Importance of Digital Archives for Academic Users

Nagare Nilesh Vitthalrao

Librarian

M.S.G. Arts, Science & Commerce (Autonomous) College,

Malegaon Camp Dist. Nashik (Maharashtra)

nagare131@gmail.com

Abstract:

Digital archiving is the storage of information in computerized form, which is useful for students for study and researchers for research. This makes information easily available, saves time and does not have the constraint of space. The use of digital tools makes study and research more efficient and convenient. Therefore, digital archiving has become an indispensable tool in the field of modern education and research. This article explains what is digital archiving? what is contained in digital archiving, its features, as well as the importance of digital archiving and gives examples from some selected fields.

Keywords: DSpace, PubMed, WHO Digital Library, Indian National Digital Library (NDLI), INFLIBNET, Bharatavani

Introduction:

In today's information technology era, the nature of acquiring and preserving knowledge is changing rapidly. While traditional tools like libraries, documents and manuscripts are still useful, the impact of digital tools is becoming more effective. Against this backdrop, the importance of digital archiving is more highlighted, especially for students and researchers. Digital archiving is the storage and management of knowledge, information, documents, research articles, books, statistics, etc. in digital form. This makes information easily accessible, saves time and effort, and allows the information to be used from any place, overcoming the limitations of space. For students, having various course-related tools available in digital form together can lead to better planning of time and efficiency. For researchers, an encyclopedia in the form of a digital archive is an invaluable asset – it becomes easier to reference for research work, check previous studies and find new perspectives. Against this backdrop, the need and usefulness of digital archiving will only increase over time. The following writings will provide a more in-depth presentation of this topic. The importance of digital archives for students and researchers is very broad and multifaceted. It has been analysed in detail through the following points:

What is digital archive?

Digital archive is a collection of information stored in digital form. In this, information is stored in digital media like computers, mobiles, servers, clouds etc. Digital archive is a computerized store of information, which is useful for education, research, reference and planning. This information can be in many forms like text, audio, video, images, PDF files, data tables etc. If a university scans the Ph.D. theses of all its postgraduate students

and research students and makes them available on their website in PDF format, then it is a kind of digital archive. When many government departments upload their annual reports in PDF or Excel format on the government website, it is also a kind of digital archive.

What is in a digital archive?

a)   Books, research articles, theses, dissertations

b)   Photos, pictures, maps

c)   Audio-video files (example: speeches, lectures)

d)   Statistics, data sets

e)   Academic and scientific documents

Characteristics of digital archives:

a)   Storable: A large amount of information can be stored in it

b)   Easy Access: Can be used from anywhere with the help of the internet

c)   Security: Can be kept safe using appropriate techniques

d)   Durability: Lasts longer than paper

e)   Searchable: The desired information can be found

Importance of digital archives:

1. Easy availability of information

Digital archives make information easily available with a click. Students can access research articles, scholarly theses, reference books, magazines, research papers, and other educational materials anywhere and anytime. Thus, the reader does not need to go to the library and physically browse through the books, but can get the same information with a click. If a reader searches for information on a topic on Google, he gets thousands of sources and hundreds of theses on Shodhganga, which can be called the ease of information. Easy availability of information is the greatest strength of the digital age, which makes acquiring knowledge easier and faster.

2. Saves time and effort

Traditionally, it takes time to search for information from the library. Digital archiving saves time and makes research more effective. Even in today's era of information and technology, card catalogs are used to search for books in public libraries. Since readers are unaware of its use, they spend a lot of time in it. As a result, a lot of time is spent in searching for information. This also reduces the number of readers. The reader can do the same work with a single click on the digital archive. Therefore, it has become necessary for all libraries to keep information from such digital archives in their libraries, which can save the time and effort of the reader.

3. Long-term storage of data

If information is stored in digital form, it can be used forever, so there is no need to store it again and again. The information can be updated as and when required. Also, this information can be reused and is useful for many generations. Libraries can increase the capacity of storing information according to their capacity, so that as much information as desired can be stored in the digital archive. Nowadays, it has become easier to store information or data on the cloud. Due to this, it has become easier to store data for a long time and use it from anywhere in the world.

4. Centralization of integrated information

Digital archives can bring information from various sources in one place, which makes it easier to conduct comparative studies and analysis. Information collections are used when the reader wants information on other subjects according to a specific subject. For example, a list of theses on many subjects related to a subject is available on Shoshtaganga. This allows the reader or researcher to expand the scope of the study. As a result, it is easier to draw comprehensive and comprehensive conclusions,

5. Useful for collaboration and networking

Researchers can share digital information with each other through online platforms. This makes joint research possible and creates new opportunities. This provides scope for collaborative research. Each other's information resources can be shared. Libraries that have fewer resources can benefit from this and use the resources of others.

6. Promoting new research

While conducting research, one has to study previous research, statistics, theses and refer to it in the current research. This also helps to review previous literature to avoid repeating the same type of research. Also, new ideas can be born from previous studies. That is why digital archives are an inspiring tool.

8. Security and privacy

Many information archives provide the user with the facility to create his own login. Due to which his own profile can be created, there are facilities like password, encryption available to keep all his favorite and necessary materials or information in digital form, which can also keep sensitive information safe.

Contribution of digital archives in some selected fields

Examples of digital archives in some specific fields are given below so that its usefulness can be seen in a better way:

1. In the field of science and technology

Many studies have shown that digital archives are being used extensively in the educational sector. Students in fields like engineering or research and development need to access old research papers, algorithms, programming codes, and simulation data. Digital repositories like IEEE Xplore, ArXiv have a large collection of such documents. This allows students and researchers to develop their projects and research in a better way.

2. Pharmacy/Medicine

Students and doctors doing research in the medical field need information on old clinical trials, case studies, and drug efficacy to study a disease. When they are unable to go to the library and search for information, they can easily access this information using digital tools like PubMed and WHO Digital Library. The WHO Digital Library is the world's leading library on public health. It provides access to knowledge gained from many research studies at WHO as well as other sources of scientific literature produced around the world. WHO also works to provide some information at very low cost.

3. Arts & Humanities

Students in history, language, sociology have to study ancient texts, inscriptions, folklore, old documents. In India, the Indian National Digital Library (NDLI) provides such tools. The Indian National Digital Library is a virtual repository of educational resources, which includes textbooks, articles, videos, audiobooks, lectures, simulations, fiction and other instructional materials for the educational community. This initiative is managed by the Ministry of Education, Government of India, under the National Mission on Education through Information and Communication Technology.

4. Agriculture and Environmental Sciences

Agricultural research requires the study of weather data, soil information, crop production techniques. In India, the Indian Agricultural Research Centre (ICAR) has started a digital archive named Krushikosh, which stores information in the form of books, articles, journals, theses, research papers, etc. on the subjects of agriculture, agricultural technology, botany, soil science, horticulture, trees, plants, etc. and readers can access it with a single click. These include information in PDF, image, text, audio, video formats.

5. Academic Theses and Project Writing

When undergraduate or postgraduate students in any discipline write a thesis, it is necessary to study previous theses. Shodhganga is an excellent Indian digital repository. M.Phil./Ph.D. Research abstracts and theses of various universities in India are stored here. It is maintained by the INFLIBNET Centre, which is an autonomous inter-university centre of the University Grants Commission (UGC) of India. The full text of all the documents presented on Shodhganga is available for reading and downloading by the academic community worldwide. This collection has a collection of more than 5,00,000 theses and 13,000 abstracts.

6. Linguistics and Translation Studies

Since texts, dictionaries, dialect collections in Marathi and other Indian languages are stored in digital format, linguists can do extensive research. Bharatavani is a project in India that aims to deliver knowledge in all languages of India in multimedia (i.e. text, audio, video, images) format through a single portal (website). The portal is comprehensive, dynamic and moderated. Bharatavani Project (BvP), is a knowledge initiative launched by the Ministry of Education (MOE), Government of India. The project aims to create a searchable knowledge repository in all languages of India and their neighbouring languages through an online portal in multimedia (text, audio, video, images) format. The Bharatavani portal will be accessible to all sections of society. The project is being implemented by the Central Institute of Indian Languages, Mysore, Karnataka.

Conclusion:

Digital archives are not just a means of storing information, they are an important medium that accelerates the learning process of students, guides the research process of researchers and contributes to the expansion of knowledge. In every field of study, digital archives are an important means of acquiring knowledge, analyzing it and creating new research. Due to this, today's students not only learn, but also become part of the global knowledge pool. Therefore, libraries need to create or maintain a list of such information archives to save the time and effort of their readers and to make new information available quickly. This will also follow the basic principles of library science.

References:

1. Bastian, J., & Huvila, I. (2016). Digital archives and the changing landscape of scholarly communication. *Journal of Documentation*, 72(4), 636-651. https://doi.org/10.1108/JD-07-2015-0095

2. Cox, R. J. (2016). Managing records as evidence and information. *American Society of Access Professionals*.

3. Duranti, L., & Rogers, C. (2012). Trusting records in the cloud: The creation, management, and preservation of trustworthy digital content. *Archives & Museum Informatics*, 26(3), 243-259. https://doi.org/10.1016/j.asi.2012.05.001

4. Lavoie, B. (2010). "Digital preservation and the role of archives in scholarly communication." *Archival Science*, 10(1), 41-55. https://doi.org/10.1007/s10502-009-9090-4

5. Rieger, O. Y., & Kopp, C. (2014). Digital archives and their importance for research. *Journal of Digital Information*, 15(2). https://doi.org/10.29087/jdi.v15i2.3

6. Smith, M., & Howard, J. (2018). The role of digital archives in supporting open scholarship. *Library & Information Science Research*, 40(3), 155-162. https://doi.org/10.1016/j.lisr.2018.03.001

7. Cox, R. J. (2014). *Understanding digital preservation*. Springer.

8. Lyman, P., & Varian, H. R. (2003). *How much information?* Harvard University Data Privacy Lab. (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=223281)

9. Gilliland, A. J. (2011). *Introduction to archives and records management*. Neal-Schuman Publishers.

10. Schroeder, R. (2018). Digital archives and research data management. *The International Journal of Digital Curation*, 13(2), 88–99. https://doi.org/10.2218/ijdc.v13i2.634

11. Duranti, L., & MacNeil, H. (2016). The concept of provenance in digital archives. *International Journal of Digital Curation*, 11(1), 95–106. https://doi.org/10.2218/ijdc.v11i1.434

12. Thibodeau, P. (2017). Building digital archives for scholarly use: Challenges and opportunities. *Journal of Academic Librarianship*, 43(5), 385-392. https://doi.org/10.1016/j.acalib.2017.06.002

13. Kahn, R. (2010). The importance of digital archives for historical research. *History and Computing*, 28(2), 123–135. https://doi.org/10.3366/hac.2010.0282

14. Puglia, C., & Huvila, I. (2017). Archival science and digital archives: Challenges and perspectives. *Archival Science*, 17(1-2), 1-16. https://doi.org/10.1007/s10502-016-9272-2

15. McKemmish, S., & Upward, F. (2014). Archives and the digital turn. *Archives and Manuscripts*, 42(3), 246-263. https://doi.org/10.1080/01576895.2014.938740