



Uses of Library Portals and Their Role in Information Accessibility: An evaluation Study of the Sonatrach Library Portal

استخدامات بوابات المكتبات ودورها في إتاحة المعلومات: دراسة تقييمية لبوابة مكتبة مؤسسة سونطراش

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Article abstract:

Library portals are one of the mechanisms developed to support open access practices, particularly by improving reach to full-text materials. This study sheds light on functional role of these portals in widening access to information by relying on an evaluation approach. The aim is to clarify how such platforms contribute to facilitating information retrieval. A structured evaluation grid is applied as a data collection tool, standard in information system assessments, allowing for a focused analysis of a specific portal taken here as the representative model. The study concludes that the examined portal offering a set of diversified services.

Key words : portal ; library portal ; evaluation ; information accessibility

ملخص المقال:

تعتبر بوابات المكتبات تقنية من تقنيات البحث التي تشجع على حركة الوصول الحر للمعلومات وإتاحة النفاذ للمعلومة من خلال النص الكامل. تسلط الدراسة الضوء على مكانة ودور بوابات المكتبات في إتاحة المعلومة من خلال دراسة تقييمية. تهدف الدراسة إلى الإشارة إلى دور البوابة في تسهيل النفاذ إلى المعلومة. تستعين الدراسة بشبكة تقييم لوصف كأداة من أدوات جمع المعلومات والتي سوف تساعدنا في عملية تقييم البوابة التي ستركز عليها الدراسة كنموذج. لتستخلص الدراسة في الأخير بأن البوابة التي تمت الإشارة إليها في الدراسة تخضع لمعايير إنشاء بوابة من خلال إتاحة خدمات متنوعة.

كلمات مفتاحية: البوابة؛ بوابة المكتبات؛ تقييم؛ إتاحة المعلومة.

Introduction

Portals have become one of the most significant ICT tools for structured access to documents and information. They arose from users' need for a unified access point that spares them the inefficiency of navigating across multiple unrelated sites. Library portals fall under the broader category of electronic gateways. What distinguishes them is their ability to provide information in various formats and support interaction with multiple resource environments, including library systems and diverse databases. Users can also search through directories and full-text indexes.

Their value lies in the combination of functions that are both archival and communicative. On one side, they centralize diverse documentary content. On the other, they operate as interactive communication technologies. This paper first considers the general role and services of library portals; it then focuses specifically on the Sonatrach Library Portal, assessed using a structured evaluation grid. This tool helps determine whether the institution's portal aligns with professional standards in portal design.

Problem Statement:

Portals are now considered among the most vital digital resources supporting both access and retrieval of information. Whether general-purpose gateways that are often referred to as electronic portals, or specialized institutional ones like university or government portals which core function remains similar: to centralize access and streamline user interaction. In recent years, library portals have emerged as a hybrid technology. On one hand, they function as digital repositories that store and facilitate retrieval of documents. On the other, they enable communication and interaction among institutional members, while also enhancing user engagement with the organization.

Against this backdrop, a central research question arises: How do library portals contribute to information access and retrieval?

To explore this question, the study addresses several related sub-questions:

- Based on the evaluation grid, what are the key standards used in designing documentary portals?
- Does the Sonatrach Library Portal meet established criteria for searchability and navigability?
- Is there a connection between the portal and technological watch practices?

Research Hypotheses:

To respond to the research problem and its sub-questions, the following hypotheses are proposed:

- Library portals contribute to access and retrieval through their offered services.
- The institutional portal conforms to core documentary portal standards.
- There is a link between the portal and technological watch standards, especially in its use of selective information dissemination tools (e.g., abstract alert systems).

Research Objectives:

This research paper aims to:

- Pinpoint the relationship between information institutions and portals.
- Identify the principal criteria in documentary portal development.
- Highlight the role of portals in information accessibility.
- Evaluate the Sonatrach Library Portal as a case study.

Research Significance:

This study draws its importance from the role portals play in giving structured access to information and improving its reach. It also aligns with the relevance of webometric approaches which are methods increasingly used to assess electronic resources.

Research Methodology:

The method reflects the nature of the subject with the aim to describe it and interpret it. Since the portal is digital and functional, the evaluation framework is suitable. The study looks at how the Sonatrach Library Portal operates by considering both its search tools and its browsing structure.

Data Gathering Tools:

Three tools were used:

- Existing literature on documentary portals, reviewed to anchor the study.
- Observation, applied to examine the content and structure of the Sonatrach portal.
- An evaluation grid, based on multiple criteria, used to assess the portal's setup (see zeb site. <https://bibliotheque.ichec.be/utiliser-des-outils-documentaires/les-etapes-a-suivre/evaluer-la-qualite-et-la-pertinence-des-sources>).

1. Conceptual Definitions

1.1 Electronic portal:

A web access point aggregating services, tools, and content.

1.2 Documentary portal:

A digital platform that hosts multiple documents, indexed and made available through various services.

1.3 Accessibility:

The ability to search, reach, and use information without major technical or physical hindrances.

1.4 Evaluation grid:

A criteria-based tool for analyzing digital resources by identifying what works and what needs to improve.

2. Library Portals

2.1 Overview of the Digital Portal:

2.1.1 Conceptual Definition:

Khalid Abduh Al-Sarayrah, in *Al-Kafi Dictionary of Library and Information Science Terminology*, defines a digital portal as the integration of hardware and software components that connect heterogeneous computer networks—differing in type, communication protocols, and structure. (Al-Sarayrah, 2010, p. 50)

Similarly, in *The Encyclopedic Dictionary of Information Technology and the Internet*, Amer Ibrahim Al-Qandilaji defines the portal as a connective interface between dissimilar networks, each distinct in content and design. (Al-Qandilaji, 2010, p. 266)

Building on these definitions one can say that a portal may be described as a digital interface designed to mediate between the user and information through communication networks. Structurally, portals exhibit a high degree of organization and are regarded as one of the most efficient tools for information retrieval online. They function not only as a central access point but also as a filter, aligning search results with user preferences by integrating search engines or directory systems. By design, they eliminate the need for visiting multiple separate websites. Their content is dynamic and is frequently updated and rich in information.

Among the standard services provided through portals are emails, messaging services, forums, live news updates, weather information on both local and global scales, as well as financial data such

as stock prices and currency rates. Additional services may include sports coverage, digital marketing tools, and interactive mapping functionalities.

2.1.2 Types of Portals:

Portals vary. Some divide them into two broad types:

- ✓ **Horizontal portals:** are designed for general use. Their function is broad and non-specific—they guide users to websites without regard for the content's domain or the type of service offered. These portals provide access to multiple search tools, news aggregators, and reference materials. Many also offer communication features like email or chat.
- ✓ **Vertical portals:** are built around specific sectors or communities. They focus on a single field—offering specialized content and linking users to related disciplines, partner organizations, or even competitors. Some incorporate e-commerce tools tailored to the sector. For instance, while an engineering portal might offer technical news, supplier directories, or professional tools, other portals may revolve around recreational themes, such as football.

Moreover, other categories have emerged based on function or audience:

- **General-purpose portals:** are intended for the public. They gather broadly useful information and organize it through search engines and index directories and they often include standard services such as email and news feeds.
- **Specialized or category portals:** target specific audiences. Three subtypes are commonly identified:
 - Consumer-oriented specialized portals, which provide general services like online retail.
 - Topic-centered portals, directed at a defined group such as a toy marketplace aimed at parents. (Khalaf, 2014, pp. 190-191)
 - Segmented-specialized portals, which combine a user group and content area with university library portals being a prime example, serving students, researchers, and faculty alike. (Khalaf, 2014, p. 193)
- **Institutional portals:** these portals act as entry points to an organization's digital presence. They may be classified into three sub categories: The first are simple landing pages. The second offer both information and interactive services. The third, in more advanced cases, like intranets or extranets, they become internal platforms linking employees, suppliers, or clients.
- **Meta-portals,** or portals of portals, serve as directories that aggregate and classify other portals. These may:
 - List general search engine gateways (e.g., Viola, Lycos), along with feature comparisons.
 - Organize portals by thematic or alphabetical criteria.
 - Maintain databases of sector-specific portals, such as online directories of academic library gateways sorted by institution.
- **Personal portals:** are user-customized dashboards, such as My Yahoo, providing individualized access to preferred content.
- **Technical portals:** are built for developers. They provide tools for creating or managing portal architectures, as in the case of IBM's WebSphere Portal.
- **Collaborative portals:** serve teams or institutions needing shared access to applications, services, or knowledge bases. These are often integrated into intranet and extranet systems. They support communication, streamline workflows, and have become central to corporate knowledge-sharing strategies, especially for cost and effort reduction.

2.2 Library Portals as Information Retrieval Systems:

A library portal works as a central point. It gives access—structured, consolidated—to different types of information. It combines digital functions: knowledge management, current awareness, search

operations. All of this depends on specific software—used for managing, storing and accessibility. In classification terms, it's part of digital information systems.

Two main types are usually identified. One is the traditional portal which is built on access to library catalogues and internal databases. Users search via standard indexing systems. The other, more recent, is what's often called a next-generation portal. This one uses open-source technologies and search engines. It pulls in external digital content, integrates it, indexes it within the portal system. What makes it different are its interactive features such as comments, tags and hyperlinks. It is also tied to document management and metadata functions. It takes advantage of Web 2.0 capabilities, making the portal more participatory.

2.2.1 Portal Services:

Institutions are increasingly setting up portals for their libraries. These platforms serve two functions: they help manage internal document flows, and they assist users in accessing what they need. The aim is to respond to user demands and improve navigation. Services vary but often include the following:

- **Document search tools:** digital collections, catalogues, digitized materials, search engines, sometimes external resource integration.
- **Library functions:** info on opening hours, loan and return processes.
- **Search help:** guides, search strategies, suggestions.
- **Current awareness + SDI:** the system notifies users about new items related to their interests.
- **News feeds:** events, acquisitions, overdue notices.
- **About the library:** history, ongoing projects, photos, architecture, staff listings. (Definition et fonctionnalités des portails documentaire, s.d.)
- **Multiformat digital content:** access to PDFs, images, audio, multimedia.
- **RSS feeds:** summaries, alerts—these are part of the institution's technological monitoring.
- **Online catalogues and databases:** structured access to bibliographic records.
- **Library services:** online forms, loan requests, registration processes.
- **Search options:** basic keyword search, advanced Boolean search, filters. (Portail documentaire, s.d.)

2.2.2 The Importance of the Library Portal:

Library portals emerged in response to users' need for a tool that merges the functions of both search engines and subject directories. They were built to simplify access across formats by combining the capabilities of document retrieval systems with the flexibility of web search protocols. These systems allow searches across primary materials, structured databases, and unstructured online content at once.

Functionally, the portal acts as a retrieval system that handles multiple resource types. It can process records from library catalogues, metadata sets, bibliographic files, HTML-based webpages, structured data files via Internet protocols (HTTP, FTP), and internally generated content through library software and databases. It also integrates with search directories and full-text indexes. (Sayed, 2009)

This type of platform has gained particular importance because of its added value—both to the institution and to the user. That's why many information organizations now develop portals of their own. Several reasons explain this shift:

- They provide access to varied content: event listings, exhibition updates, information monitoring tools like RSS feeds.
- They serve as institutional interfaces by offering services through embedded tools and web-based features.

- They function as digital research guides, especially useful in navigating document repositories.
- They create interactive spaces by linking users with each other, and also connecting them with institutional systems.
- They offer communication channels that support both external access and internal staff coordination. (Al-Mutham, 2011)

3. The Sonatrach Library Portal

This section focuses on the field study. It describes and evaluates the Sonatrach Library Portal using an evaluation grid (see appendix). This particular model was selected because it offers a structured way to assess any electronic resource.

3.1 The Sonatrach Library Portal:

3.1.1 Overview of the Library:

The portal serves as an informational and cultural space. It was designed to support learning, research, and access to specialized documentation. Its holdings include different types of sources such as standards, professional journals and books, all aligned with the areas relevant to the company's activities. The setup supports multiple uses. On one side, it retains the traditional physical structure (bookshelves); on the other, it integrates digital tools, which are essential for electronic access. This mix allows users to find documents, consult them, and carry out their research with fewer obstacles.

3.1.2 The Sonatrach Library Portal and Its Functions:

Functionally, the platform is a digital repository. It stores, organizes, and manages both born-digital and digitized resources. What it does—effectively—is control the flow of internal documents. This falls under what's usually termed electronic document management. Users log in through the intranet. Each has a unique username and password.

The portal has been in place since 2006. It consists of two main access zones:

- Personal space, reserved for each employee and it is tied to individual credentials.
- Public space, open to all staff. This area gives access to general services and shared resources, including updates to the document base.

Among the main services:

- Lending and return of books and weekly updates of journal content.
- Tools to search for books, standards, and journal articles.
- Support for communication between employees.
- Acts as a daily-use tool in several work contexts.

3.2 Evaluating the Sonatrach Library Portal:

3.2.1 Evaluation Grid: Initial Presentation:

The grid includes three core dimensions (see appendix). Each is broken down into finer criteria to help parse the portal's content and functionality in a more grounded way. The three sections are as follows:

- **Reliability:** This criterion draws attention to three core indicators: the typology of the document, the date it was last updated or produced, and whether there is clear attribution of authorship or institutional responsibility. These elements are used to present the portal.
- **Relevance:** Composed of two sub-criteria: the first assesses whether the portal's content is related to the subject matter; the second evaluates its suitability for the user's academic level; this criterion aims to determine how easily users can locate relevant content.

- **Quality:** This criterion comprises three sub-criteria as well: site organization, navigation, and visual presentation (layout and design). It also includes the identification and referencing of sources. The goal is to assess the overall quality and coherence of the portal's content. Before starting the evaluation, it must be noted that the portal was evaluated based on three samples: personal evaluation, archival evaluation, and a specialist in information technology.

3.2.2 Portal Evaluation:

- **Evaluation of Section One: Reliability Document Type:** The material evaluated here is the institutional library portal of Sonatrach, a national economic enterprise. URL Structure: The web address does not include a typical domain name but instead appears under the extension doc.avl.dz. This likely reflects its restricted status—it is not publicly indexed and requires authorized login (username and password) to access.
- **Responsibility Attribution:** The homepage provides institutional identification along with contact details, which makes it possible to determine authorship and administrative ownership. The screenshot below shows the portal's interface.

Figure 01: Interface of the Sonatrach Library Portal



Source: (Portal homepage , s.d.)

- **Date of Document:** No creation date or update history is visible on the homepage. When questioned, the IT specialist explained that the system used to develop the portal does not support automatic display of timestamps. Based on the compiled results—percentages and graphical data—two main findings emerged. The most selected rating was “Very Good”, particularly for the nature of the document and the clear attribution of responsibility. Evaluator responses showed high consistency on these two points; However, the second most frequent rating was “Insufficient”, revealing the lack of visible creation or update dates on the portal which was pointed by most evaluators as a structural shortcoming.

3.2.3 Evaluation of Section Two: Relevance:

- **Topical Relevance:** The portal does respond to research needs. It offers several search options—advanced, thematic, and targeted searches for books and standards. It also allows access to full-text documents, which improves relevance for content-based queries.
- **User Level Fit:** In terms of usability, the portal matches the expected user level. Navigation and search posed no difficulty during testing.

Responses were split almost evenly between “Very Good” and “Good”, which suggests that users generally perceived the portal as effective in meeting their information needs. The portal offers multiple ways to formulate queries—whether through advanced search, subject-based queries, or direct lookup of books and standards. It also includes a usage guide, which makes the experience smoother and helps streamline the retrieval process.

3.2.4 Evaluation of Section Three: Quality:

Site Structure and Navigation: The portal includes an internal search engine and a site index. All internal links were active and functional at the time of assessment.

- **Visual Presentation:** Overall, the interface design and graphics are satisfactory. Nothing obstructs usability, and the visual layer is clear.
- **Resource Indicators:** This sub-criterion involves checking whether the portal includes bibliographic references or external links. In this case, both were found to be entirely absent.

According to evaluator responses, “Good” was the most selected rating, followed by “Very Good”, with “Insufficient” in third. The differences between these scores were minor which suggests a relatively balanced perception of the portal’s overall quality. However, the lower scores concentrated around the lack of external references or bibliographic indicators which, in turn, signals a need to reassess the portal’s treatment of external resource integration, which appears underdeveloped or inconsistent.

3.2.5 Overall Evaluation Across the Three Sections:

Overall, the results show that “Very Good” received the highest percentage, followed by “Good”, with “Insufficient” ranking last. The results suggest that the portal performs reasonably well. Most evaluators leaned toward the higher end of the scale. Still, the lack of external resource links came up more than once. That gap makes the platform feel somewhat closed, at least in terms of bibliographic transparency.

As a tool, the portal plays a practical role. It brings together services and materials related to the institution’s technical focus. The content variety is there, and so is the functionality. But a few areas—especially linking and metadata—would benefit from revision.

Conclusion:

Library portals are research tools that were built to make access easier—both to documents and to structured content. The portal offers advanced search, thematic retrieval, and document availability.

The portal under review plays a significant role in facilitating both access and retrieval of specialized content. In that sense, the first hypothesis is confirmed.

The portal also functions as a front-facing interface. It reflects what the institutional library offers through a set of technical tools and features. It can be seen as a search guide, helping users navigate the digital document environment. This supports the second hypothesis as well.

Moreover, it provides communication tools that assist users in locating information and also enhances internal communication among staff. Additionally, it acts as a collaborative environment—a space for information exchange and updates—using tools such as RSS feeds, thus, the third hypothesis holds up. The portal doesn’t just share static content. It uses alert systems—RSS feeds, notifications—to deliver updates. That’s a form of selective information dissemination, and it’s active.



Portals like this one are not just content hubs. They shape how people interact with digital knowledge. They also shape expectations—especially inside institutions where document access is part of daily workflow. Over time, this structure helps build habits around digital use. That's not trivial—it supports what we might call a digital culture.

And finally, the hope is that this study

will serve as a starting point for further research on library portals—research that could approach the topic from different angles, especially those connected to webometric analysis. There is also room to reconsider the role and skillset of the human actor within these digital environments. It's equally important to address, without hesitation, the question of how digital tools can be integrated into the daily practices of

library work—without fear, and with intent.

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Appendices

Evaluation Grid

Grille d'évaluation des ressources Internet			
Critères	Comment faire?	À compléter	Évaluation
FIABILITE			
Nature du document site/page Internet portail blog forum...	- Analyser l'adresse URL nom de domaine + extension (.gouv, .ac-, .edu...) - Accéder à la page d'accueil		TB B Insuff.
Mention de responsabilité (auteur ou propriétaire)	- Chercher la rubrique type « qui sommes-nous? » - Identifier s'il s'agit d'une personne physique ou un organisme? - Repérer le contact possible?		TB B Insuff.
Date	- Vérifier la date de création - Vérifier les mises à jour		TB B Insuff
Est-ce que le document est fiable ? Si non, je dois rechercher d'autres documents Si oui, je dois poursuivre l'évaluation de ce document			
PERTINENCE			
Relation avec le sujet	S'interroger : - Est-ce que le document répond à la question posée ? - Est-ce que la date du document est en adéquation avec mon sujet ?		TB B Insuff.
Relation avec mon niveau	S'interroger : Est-ce que les informations sont adaptées à mon niveau ?		TB B Insuff.
Est-ce que le document est pertinent ? Si non, je dois rechercher d'autres documents Si oui, je dois poursuivre l'évaluation de ce document			
QUALITE			
Organisation du site / navigation	Repérer : - présence d'un menu, sommaire - hyperliens internes actifs... - moteur de recherche interne		TB B Insuff
Lisibilité et charte graphique	Observer : - couleurs - typographie - illustrations... - présence de publicités		TB B Insuff
Indication de ressources	Identifier : - bibliographie - liens externes		TB B Insuff
Est-ce que la qualité de ce document me convient ? oui non			
Est-ce que je valide et j'utilise ce document ? Si non, je dois rechercher d'autres documents Si oui, je note les références bibliographiques			