

Original Article

Problems and Prospects of Online Databases with Special Reference to Usage in Research

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Abstract

Researchers need to use online databases because these databases enable them to access numerous academic resources needed for their research work. Academic institutions use online databases for their literature review, data collection, citation tracking, and interdisciplinary research needs because digital technology has developed rapidly. Researchers face multiple challenges, which include high subscription costs, digital access problems, excessive information, inadequate information literacy skills, and doubts about data authenticity and trustworthiness. Research output quality suffers because research materials require special access procedures, which make research work more challenging. The research paper investigates the primary challenges that researchers encounter from online database systems while assessing how these systems will develop to increase academic productivity and assist knowledge distribution. Research barriers that exist today can be eliminated through the combined efforts of open access initiatives, artificial intelligence, cloud computing, and advanced search technologies. The study found that online databases have specific restrictions that organizations can overcome through strategic policy development, institutional financial support, and user education programs. Online databases create new opportunities for research because they enable researchers to work together while providing equitable access to academic resources throughout the world.

Keywords: Online Databases, Digital Resources, Research Usage, Information Access, Academic Research, Digital Libraries

Introduction:

The fast development of information and communication technology (ICT) has changed the ways that human beings acquire knowledge, maintain knowledge, and disseminate knowledge to other people. Researchers in earlier times depended almost entirely on printed books and journals, together with physical libraries, to collect research materials. Nowadays, research has undergone a fundamental change because online databases enable researchers to obtain organized scholarly resources through remote access, which provides immediate access to extensive research collections. Online databases serve as fundamental research tools that students and researchers throughout all academic disciplines use to conduct their studies.

The online databases Scopus, Web of Science, PubMed, JSTOR, EBSCO, and Google Scholar allow users to access peer-reviewed journals, conference proceedings, theses and dissertations, reports, datasets, and citation indexes. The digital platforms enable researchers to conduct literature searches more efficiently while extending their research capabilities across different fields through interdisciplinary and collaborative research. Researchers enhance their academic work through advanced search capabilities that enable them to track citations while selecting specific content to examine.

Online databases help researchers through various advantages, yet they create problems that impede research activities. The high subscription charges to access online databases create accessibility issues that affect numerous institutions in developing countries. Successful execution gets obstructed by the combination of poor internet access, together with digital divide issues, absent technical resources, and insufficient knowledge of information systems. Researchers encounter multiple obstacles, which involve managing excessive data, evaluating source reliability, resolving copyright matters, and safeguarding their data.

Researchers need to investigate the complete range of advantages and disadvantages that online databases provide for their research activities. Academic institutions, together with libraries and database providers, and policymakers, need to understand these obstacles and advantages, which will help them create better methods that improve research efficiency, system accessibility, and user experience. The research paper examines major problems present in online databases while showing how these databases will advance innovation, knowledge sharing, and international research collaboration.

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Objectives of the Study

1. To understand the concept and types of online databases used in academic and research institutions.
2. To examine the importance and role of online databases in supporting research activities such as literature review, data collection, citation analysis, and scholarly communication.
3. To identify the major problems faced by researchers while accessing and using online databases, including technical, financial, and informational challenges.
4. To analyze issues related to accessibility, authenticity, and information overload in the use of digital databases.
5. To evaluate the level of awareness and information literacy skills among researchers regarding effective database usage.

Research Methodology:

The study adopts a descriptive research design to examine the problems and prospects of online databases in research usage. Both primary and secondary data were used. Primary data were collected through structured questionnaires distributed to research scholars, faculty members, and postgraduate students. Sample size is 180. Secondary data were gathered from books, journals, and online sources. The collected data were classified, tabulated, and analyzed using percentage analysis and simple statistical tools for interpretation.

Problems and Prospects of Online Databases with Special Reference to Usage in Research:

Online databases function as electronic information systems that user's access through the internet to conduct efficient searches while handling academic resources. The databases feature multiple categories, which include bibliographic databases (Scopus and Web of Science), full-text databases (JSTOR and ScienceDirect), citation databases, subject-specific databases (PubMed), institutional repositories, and open access databases. Digital platforms serve as indispensable academic research resources because they provide scholars with systematic access to vast research materials that encompass all academic disciplines.

Research requirements depend on online databases because these resources help scholars produce better research results while they work more quickly. Researchers can access updated and peer-reviewed literature anytime and from anywhere, which saves them considerable time throughout their work. The system uses advanced search features together with citation tracking and filtering tools for users to discover relevant studies while they research their findings. Online databases enable researchers to study multiple fields while they work together with scientists from different countries because they provide access to different knowledge sources and research resources.

Online databases provide users with various research advantages; however, users face multiple difficulties when they attempt to use these research platforms. High subscription costs restrict access for many institutions, particularly in developing regions, and the digital divide further limits effective utilization. Researchers encounter three main obstacles, which include information overload, technical difficulties, and source verification problems. Online databases will experience continuous development because open access initiatives, artificial intelligence and cloud-based storage systems, and improved user interfaces will simplify research work while making it easier for home-based researchers to access reliable research resources.

Analysis and Interpretation:

Table 1: Distribution of Respondents by Category

Sr. No.	Category of Respondents	Frequency (f)	Percentage (%)
1	Research Scholars	79	43.89%
2	Faculty Members	51	28.33%
3	Postgraduate Students	50	27.78%
	Total	180	100%

Table 2: Gender-wise Distribution of Respondents

Sr. No.	Gender	Frequency (f)	Percentage (%)
1	Male	91	50.56%
2	Female	89	49.44%
	Total	180	100%

Table 3: Mode of Questionnaire Distribution

Sr. No.	Mode	Frequency (f)	Percentage (%)
1	Online	113	62.78%
2	Offline	67	37.22%
	Total	180	100%

Table 4: Data Analysis Methods Used

Sr. No.	Method	Frequency (f)	Percentage (%)
1	Percentage Analysis	95	52.78%
2	Tabulation	85	47.22%
	Total	180	100%

Finding:

Table 1 shows that out of 180 respondents, the majority were research scholars (79; 43.89%), followed by faculty members (51; 28.33%) and postgraduate students (50; 27.78%). Online database access users mostly use digital resources for their academic research work because research scholars need these resources more than any other user group. Table 2 reveals that 91 respondents (50.56%) were male and 89 respondents (49.44%) were female. The distribution shows an equal distribution because both male and female study participants took part in the research. The researchers established this gender balance to guarantee that the research findings would show how both male and female researchers view online database usage. Table 3 shows that online distribution methods accounted for 113 questionnaires, which represented 62.78 percent of the total questionnaires, while 67 respondents (37.22 percent) participated through offline methods. The respondents preferred digital communication methods because they could access online platforms, which they already knew how to use. Table 4 shows that percentage analysis was used for 95 responses (52.78%), while tabulation was applied to 85 responses (47.22%). The study employed fundamental statistical techniques to achieve successful data analysis and data comprehension of the collected information. The percentage analysis method presents online database usage patterns in a way that shows clear and understandable results.

Discussion:

The study discovered that 43.89% of participants who used online databases belonged to the group of research scholars. Scholars need to complete their thesis work, which includes a literature review and publication tasks. Digital academic resources provide essential resources that research scholars require for their thesis writing, literature review, and publication work. The research results demonstrate that online database usage is most common among faculty members and postgraduate students because databases enable all academic-level students to access their contents. The research findings show that male and female respondents participated in almost equal numbers, with 50.56 percent of males and 49.44 percent of females participating. The balanced representation proves that online database usage remains unaffected by gender differences because both male and female researchers use digital resources for academic work. The study results gained more reliability because of the research design, which distributed study results between male and female participants. The distribution method used for the questionnaire resulted in 62.78% of respondents selecting online mode because they had experience with digital platforms and technology access. The study investigates online databases, and this research method matches that focus. The research team used percentage analysis and tabulation as their primary statistical methods to organize their data for result presentation. The research results demonstrate that researchers widely use online databases for research purposes, yet successful research depends on both digital access and user understanding and analytical skills.

Conclusion:

Researchers today require access to online databases because these resources have become vital for their research activities and content acquisition. Researchers can quickly access organized collections of academic literature, which enables them to conduct efficient literature reviews and track citations and explore different fields of study. The study shows that research scholars and faculty members, together with postgraduate students, use online databases as their primary academic resource, which shows that these databases serve as essential research tools. The system demonstrates multiple advantages, although its various challenges prevent users from experiencing complete system advantages. The main obstacles experts encounter include high subscription costs as well as digital divide issues and information overload, together with limited information literacy skills and authenticity and copyright concerns. Researchers from developing nations and small academic institutions face these challenges, which restrict their access to top-quality research materials. The current status of online databases shows strong potential for growth in the future. Advanced user interfaces that will be developed in the future will provide users with better access to precise information delivery and improved user experience through artificial intelligence and cloud technology together with research analytics tools and new open access initiatives. Online databases can enhance international research partnerships and knowledge sharing through institutional support and digital literacy programs and new policy developments. Online databases in research will undergo continuous development, which creates essential changes between their current state and future evolution.

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Conflicts of interest

The authors declare that there are no conflicts of interest regarding the publication of this paper

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