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The Iraqi Digital Repository for University Theses and Dissertations: A Descriptive Study

Objective. The Iraqi Qualifications Repository (IQDR) represents a significant step in Iraq's efforts to modernize education and establish a prominent position in global scientific research. This article provides a detailed overview of the repository, focusing on its history, features, impact on academia, and the challenges it faces. **Methods.** The article places the IQDR within the broader context of digital scholarship, examining its technology, multilingual options, metadata features, and its potential to serve as a model for other national academic repositories in the region. **Results.** The Iraqi Qualifications Repository (IQDR) is Iraq's primary electronic collection of graduate theses and dissertations from its universities, essential for knowledge sharing, supporting open access, and assisting academic verification. **Conclusions.** Despite the challenges, IQDR has the potential to undergo significant strategic transformations if we properly capitalize on the available opportunities. The repository can be developed into a national knowledge platform by incorporating faculty research and locally published articles, as well as linking it to local scientific conferences and working papers.

Keywords: digital repository; Iraqi Digital Repository; Iraqi universities; Iraqi theses; Iraq higher education; institutional repository; open access

Introduction

Institutional repositories (IRs) serve as a strategic mechanism for preserving scientific and knowledge outputs from academic and research institutions, particularly in the context of rapid digital transformations and an increasing need to document human knowledge. Repositories have become essential to the scientific research ecosystem by facilitating the gathering, organization, and accessibility of intellectual output, including research reports, scientific articles, university dissertations, and raw data (Chang, 2003). The Iraqi Digital Repository (IQDR) initiative is a national project in Iraq designed to compile and document graduate-level scientific output, with a focus on university theses and dissertations. IQDR serves as a significant online platform that facilitates the compilation of scientific work from various Iraqi universities and institutions, promoting open access and aiding researchers both in Iraq and internationally. It enables users to efficiently search, download, and locate information. The scientific research landscape in Iraq has experienced significant fragmentation of its information infrastructure and alterations in the preservation and documentation of scientific output, particularly since 2003 (iqdr.iq). A national initiative to coordinate efforts and establish an information infrastructure aimed at protecting academic heritage and sustaining its benefits is essential (Mohammed & Bkeet, 2024). In order to fully understand the potential of the IQDR project as a model for similar initiatives in other domains that deal with the preservation of academic legacy and the promotion of scholarly collaboration, this paper looks at a number of its components. The IQDR project fosters scholarly collaboration, which produces innovative concepts and adaptable approaches suitable for a variety of circumstances. The IQDR project strengthens the culture of mutual support and knowledge exchange by promoting academic cooperation in addition to addressing the crucial challenges of academic preservation. By ensuring that significant cultural heritage is preserved for future generations, this collaborative approach promotes sustainable practices that benefit both society and the academic community (Paragiarino, Barujel, & Nistal, 2014). In addition to providing

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valuable insights for upcoming projects aimed at honouring the academic legacy overall, this research will highlight the IQDR project's achievements and challenges.

Digital institutional and academic repositories. According to Woolcott, the term "digital repositories" refers to information systems or platforms that facilitate the ingestion, storage, management, and display of digital content. Since they can retain and manage content over an extended period of time, they frequently support various aspects of digital preservation, which makes them appropriate systems for digital documentation (Woolcott & Shiri, 2023). Institutional repositories are commonly defined by researchers as a collection of services offered by an institution to oversee and disseminate diverse digital research outputs produced by individual researchers or research communities. A university institutional repository comprises services offered by a university to facilitate the management and dissemination of digital materials produced by the institution and its community members. This represents an organizational commitment to the stewardship of digital materials, encompassing long-term preservation when suitable, along with curation, access, and distribution (Asadi, Abdullah, Yah, & Nazir, 2019). Rodrigues mentioned that institutional repositories are information systems designed to preserve, store, and disseminate scientific knowledge generated by higher education and research institutions. They enhance the visibility and citation frequency of the documents. They also help mitigate negative factors such as content plagiarism, as documents are subjected to peer scrutiny in real time. Repositories are established in a cultural atmosphere of considerable visibility, which leads to an immediate critical appraisal by peers. According to M.E. Rodrigues & A.M. Rodrigues (2012), this approach serves as a substitute for the traditional method of publishing scientific research content. An institutional repository is a collection of services provided by a university to its community members for the management and dissemination of digital materials produced by the institution and its constituents (Lynch, 2003). The institutional repositories bring together research papers and metadata in a single system, regardless of the type of electronic platform used. Institutional digital repositories also provide a single identification tool for finding documents in the context of scholarly publishing. These two factors make institutional digital repositories highly useful, more effective, and more contributive to the dissemination and sharing of scholarly materials (Womack, 2002). Certain authors indicate that repositories are typically utilized to facilitate rapid access to scientific knowledge (Baptista & Ferreira, 2006).

The functions of academic digital repositories. Academic digital repositories have become a key part of higher education and scientific research in a world where knowledge is growing faster and access to information is becoming more important. Schools and universities are no longer just places to learn and do research. Now, they are trying to use technology to help science and knowledge. In this context, digital repositories are very important for keeping, organizing, and sharing academic knowledge (Vrana, 2011). The main job of a digital repository is to keep scholarly work safe. Every university or research institution makes a lot of dissertations, research papers, articles, and reports that need to be kept safe and in order (Okon, Eleberi & Uka, 2020). Over time, these resources accumulate into a historical archive that demonstrates how the institution's expertise has evolved. This entails more than just storing content; it also entails structuring it such that scholars can quickly locate it using clear descriptive criteria that facilitate searching and retrieval (Park & Tosaka, 2010). The most important thing to accomplish in the age of open knowledge is to make scholarly work freely available (Peters & Roberts, 2015). Researchers, students, and others throughout the world can now access research through digital repositories without having to pay hefty membership rates or cope with the constraints of traditional publishing (Woszczynski & Whitman, 2016). This willingness to share knowledge facilitates collaboration among scholars, leading to a greater impact and an increase in citations (Tan, 2016). Digital repositories are also crucial for helping schools build their academic identity

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(Picón, 2024). These repositories are an electronic interface that shows off the university's scientific contributions by listing the names of researchers, their areas of expertise, and their published works (Pinfield et al., 2014). This boosts the university's academic reputation both locally and globally. Uploading research to a repository makes it more likely that it will show up in scientific search engines like Google Scholar (Martín-Martín, Costas, van Leeuwen, & López-Cózar, 2018). This helps the institution's academic ranking go up. Repositories do more than just publish and promote; they also help with the learning process. Students and professors can use the resources in them as teaching tools, whether they are preparing lectures or doing research (Cohen, Kalimi, & Nachmias, 2013). Repositories also make it easier to create open educational resources (OER), which can be easily added to school curricula (Butcher, 2015). In addition, repositories help protect intellectual property rights. When you upload research or a thesis, you usually have to choose a license that lets or doesn't let other people use the material again (Nath, Sridhara, Joshi, & Kumar, 2008). In addition to providing a lasting record of the researchers' scholarly labor, this permanent record of rights guarantees the safety of their work. Last but not least, repositories provide an analytical purpose by providing us with precise data on downloads, views, and the origins of visitors (Chen & Zhang, 2014). This data is used by university administrations to assess the quality of research and to make data-driven strategic decisions. To put it briefly, academic digital repositories are more than just online shops these days. They have developed into significant hubs that integrate development, analysis, access, and preservation in the higher education system. They serve as a link to the outside world, a reminder of schools, and a path to a more progressive and open society of knowledge (Jain, 2011).

Study objectives and importance. The study aims to analyse the components of the Iraqi Digital Repository platform for university theses and dissertations and its operational and scientific objectives. Second, evaluate the quality of the content offered in terms of comprehensiveness, diversity, and modernization. Third, monitor the technical and administrative challenges facing the platform. Finally, present proposals to improve the effectiveness of the platform and increase its research impact. The study is important because it aims to offer information about one of the most well-known digital projects in modern-day Iraq, which serves as a template for digital transformation in the academic field. Additionally, the study helps researchers, librarians, and decision-makers comprehend how digital repositories help preserve academic memory and improve its future use for research and education. Understanding these dynamics will enable stakeholders to make informed decisions about resource allocation and strategic planning, ultimately enhancing the efficacy of academic institutions. Furthermore, the insights gained could potentially inspire similar initiatives in other regions, fostering a global movement toward digital innovation in education.

Study's problem. Despite the establishment of the Iraqi Digital Repository for University Theses and Dissertations (IQDR), its effectiveness as a national platform for preserving, organizing, and providing access to graduate research remains inadequately examined. Many Iraqi universities still face challenges in systematically submitting theses and dissertations, leading to inconsistent coverage across institutions. Additionally, users often report difficulties with search functionality, metadata quality, accessibility, and record completeness. These issues hinder the repository's ability to serve as a reliable scholarly resource and reduce the visibility and impact of Iraqi academic output. Therefore, a comprehensive descriptive study is necessary to evaluate the current status, structure, content, usability, and operational challenges of the Iraqi Digital Repository to identify gaps and suggest improvements that support national research development.

Methods

The lack of in-depth analysis of the IQDR platform, which is gaining increasing importance in Iraqi academia, poses a challenge to this study. The platform's impact on Iraqi academia remains unclear, as do its role in community development and growth, its operating methods, and the number of Iraqi institutions it houses. The study was conducted using a descriptive and analytical approach, providing a comprehensive description of the repository's technological structure and information content. This description and analysis relied on primary data collected from the IQDR homepage, search interface, browsing categories, metadata pages, and download options. Secondary sources included documents and policy statements issued by the Iraqi Ministry of Higher Education and Scientific Research regarding digital archiving and repository guidelines, as well as scholarly literature on digital repositories, metadata standards, institutional repositories, and open access principles. The researcher then examined the repository's content to assess its strengths and weaknesses.

Literature Review

Digitization, academic libraries, and the emergence of institutional repositories. The trend toward digitization seems to have infiltrated every aspect of our national existence, shifting meetings that were once held in physical environments to digital platforms. This shift has also been evident in university libraries. University libraries have recently implemented institutional repositories (IRs). Universities, as institutions of higher education, prioritize research as a primary objective alongside teaching and community service. Institutional repositories (IRs) are technologies developed by university libraries to meet the changing role of libraries and user requirements (Obiozor-Ekeze & Nwafor-Orizu, 2024). Tapfuma defines institutional repositories as collections of services provided by academic and research institutions designed to manage and disseminate digital resources produced by the institution and its staff. Utilizing the Open Archives Initiative Metadata Harvesting (OAI-PMH) methodology, open access repositories exhibit interoperability, enabling readers from diverse geographical locations to conduct remote searches across various repositories and archives. The success of any repository is fundamentally contingent upon the availability of scholarly materials that possess demonstrated value and are actively sought and cited. Tapfuma's study of digital repositories at public universities in Zimbabwe indicates that modern universities face challenges in sufficiently populating their repositories to derive value from investments in information repository technologies (Tapfuma & Hoskins, 2019). In today's era of unrestricted access to information, academic digital libraries play a crucial role in meeting the informational needs of researchers, scholars, and students. Researchers, scholars, and students seek contemporary, rapid, and precise information, which necessitates that digital library systems meet their requirements to enhance and broaden knowledge. Assessments of digital libraries, particularly academic digital libraries, must consider users' criteria rather than solely relying on the perspectives of scholars or librarians. These will help create a complete set of evaluation standards focused on users, making sure that digital libraries effectively support academic or educational activities now and in the future (Kadir, Dollah, Saaid, & Diljit, 2009).

Development, status, and challenges of institutional repositories. Koma and Felson pointed out that Ghanaian institutional digital repositories have come a long way in the last decade, with the help of groups like (CARLIGH) and the International Network for Access to Scholarly Publishing (INASP). Despite the benefits, their study of seven Ghanaian academic digital repositories revealed a number of challenges, such as inadequate funding and policy backing, slow bandwidth, an absence of public IP addresses, software problems, and an absence of highly trained staff (Kumah, & Filson, 2022). In Nigeria, only 21 of the 202 universities accredited by the

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National Universities Council have established effective institutional repositories to manage their intellectual output for global visibility. This data indicates that the development of institutional repositories to control and display the intellectual output of universities remains slow at the global level. Many institutional repositories in Nigeria are growing without any policy guidelines to guide their growth (Idiedo, Omigie, & Ebhomye, 2024). The necessity for discoverability has grown recently due to the proliferation of massive digital archives, libraries, and research and data repositories. Understanding digital repositories—what they are, the many forms, how they function, user interaction, and what determines their discoverability—is vital for properly managing, accessing, and finding data, information, and digital things in such repositories. The foundation of any effective digital information platform is discoverability, or the ease with which users may locate information (Woolcott & Shiri, 2023). Additionally, due to advancements in software development, there has been a tremendous increase in the construction of institutional repositories (IRs) at academic institutions worldwide. The necessity or desire to establish a repository for the academic work of a certain university or college, along with shifts in methods of intellectual communication, has contributed to the growth in demand for IRs. The proliferation and easy sharing of information, publications, and data have been made possible by electronic communication methods. Adding academic content to an institutional repository (IR) offers a controlled environment for open-access documents, rather than having it available on personal web pages, wikis, or blogs (Campbell-Meier, 2011).

User needs, discoverability, open access, and repository engagement. Organizations must delineate their policies and objectives, safeguard researchers' intellectual property rights, and enhance transparency and marketing for repositories. These actions will enhance researcher satisfaction and, as a result, increase participation in depository research. Organizations must implement effective marketing strategies for these applications to eliminate barriers to repository utilization and promote their adoption (Horthy, 2015). Establishing preservation policies should be the initial step in ensuring effective preservation actions. Established preservation policies should guide strategies for preserving digital repository content and decisions regarding the duration of preservation – short, medium, or long term. The rapid growth of IR content necessitates an examination of the policies established to guide the implementation of digital preservation for such content (Li & Banach, 2011). Academic libraries have advanced in the creation of digital repositories (DIRs) aimed at preserving, managing, and facilitating open access to university digital research. The core principle of Open Access (OA) is to enhance the visibility, accessibility, searchability, and usability of intellectual output for all potential users, which is important to guarantee long-term access to reliable digital information. While numerous researchers assert that open access (OA) positively influences scholarly research, OA platforms, including digital institutional repositories (DIRs), frequently face scepticism, primarily due to their provision of free access to digital research. The question concerns the extent to which digital repositories established in academic libraries can be classified as Trusted Digital Repositories (TDRs) that ensure reliable, long-term access to digital resources (Masenya, 2021).

Digital preservation, standards, and long-term sustainability of institutional repositories. Currently, nearly all documents produced and the results from most research-related projects exist as digital objects. Not all materials need to be preserved indefinitely; however, those possessing scholarly or historical significance should be maintained for future generations. Preserving digital objects presents greater challenges than preserving paper items. Hardware becomes outdated, new software supersedes previous versions, and storage media deteriorate. Recent years have seen substantial advancements in the development of tools and standards for the preservation of digital media, especially within institutional repositories. The predominant standard to date is the Trustworthy Repositories Audit and Certification: Criteria and Checklist (TRAC), which has

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developed into ISO 16363-2012 (Houghton, 2015). Common qualities of an institutional repository (IR) are being digital, community-oriented, institutionally endorsed, robust, permanent, and accessible. Due to these attributes, an institutional repository (IR) is optimal for showcasing and distributing academic work that may not be suitable for peer-reviewed journals or requires compliance with open access (OA) standards. Examples encompass student assignments, conference proceedings, working documents, newsletters, theses, electronic theses and dissertations (ETDs), journals with limited distribution, and digital archiving resources. However, the creation of an IR presents numerous recognized obstacles. Academic institutions encounter challenges in implementing and developing institutional repository systems due to staffing and storage expenses, minimal usage, faculty reluctance to deposit resources, and time limitations (Demetres, Delgado & Wright, 2020).

Results and Discussion

Description. Iraqi Digital Repository is an integrated academic information system in Iraq that specializes in accredited dissertations from Iraqi universities. It provides its services based on several key pillars. The first is the collection, where the repository receives content from Iraqi universities accredited by the Iraqi Ministry of Higher Education. Documentation, the second pillar, involves entering metadata for sources using MARC 21 or similar systems. The third pillar is indexing, where the indexing process is based on the following criteria: author, title, general subject, academic degree, university, and date. The fourth pillar is accessibility, offering direct downloads of university dissertations or providing bibliographic information if the full text is unavailable. Finally, the system offers a search feature that includes multiple interfaces: general, advanced, and subject (<https://iqdr.iq/index?&lang=en>).

Technical structure of the IQDR and its components. The technical architecture of any digital repository is the foundation upon which its functional success and future sustainability are built. Technology not only provides a mechanical framework for storing data but also plays a pivotal role in ensuring access, protection, organization, and ease of use (Leventakou, 2024). For the Iraqi Digital Repository (IQDR), the technical setup includes a mix of up-to-date information systems, databases, and user interfaces that are tailored to fit the Iraqi academic setting and can handle a large number of university theses and dissertations.

Description of the Iraqi Digital Repository (IQDR) website. The IQDR website (<https://iqdr.iq>) features a flexible design structure that incorporates easy-to-use, multi-functional interfaces. The responsive design of the platform ensures its efficient operation across various devices such as computers, phones, and tablets. The website features a main home page along with six additional pages: submission, citation, FAQs, about the repository, contact page, and login. Users can search the repository from the home page by using the title elements, the author's name, and the subject. The home page also contains an advanced search feature. The advanced search functionality allows researchers in the repository to employ Boolean logic operators to connect elements such as title, author's name, supervisor's name, university, academic degree, year, general subject, language, and the university's geographical location within the governorates of Iraq. On the home page of the repository, there are also several separate search tools that can be used to look through the repository. For example, you can search by university, by year, by academic degree, or by general topic.

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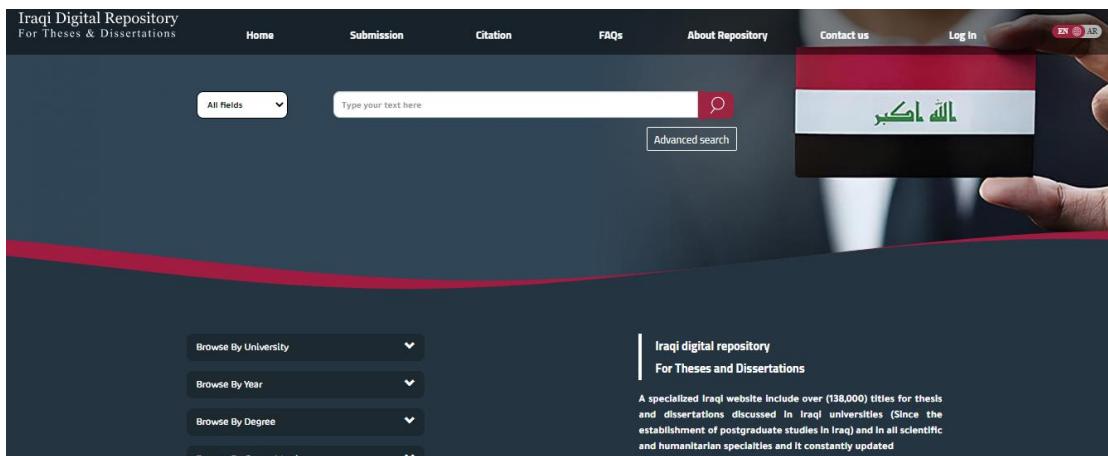


Fig. 1. IQDR homepage

Submission page. This page is for those who want to deposit their thesis in the repository after providing the required information (<https://iqdr.iq/index?send&lang=en>).

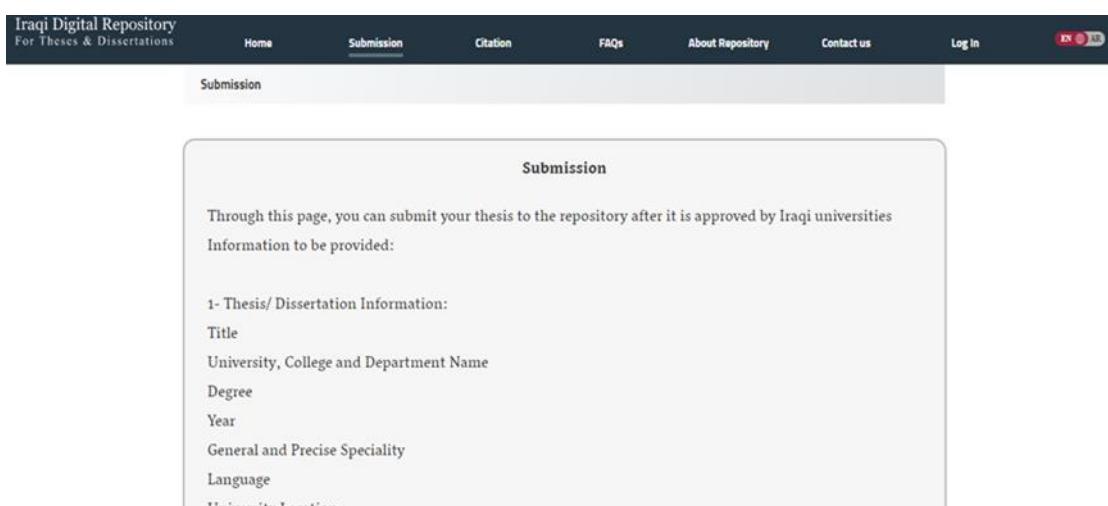


Fig. 2. Submission page

Citation page. Through this service, the person who has deposited his thesis in the repository can verify the authenticity of his thesis or dissertation title and issue a report of the retrieved results. To complete this verification, the individual must enter basic information, including the researcher's name, the title of the thesis or dissertation, keywords, and the precise specialization. There are also additional optional fields, including the email address, the name of the university and college, and the secondary specialization (<https://iqdr.iq/index?citation&lang=en>).

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Through This Service, You Can Search in The Iraqi Digital Repository Databases to Verify the Authenticity of Your Thesis or Dissertation Title, And Issue a Report with The Retrieved Results.

Researcher Name *

Email

Title *

University

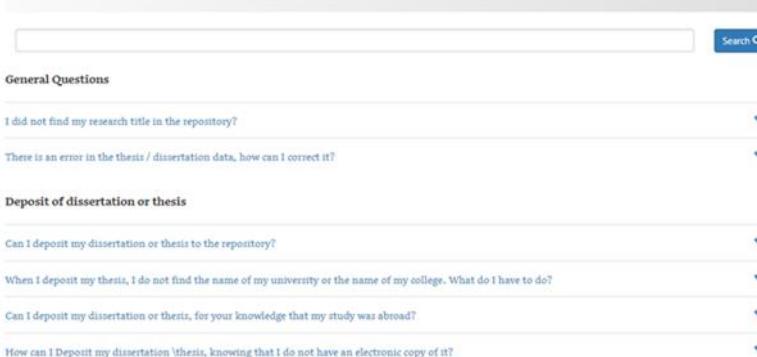
College

Specialty *

Secondary Specialties

Fig. 3. Citation page

FAQs page. Users of the Iraqi Digital Repository frequently ask questions on the Frequently Asked Questions (FAQ) page. This page includes five main sections, each containing several frequently asked questions and their corresponding answers. The five main sections cover topics such as submitting a thesis, accessing theses on the site, general inquiries, communicating with the site administration, and information for libraries and universities(<https://iqdr.iq/index?qa&lang=en>).



General Questions

I did not find my research title in the repository?

There is an error in the thesis / dissertation data, how can I correct it?

Deposit of dissertation or thesis

Can I deposit my dissertation or thesis to the repository?

When I deposit my thesis, I do not find the name of my university or the name of my college. What do I have to do?

Can I deposit my dissertation or thesis, for your knowledge that my study was abroad?

How can I Deposit my dissertation /thesis, knowing that I do not have an electronic copy of it?

Fig. 4. FAQs page

About the repository page. This page discusses the importance of the Iraqi digital repository, the history of its launch, and future plans for its development. The repository's objectives are outlined, along with the various services it offers (<https://iqdr.iq/index?about&lang=en>).

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As we witness the accelerating steps of scientific progress in the world ... the prosperity and rise of nations depends on the amount of care they give to their scientific and educational institutions, as they represent a basic pillar for the consolidation of their scientific approach, and for a prosperous Iraq, motivation and concerted efforts have been come together to build a scientific model that keeps pace with the development in the means of acquiring and developing knowledge, and the intellectual efforts come together, which highlights the scientific position of the country that makes the use of knowledge sources by students more easy.

after launching its trial platform on 21 July, 2019. The features of the project appeared, which took nearly three years to complete after it was prepared (analysis, design and programming) by Iraqi efforts and capabilities with support of the General Secretariat of Al-Abbas holy shrine and direct supervision from the digital information centre of Al-Abbas holy shrine library in cooperation with Iraqi universities. Updates are still ongoing to develop its services.

The idea of the project is abridged by the endeavor to collect theses and doctoral dissertations in all scientific and humanitarian specializations since the establishment of postgraduate studies in Iraqi universities, and to include them in a comprehensive electronic guide, and to be in standard specifications that can be updated, developed and adapted to the international programs, depending on the Iraqi scientific and technical capabilities.

Fig. 5. About the repository page

Contact us page. This page allows people who want to communicate with the warehouse administration to ask questions or inquiries, and it is also a means of communication with the central libraries of Iraqi public universities(<https://iqdr.iq/index?contact&lang=en>).

Fig. 6. Contact us page

Log in page. This page allows users to register for the repository in order to access the full text of the resources. If the user does not have a login account, they must create a new account according to specific instructions (<https://iqdr.iq/index?login&lang=en>).

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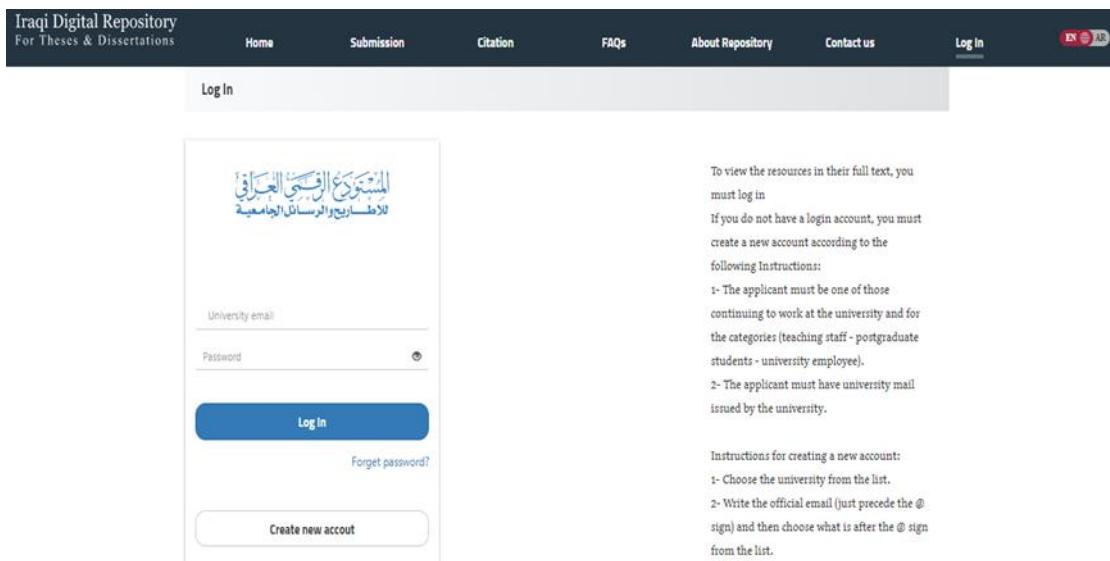


Fig. 7. Log in page

Analysis

Content management system (CMS) in the Iraqi Digital Repository. IQDR relies on a custom or modified content management system (CMS) specifically designed to meet academic archiving requirements. The website does not provide precise details about the system, but an analysis of its structure indicates that it integrates a back-end database (mostly MySQL or PostgreSQL) with display systems built into PHP or ASP.NET. The CMS also includes an administrative control panel for controlling the addition, modification, and deletion of theses. It also supports uploading attachments (PDF files, images, and documents) and updating their metadata. IQDR's CMS is multilingual (Arabic-English), offers advanced filtering, and allows the flexibility to link theses to their authors, universities, and supervising professors.

Search and exploration tools. One of IQDR's most notable strengths is its search tools, which include a general search engine located on the homepage that allows for keyword entry and returns results in seconds. The repository also includes an advanced search feature that allows precise criteria such as university, student name, supervisor name, thesis title, college or department, keywords, and thesis type (master's or doctoral). The repository also features a subject classification system that allows theses to be browsed according to academic classifications, facilitating subject-based access to content. Practical experience with the search interface shows it to be efficient and fast, returning relatively accurate results, although support for voice or automatic search is currently limited. (<https://iqdr.iq/index?lang=en>).

Digital deposit mechanism. One of the most important features of digital repositories is "self-deposit," or deposit through an official intermediary. IQDR relies on an institutional model, whereby each central university library submits theses to IQDR after review. The upload is done via a dedicated administrative interface or a standardized form. Each message must include the following information: full title, student and supervisor names, defence date, a PDF copy of the thesis, an abstract, and keywords. Theses are subject to technical (not scientific) review before publication to ensure formatting and data integrity (<https://iqdr.iq/index?send>).

Security and privacy structure. IQDR attaches great importance to privacy and copyright issues. Such attention is evident in the fact that some messages cannot be downloaded directly without logging in, and some theses display only bibliographic information without text. The

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repository also allows users to contact the site to inquire about downloading content (<https://iqdr.iq/index?contact&lang=en>). The repository uses HTTPS to secure the connection, which enhances its security. Despite these precautions, the site does not detail its copyright policy or the extent of the license available for reusing theses, for example, a CC license (<https://iqdr.iq/index?about&lang=en>).

Networking and integration. An important element of modern digital repositories is their ability to integrate with other systems, such as Google Scholar to enable global indexing of academic content, ORCID to link a researcher's publications to their digital identifier, and DOI to provide a permanent identifier for each thesis. IQDR currently shows no clear indications of full integration with these systems, a gap that should be addressed in the future to expand academic dissemination and citation.

User support and interaction. One of the technical support tools that the site provides to users is a form for direct contact with the warehouse management. In addition, the site provides a guide in PDF format for using the search tools in the warehouse.

Technical challenges. Despite the strength of IQDR's technical infrastructure, it faces challenges, including spelling errors or duplication of some titles or author names, which is an indicator of inconsistent data quality. Furthermore, the absence of links connecting the content to global research platforms limits its dissemination and indicates a lack of global integration. Weak data analysis is also indicated by the lack of dashboard analysis tools that show the most active universities or trending topics.

Technical strengths. On the other hand, IQDR boasts several strengths that make it a unique platform. These include a fast and easy-to-use interface, a high level of comprehensiveness for Iraqi content, excellent organization by universities and colleges, and relatively accurate indexing.

Scientific content, quantitative and specialized distribution of theses in the repository. Academic content represents the core of any academic digital repository. It reflects the volume of knowledge production and expresses scientific research trends, the priorities of the state, and the academic environment in general. In the case of the Iraqi Digital Repository (IQDR), content analysis provides a precise understanding of the project's comprehensiveness, the disciplines covered, and the geographical and institutional distribution of theses, contributing to assessing its effectiveness as a national knowledge infrastructure. The following is an analysis of the scientific content of the repository in the form of statistical tables, in terms of quantity, specializations, university distribution, types, and language. It is based on direct monitoring of the data available on the repository's website.

1- Quantitative content

Table 1

The quantitative content of the repository is represented in terms of the number of theses and their temporal distribution

Standard	Details
Total number of theses	138.000
Time period	From the 1990s to the present

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After 2003	More than 70% of theses
After 2016	The steady annual increase due to the digital transformation of the Ministry of Higher Education

2- *Distribution by academic degree*

Table 2

Percentages of master's theses and PhD dissertations in the repository

Thesis Type	Estimated Percentage
Master's theses	Approximately 75%
PhD dissertations	Approximately 25%

3- *Specialized distribution of theses*

Table 3

Percentages of scientific fields related to academic theses and dissertations in the repository

Scope	Estimated Percentage	Examples of Specialization
Humanities and Social Sciences	40-45%	Arabic Language, History, Law, Sharia, Geography
Applied Sciences and Engineering	Approximately 35%	Engineering, Computer Science, Mathematics, Physics, Veterinary Medicine

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Medical and Health Sciences	10-12%	Medicine, Pharmacy, Nursing, Pathology
Management and Economics	About 10%	Business Administration, Economics, Accounting, Information Systems

4- Geographical and institutional distribution (top contributing universities)

Table 4

Percentages of academic theses and dissertations according to the universities that issued them

University	Approximate percentage of theses
University of Baghdad	22%
Al-Mustansiriya University	14%
University of Basra	11%
University of Mosul	10%
University of Kufa	8%
Tikrit University	6%
Other universities	29%

5- Distribution by language

Table 5

Percentages of academic theses and dissertations based on the language in which they were written

Language	Percentage/Description
Arabic	More than 85% of theses

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English	Used in scientific and medical specialties
Kurdish	Rare or absent due to the weak participation of regional universities

6- Content quality assessment

Table 6

Evaluating the bibliographic data of theses and dissertations in the repository

Item	Evaluation/Description
Organization and description	Good, although some data is missing or duplicated.
Abstract and Keywords	The abstract is often present, but the keywords are irregular.
Subject Classification	Poor use of standard classifications such as Dewey or LCSH (Library of Congress Subject Headings).
Availability	The full text is mostly available in PDF format, although it may also be bibliographical only

7- Trending topics

Table 7

Topics trending for theses and dissertations in the repository

Field	Recurring Topics
Law	Criminal Justice, Administrative Corruption, International Humanitarian Law

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Administration	Governance, Higher Education Quality, Transformational Leadership
Computer Science	Cryptography, Artificial Intelligence, Neural Networks
Islamic Sciences	Waqf, Comparative Jurisprudence, Thematic Analysis of the Qur'an

These duplications indicate prevailing research interests but may also reflect a lack of coordination and substantive updating.

8- *Gaps and observations*

Table 8

Observations and gaps are generally identified in theses and dissertations in the repository

Type	Details
Gaps	The near-total absence of private universities, the weakness of Kurdistan's universities, and disparities between universities.
Comments.	Inaccurate titles, duplicate topics, and weak use of international symbols

The digital repository represents a pillar of the knowledge infrastructure in modern academic communities due to its pivotal role in facilitating access to scientific production, motivating researchers, and enhancing knowledge collaboration (Lorenz & Konečný, 2023). In the Iraqi context, the Iraqi Digital Repository for University Theses represents a pioneering step toward digitizing, aggregating, and making knowledge available on a national level. It has become imperative to evaluate the actual impact of this repository on the overall scientific research environment in Iraq, especially considering the educational and research challenges that have accumulated over the past decades. The Iraqi Digital Repository provides multiple features to the Iraqi academic community, as shown below.

Promoting access to knowledge. One of the most prominent roles of the Iraqi Digital Repository is facilitating open access to Iraqi academic theses. This will enable students and researchers at Iraqi universities to quickly access thousands of academic theses and reduce reliance on paper and physical libraries, which are often limited in capacity and service. The Iraqi Digital Repository opens the way for researchers from outside Iraq to view local findings, enhancing the international presence of Iraqi scientific research. The transition from limited access within university libraries to open digital access represents a qualitative shift that saves time, reduces costs, and enhances the efficiency of knowledge exchange (Sharma & Khan, 2024).

Reducing duplication and improving scientific originality. A common problem in higher education systems with limited access to information is the duplication of research and theses on the same topics, sometimes reproducing them in different formats (Anney & Mosha, 2015). The Iraqi digital repository will help reduce this phenomenon by quickly making previous thesis titles available, preventing duplication, and encouraging the creation of new topics. It will also help graduate study committees quickly check for unique titles and assist academic committees in evaluating how new theses compare to what's already in the repository. It will also indirectly contribute to strengthening plagiarism detection tools, especially when the repository is linked to specialized electronic screening systems.

Supporting higher education and motivating researchers. The existence of IQDR may lead to positive outcomes in the Iraqi academic environment, most notably improving the quality of theses. It may make students more aware of the quality of published theses, which may lead to students being able to compare old and new models. The initiative may contribute to raising the standard of academic writing, strengthening the methodological structure of theses, and enhancing the diversity of sources and research methods. Now that these are available online, this may encourage many researchers to develop their theses into research that can be published in peer-reviewed journals. Making theses publicly available promotes transparency and may limit marginal or biased research that does not withstand public scrutiny (Lee & Moher, 2017).

Promoting integration among universities. The repository will contribute to connecting Iraqi universities within a unified knowledge network by providing a shared central database for all public universities. This will enable researchers at a given university to easily access dissertations at other universities, in addition to supporting comparative research between universities, both in terms of topics and research performance. This integration may also help encourage joint research initiatives between researchers from different universities (Yarime et al., 2012).

Impact on educational and research policy. IQDR helps academic leaders by showing how many theses are written in certain subjects and pointing out areas where research is lacking. The Iraqi digital repository can also serve as a means of evaluating university performance in terms of the number and quality of theses, as well as supporting curriculum development projects based on actual student research trends. This impact reflects the repository's transformation from a mere digital archive to a strategic tool for institutional monitoring and improvement (Ball, 2010).

Improving the global visibility of Iraqi scientific research. Although IQDR remains local in its structure, its impact on the global presence of Iraqi knowledge will grow by increasing citation opportunities when the repository is linked to academic search engines such as Google Scholar, enabling researchers to access it freely. Supporting translation initiatives or international research collaborations based on Iraqi theses will also have a significant impact on the global image of Iraqi scientific research. All these factors will contribute to enhancing the academic rankings of Iraqi universities, provided that those responsible for the repository consider global assessments.

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Challenges and future opportunities for the Iraqi digital repository. Despite the tangible progress made by the Iraqi Digital Repository for University Theses (IQDR) in digitizing academic production and facilitating access to it, its future development remains subject to a number of technical, administrative, and cultural challenges. At the same time, the repository holds vast potential and strategic opportunities that can be leveraged to enhance the national research infrastructure and make IQDR an integrated knowledge platform at the local and perhaps regional levels.

Technical challenges. The repository suffers from poor compatibility with international repository standards. Despite having a strong infrastructure, the platform does not connect with important international standards like OAI-PMH, which helps academic search engines find data; DOI, which is used for identifying theses worldwide; and MARC21, which organizes bibliographic information. The absence of these standards limits their visibility in global databases and hinders their ability to export and analyse data on a large scale. The repository's lack of application programming interfaces (APIs), which would enable researchers or institutions to build custom search tools or integrate systems with digital libraries, hinders the realization of the repository's potential (Qazi, 2023).

Administrative and organizational challenges. Not all Iraqi universities follow unified policies for uploading theses to the repository, which leads to the absence of some theses despite their approval in the universities. There is also irregularity in the chronological archiving, in addition to the repetition of some entries or the lack of their data. The repository lacks a clear mechanism to guarantee the copyright of published theses. Also, the license to use the materials is not explicitly mentioned on the site, which opens the door to potential violations in quoting or unauthorized use (Stim, 2022).

Conclusions

The Iraqi Digital Repository for University Theses and Dissertations (IQDR) has demonstrated clear value as a national academic infrastructure that centralizes, preserves, and disseminates graduate research. Yet its full potential remains unrealized due to technical, organizational, and policy-related limitations. Coordinated action at multiple levels is required to transform IQDR into a mature, globally integrated knowledge platform. The IQDR administration, university libraries, and the Ministry of Higher Education and Scientific Research can directly implement the following recommendations. The IQDR administration can work on developing the repository through several key points, which are: Implement OAI-PMH interoperability to allow harvesting by Google Scholar, BASE, CORE, OpenAIRE, and other international scholarly aggregators. Assign DOI identifiers to theses to ensure permanent, citable digital records and improve tracking of usage and citations. Introduce Application Programming Interfaces (APIs) to enable universities, researchers, and external systems to integrate IQDR content into local catalogues or discovery systems. Strengthen metadata standards by fully adopting MARC21, Dublin Core, or LCSH subject headings and enforcing uniform metadata entry. Develop analytics dashboards (e.g., most downloaded theses, active universities, trending topics) to support decision-making and research assessment. Improve advanced search functionality, including faceted search, author disambiguation, and error-tolerant queries. Standardize title, author name, and subject entry to reduce duplicates and inconsistencies in metadata. Enable ORCID integration so authors can link their theses directly to their global researcher profiles. Expand language support to include Kurdish and English interfaces that reflect Iraq's multilingual academic landscape. As for universities and their contribution to developing the repository, they can work on adopting a unified nationwide deposit protocol to ensure consistent submission of theses from all faculties

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and colleges, assign designated repository officers in each central library to oversee data accuracy, metadata standards, and compliance, and implement pre-submission checks to avoid incomplete entries, inconsistent names, and missing abstracts or keywords. As for the role that the Iraqi Ministry of Higher Education and Scientific Research can play in developing the digital repository, it can mandate compulsory deposit of all postgraduate theses and dissertations in IQDR before degree conferral, develop a national repository policy covering standards, digital preservation, copyright, and access level, establish legal frameworks for licensing, and require universities to adopt Creative Commons or similar standardized rights statements.

REFERENCES

Anney, V. N., & Mosha, M. A. (2015). Student's plagiarisms in higher learning institutions in the era of improved internet access: Case study of developing countries. *Journal of Education and Practice*, 6(13), 203-216. Retrieved from <https://www.iiste.org/Journals/index.php/JEP/article/view/22383/23030> (in English)

Asadi, S., Abdullah, R., Yah, Y., & Nazir, S. (2019). Understanding institutional repository in higher learning institutions: A systematic literature review and directions for future research. *IEEE Access*, 7, 35242-35263. doi: <https://doi.org/10.1109/access.2019.2897729> (in English)

Ball, A. (2010). *Preservation and curation in institutional repositories*. Edinburgh, UK: Digital Curation Centre. Retrieved from <https://era.ed.ac.uk/bitstream/handle/1842/3381/Ball%20irpc-report-v1.3.pdf?sequence=1&isAllowed=y> (in English)

Baptista, A. A., & Ferreira, M. (2006). Repository conversations. *Brazilian Journal of Information Science: Research Trends*, 50-65. doi: <https://doi.org/10.36311/1981-1640.2006.v0n0.04.p50> (in English)

Butcher, N. (2015). *A basic guide to open educational resources (OER)*. Paris, France: UNESCO. doi: <https://doi.org/10.56059/11599/36> (in English)

Campbell-Meier, J. (2011). A framework for institutional repository development. In *Advances in library administration and organization* (pp. 151-185). Emerald Group Publishing Limited. doi: [https://doi.org/10.1108/s0732-0671\(2011\)0000030006](https://doi.org/10.1108/s0732-0671(2011)0000030006) (in English)

Chang, S. H. (2003). Institutional repositories: The library's new role. *OCLC Systems & Services: International Digital Library Perspectives*, 19(3), 77-79. doi: <https://doi.org/10.1108/10650750310733199> (in English)

Chen, H. L., & Zhang, Y. (2014). Functionality analysis of an open source repository system: current practices and implications. *The Journal of Academic Librarianship*, 40(6), 558-564. doi: <https://doi.org/10.1016/j.acalib.2014.09.012> (in English)

Cohen, A., Kalimi, S., & Nachmias, R. (2013). The use of digital repositories for enhancing teacher pedagogical performance. *Interdisciplinary Journal of E-Learning and Learning Objects*, 9(1), 201-218. doi: <https://doi.org/10.28945/1926> (in English)

Demetres, M. R., Delgado, D., & Wright, D. N. (2020). The impact of institutional repositories: a systematic review. *Journal of the Medical Library Association*, 108(2), 177. doi: <https://doi.org/10.5195/jmla.2020.856> (in English)

Harthy, M. (2015, December). Digital repositories: Critical analytical study. In *2015 IEEE Seventh International Conference on Intelligent Computing and Information Systems (ICICIS)* (pp. 179-182), IEEE. doi: <https://doi.org/10.1109/intelcis.2015.7397218> (in English)

Houghton, B. M. (2015). Trustworthiness: Self-assessment of an institutional repository against ISO 16363-2012. *D-Lib Magazine*, 21(3/4). doi: <https://doi.org/10.1045/march2015-houghton> (in English)

MANAGEMENT AND MARKETING AT THE UNIVERSITY LIBRARIES

Idiedo, V., Omigie, C., & Ebhomye, L. (2024). A survey of open access institutional repositories in Nigerian university libraries: The current state. *International Journal of Knowledge Content Development & Technology*, 14(1), 53-73. Retrieved from <https://journals.sfu.ca/ijkcdt/index.php/ijkcdt/article/view/847> (in English)

Jain, P. (2011). New trends and future applications/directions of institutional repositories in academic institutions. *Library Review*, 60(2), 125-141. doi: <https://doi.org/10.1108/0024253111113078> (in English)

Kadir, R. A., Dollah, W. A. K. W., Saaid, F. A., & Diljit, S. (2009). Academic digital library's evaluation criteria: User-centered approach. *International Journal of Business, Human and Social Sciences*, 3(6), 1111-1116. doi: <https://doi.org/10.5281/zenodo.1330261> (in English)

Kumah, M. A., & Filson, C. K. (2022). An evaluation of academic institutional repositories in Ghana. *International Journal of Knowledge Content Development & Technology*, 12(1), 67-83. Retrieved from https://scholar.google.com/citations?view_op=view_citation&hl=en&user=q-ctDcUAAAJ&citation_for_view=q-ctDcUAAAJ:Tyk-4Ss8FVUC (in English)

Lee, C. J., & Moher, D. (2017). Promote scientific integrity via journal peer review data. *Science*, 357(6348), 256-257. doi: <https://doi.org/10.1126/science.aan4141> (in English)

Leventakou, F. (2024). *Digital libraries and sustainability: A bibliometric analysis using Web of Science and Scopus*. Retrieved from <http://www.diva-portal.org/smash/record.jsf?pid=diva2%3A1911654&dswid=-6481> (in English)

Li, Y., & Banach, M. (2011). Institutional repositories and digital preservation: Assessing current practices at research libraries. *D-lib Magazine*, 17(5/6), 1-13. doi: <https://doi.org/10.1045/may2011-yuanli> (in English)

Lorenz, M., & Konečný, M. (2023). Digital archives as research infrastructure of the future. *Acta Informatica Pragensia*, 12(2), 327-341. doi: <https://doi.org/10.18267/j.aip.219> (in English)

Lynch, C. A. (2003). Institutional repositories: essential infrastructure for scholarship in the digital age. *portal: Libraries and the Academy*, 3(2), 327-336. doi: <https://doi.org/10.1353/pla.2003.0039> (in English)

Martín-Martín, A., Costas, R., van Leeuwen, T., & López-Cózar, E. D. (2018). Evidence of open access of scientific publications in Google Scholar: A large-scale analysis. *Journal of Informetrics*, 12(3), 819-841. doi: <https://doi.org/10.1016/j.joi.2018.06.012> (in English)

Masenya, T. M. (2021). Trustworthiness of institutional repositories in academic libraries in South Africa. *Library Philosophy and Practice*, 1-35. Retrieved from <https://digitalcommons.unl.edu/libphilprac/5160> (in English)

Mohammed, R. H., & Bkeet, M. S. A. (2024). Scientific chairs of Iraqi universities and their role in achieving sustainable development goals. *Journal of Legal Sciences*, 39(1), 604-643. doi: <https://doi.org/10.35246/1aw52r71> (in English)

Nath, S. S., Sridhara, B., Joshi, C. M., & Kumar, P. (2008). Intellectual property rights: Issues for creation of institutional repository. *DESIDOC Journal of Library & Information Technology*, 28(5), 49-55. doi: <https://doi.org/10.14429/djlit.28.5.216> (in English)

Obiozor-Ekeze, R. N., & Nwafor-Orizu, O. E. (2024). Developing institutional repositories in University libraries in Anambra State: Prospects and challenges. *Information Impact: Journal of Information and Knowledge Management*, 15(2), 86-97. doi: <https://doi.org/10.4314/iijikm.v15i2.7> (in English)

Okon, R., Eleberi, E. L., & Uka, K. K. (2020). A web based digital repository for scholarly publication. *Journal of Software Engineering and Applications*, 13(04), 67. doi: <https://doi.org/10.4236/jsea.2020.134005> (in English)

MANAGEMENT AND MARKETING AT THE UNIVERSITY LIBRARIES

Paragarino, V. R., Barujel, A. G., & Nistal, M. L. (2014, September). Use of repositories of digital educational resources in higher education. In *Proceedings of the XV International Conference on Human Computer Interaction* (pp. 1-6), Universidad de La Laguna. New York, NY: Association for Computing Machinery. doi: <https://doi.org/10.1145/2662253.2662338> (in English)

Park, J. R., & Tosaka, Y. (2010). Metadata creation practices in digital repositories and collections: Schemata, selection criteria, and interoperability. *Information Technology and Libraries*, 29(3), 104-116. doi: <https://doi.org/10.6017/ital.v29i3.3136> (in English)

Peters, M. A., & Roberts, P. (2015). *Virtues of openness: Education, science, and scholarship in the digital age*. New York, NY: Routledge. doi: <https://doi.org/10.4324/9781315631271> (in English)

Picón, G. A. (2024). Perspective of the institutional digital repository in the protection and diffusion of academic activity. *Ciencia Latina Revista Científica Multidisciplinaria*, 8(2), 4210-4227. doi: https://doi.org/10.37811/cl_rcm.v8i2.10831 (in English)

Pinfield, S., Salter, J., Bath, P. A., Hubbard, B., Millington, P., Anders, J. H., & Hussain, A. (2014). Open-access repositories worldwide, 2005–2012: Past growth, current characteristics, and future possibilities. *Journal of the Association for Information Science and Technology*, 65(12), 2404-2421. doi: <https://doi.org/10.1002/asi.23131> (in English)

Qazi, F. (2023). Application Programming Interface (API) security in cloud applications. *EAI Endorsed Transactions on Cloud Systems*, 7(23), e1. doi: <https://doi.org/10.4108/eetc.v7i23.3011> (in English)

Rodrigues, M. E., & Rodrigues, A. M. (2012). Analyzing the performance of an institutional scientific repository—A case study. *LIBER Quarterly: The Journal of the Association of European Research Libraries*, 22(2), 98-117. doi: <https://doi.org/10.18352/lq.8047> (in English)

Sharma, S., & Khan, Q. A. (2024). Embracing the digital shift: A revolution in library technology. In S. Hasan, S. Kumar, S. Panda, A. H. Mir, K. N. Khan, & G. Samdani (Eds.). *Academic libraries: Sustaining excellence through innovation & technology* (pp. 184-190). New Delhi, India: Synergy Books India. Retrieved from <https://surl.li/jqmezp> (in English)

Stim, R. (2022). *Getting permission: Using & licensing copyright-protected materials online & off*. (8th ed.). Nolo. (in English)

Tan, C. N. L. (2016). Enhancing knowledge sharing and research collaboration among academics: the role of knowledge management. *Higher Education*, 71(4), 525-556. doi: <https://doi.org/10.1007/s10734-015-9922-6> (in English)

Tapfuma, M. M., & Hoskins, R. G. (2019). Usage of institutional repositories in Zimbabwe's public universities. *South African Journal of Information Management*, 21(1). doi: <https://doi.org/10.4102/sajim.v21i1.1039> (in English)

Vrana, R. (2011). Digital repositories and the future of preservation and use of scientific knowledge. *Informatologia*, 44(1), 55-62. Retrieved from <https://hrcak.srce.hr/en/66896> (in English)

Womack, R. (2002). Information intermediaries and optimal information distribution. *Library & Information Science Research*, 24(2), 129-155. doi: [https://doi.org/10.1016/S0740-8188\(02\)00109-3](https://doi.org/10.1016/S0740-8188(02)00109-3) (in English)

Woolcott, L., & Shiri, A. (Eds.). (2023). *Discoverability in digital repositories: Systems, perspectives, and user studies*. Taylor & Francis.

Woszczynski, A. B., & Whitman, M. E. (2016). Perspectives on open access opportunities for IS research publication: potential benefits for researchers, educators, and students. *Journal of Information Systems Education*, 27(4), 259-276. Retrieved from <https://jise.org/Volume27/n4/JISEv27n4p259.html> (in English)

Yarime, M., Trencher, G., Mino, T., Scholz, R. W., Olsson, L., Ness, B., ... Rotmans, J. (2012). Establishing sustainability science in higher education institutions: towards an integration of academic development, institutionalization, and stakeholder collaborations. *Sustainability Science*, 7, 101-113. doi: <https://doi.org/10.1007/s11625-012-0157-5> (in English)

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Іракське цифрове сховище університетських дипломних робіт та дисертацій: опис дослідження

Мета. Іракське сховище кваліфікаційних робіт (IQDR) є важливим кроком у зусиллях Іраку з модернізації освіти та завоювання провідних позицій у світовій науковій дослідницькій діяльності. Ця стаття містить детальний огляд сховища, зосереджуючись на його історії, особливостях, впливі на наукові кола та викликах, що стоять перед ним. **Методика.** Стаття розглядає IQDR у ширшому контексті цифрової науки, аналізуючи його технологію, багатомовні опції, функції метаданих та його потенціал як моделі для інших національних академічних репозитаріїв у регіоні. **Результати.** Іракський репозитарій кваліфікаційних робіт (IQDR) є основною електронною колекцією дипломних робіт та дисертацій випускників іракських університетів, яка є необхідною для обміну знаннями, підтримки відкритого доступу та сприяння академічній добродетелі. **Висновки.** Незважаючи на виклики, IQDR має потенціал для значних стратегічних перетворень, якщо ми правильно використаємо наявні можливості. Репозитарій може бути перетворений на національну платформу знань шляхом включення досліджень викладачів та місцевих публікацій, а також шляхом зв'язку з місцевими науковими конференціями та робочими документами.

Ключові слова: цифровий репозитарій; іракський цифровий репозитарій; іракські університети; іракські дисертації; вища освіта в Іраку; інституційний репозитарій; відкритий доступ

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