, enabling society to better understand ongoing transformations and, in turn, build a better future.

3.1.4 Axis 4: Benefits, Challenges, and Future Prospects for Supporting the Entrepreneurial University Model

The librarians interviewed agreed that the institutional repository represents both a cornerstone for the university library and a strategic asset for the university. It enables the institution to gain recognition and strengthen its standing among peers by facilitating the dissemination and promotion of its scholarly output.

They also highlighted the benefits of the repository's management software, particularly the ability to generate statistics that track the contributions of the university and its academic community. Such data help inmonitoring the university's visibility and positioning in international rankings. According to the respondents, regular meetings of the university's visibility committee are held to follow up on the university's digital platforms, including the repository, which serves as a central gateway to its academic activities. While this process remains in its early stages given the recent establishment of the repository, there are already positive indicators, including mandatory policies that encourage the deposit of intellectual output.

Additional reported benefits include positive impacts on librarians' daily work, particularly through improved organization of "grey literature" such as doctoral theses and Master's dissertations. This has led to shorter response times and better services for users both within and outside the university. Moreover, the repository provides precise statistics on stored resources, a service valued by beneficiaries who often include such outputs in their CVs when applying for new positions. This was a point also underlined by Grammenis and Mourikis.

Institutional repositories have thus emerged as a distinctive digital service for university libraries, reinforcing their role in supporting the digital transformation. Respondents emphasized the importance of ministerial directives urging the digitization of library services, including the adoption of technologies such as RFD to streamline library use for students and researchers.

Digital transformation projects in Algeria are still in their early stages, but the Ministry is advancing rapidly to digitize the higher education and research sector, recognizing the university's strategic role in the knowledge economy. Today, universities are not only hubs of innovation and creativity but also incubators and distributors of knowledge across sectors. Their success lies not only in generating innovation but in effectively disseminating and linking it to industry and socioeconomic development.

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In this context, Emir Abdelkader University's engagement with these trends marks an important step in preserving its role and reputation. By advancing digital transformation across its structures, including the institutional repository, which serves as both witness and preserver of its academic activity, the university demonstrates commitment to evolving toward the fourth-generation university.

The respondents also identified several challenges:

- ✓ Technical challenges: Problems in depositing and cataloging works according to the Dublin Core standard, with errors and inconsistencies observed. This requires stronger oversight, careful review of submissions, and librarian training.
- ✓ Technological challenges: Weak infrastructure, particularly internet connectivity, and outdated equipment. Respondents noted, however, that the university administration is working to address these gaps by updating equipment.
- ✓ Organizational challenges: Lack of coordination among stakeholders in the deposit process, highlighting the need for structured committees and professional training to ensure more effective workflows.

Speaking about future orientations, the university's priorities include further integrating the repository into its intellectual activity and connecting it with the national platform of institutional repositories to enhance the valorization of research results. This integration is expected to improve visibility and strengthen the university's ranking both nationally and internationally.

The repository administration is also attentive to emerging global trends, focusing on developing higher-quality services that will allow it to function as an integrated infrastructure and a key factor in positioning the university as an entrepreneurial institution. The expansion of available resources is part of this effort, ensuring the repository becomes both a showcase and a living memory of the university's intellectual and academic life.

3.2 Findings of the Study

3.2.1 Strategic Importance of Institutional Repositories:

The study revealed that repositories are vital tools within the university's digital transformation, enhancing both services and infrastructure while supporting the institution in addressing digital challenges. They strengthen teaching and research by preserving and systematically disseminating research outputs, effectively serving as a ready-to-use knowledge bank.

3.2.2 Repositories as Tools for Valorizing Research Outputs:

The findings also show that repositories play a central role in the shift toward entrepreneurial universities. Interviews confirm that repositories are essential for fulfilling one of the defining functions of these universities: the valorization of research results, particularly through non-commercial forms of

dissemination. In doing so, they connect scholarly outputs with institutional strategy, enhancing recognition of the university and its academic community.

Repositories thus serve as gateways to open access, aligning with the principles of open science and contributing to the creation of knowledge bases that underpin both an information society and a knowledge-driven economy.
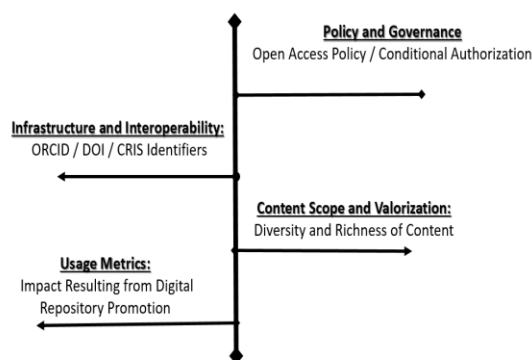
Conclusion

Institutional repositories represent a promising asset for higher education institutions, providing a knowledge and technological infrastructure that reinforces the concept of the entrepreneurial university. To achieve this potential, university administrations must prioritize strong support for university libraries, which remain central to the development and management of repositories and to the documentation of institutional knowledge.

By doing so, repositories can fulfill their mission as observatories of sustainable scientific knowledge and as key components of the broader digital transformation of universities, enabling them to serve as engines of the knowledge economy.

The contribution of repositories to valorizing research results is already on an upward trajectory, and their impact will continue to grow. Recent directives from the Ministry of Higher Education, such as the adoption of RFID technologies, the development of repositories, and the establishment of a national platform, further reinforce this trend, encouraging libraries to join these initiatives under specific conditions.

Based on the study's findings, and in order to strengthen the repository's role in advancing the university's transformation toward a fourth-generation, entrepreneurial institution, we propose a set of strategic directions built around four main pillars. These are illustrated in the following diagram:

Policy and Governance
Open Access Policy / Conditional Authorization

Infrastructure and Interoperability:
ORCID / DOI / CRIS Identifiers

Content Scope and Valorization:
Diversity and Richness of Content

Usage Metrics:
Impact Resulting from Digital Repository Promotion

(Prepared by the researcher)

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