Open Access Repository and Availability of ETDs in Nepal

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Abstract

Most of the research work done around the globe as an academic mandate does not get published. Some of the researchers who publish their work in academic journals are not easily accessible to the general public due to their high subscription costs. Very few of them get published in an open-access repository accessible to all interested. Electronic theses and dissertations (ETDs) are very important to the university students and other researchers because of their academic value. Despite its importance, the archived ETDs in the institutional repository of the universities abroad (western countries) are not accessible to the public. To fulfill this gap in scholarly communication, Nepali universities and some other institutions in Nepal have initiated digital archiving in an open-access medium.

This paper tries to show the situation of digital repositories in Nepal. Ten major digital repositories of universities, research institutions, the United Nations Resource Centre in Nepal, and the digital repositories run by the organisations of Nepal government, as well as non-government organisations, have been selected for this study. They archive a variety of items including books, journal articles, book chapters, ETDs, reports, conference papers, and images while major collections in the university repositories are ETDs. Most of these repositories are open-access.

Keywords: Digital Archives, Electronic Theses and Dissertations (ETD), Institutional Repositories, Open Access

1.   Open Access Repository and Availability of ETDs in Nepal

Much research is being done around the globe as an academic mandate and/or to know the situation on different issues. A lot of development-related research output is produced in Nepal, especially multilateral institutions and some large government and non-government organisations. Though their nature and usefulness to other practitioners and researchers are very high, these reports are not widely distributed (Aryal, 2017).

Sharing knowledge to other scholar competently is crucial for future research throughout the world (Ali, Jan & Amin, 2013). Some of the researchers publish their work in an academic journal while others will either keep them in an institutional repository only accessible throughout their institutions or remain a copy along with them only. Nepali researchers contribute scholarly writings on Nepal as book chapters and as international

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journal articles. However, these works are not generally accessible to researchers in Nepal due to their high price/or subscription cost and/or their unavailability in local repositories. Yet, extensive "grey literature" has become available in recent years in the national and regional libraries and archives as well as through a variety of institutional repositories (Fox, 2021).

Open access solves the issue of inaccessibility and distribution of scholarly writings to wider community due to financial constraints (Ghosh & Das, 2007). However, very few research works get published in an open-access repository to make them accessible to all interested. As part of the academic research, electronic theses and dissertations (ETDs) are archived in an institutional repository of the concerned universities. Though ETDs are very important for the researchers as well as to the students, most of the ETDs are archived in the institutional repositories of foreign universities and commercial databases which are not easily accessible. ETDs of western universities are available online in ProQuest, a commercial database, but students and researchers from developing countries cannot afford to access it.

Publishing in open-access media enables researchers in developing countries to evaluate gaps in their research, gives visibility to their research, and enriching their research capacity nationally (Rajashekar, 2004). But universities and non-profit organisations in developing countries face multiple barriers that hinder the implementation of digital preservation programmes, for example, lack of sufficient budget, lack of policies, lack of trained human resources, lack of adequate technology, and lack of collaboration with the concerned stakeholders (Ahmad, Rafiq & Arif, 2023).

2. Background

Open-access initiatives began all over the world with "the Budapest Open Access Initiative" which "arose from a small meeting convened by the Open Society Institute in Budapest on December 1-2, 2001" (BOAI, 2023). Long after this initiative, Nepal started advocating for open access in 2009 through a workshop "Open Access: Maximizing Research Quality and Impact", organised by Nepal Library and Information Consortium (NeLIC) (Aryal, 2021). Tribhuvan University and some other universities in Nepal have started open access institutional repository, which only store some of the ETDs and other published and unpublished research outputs of their faculties, students, and other scholars. Nepal Library and Information Consortium established a digital repository in 2012 with support from the EIFL Open Access Programme, where researchers can both upload their research work and download others' work (Aryal, 2017).

International Centre for Integrated Mountain Development (ICIMOD) developed its central repository HimalDoc in 2014 to serve as an open-access knowledge portal for a wide range of publications related to climate, socioeconomic and environmental change, and sustainable development in the Hindu Kush Himalayan Region (Jha, 2014).

Open Learning Exchange Nepal (OLE Nepal) initiated the development of E-Pustakalaya in 2008 that specifically catered to school children as it was their organisational goal to promote reading culture among and improve reading skills of children by providing them with age-appropriate reading materials free (OLE Nepal, 2023).
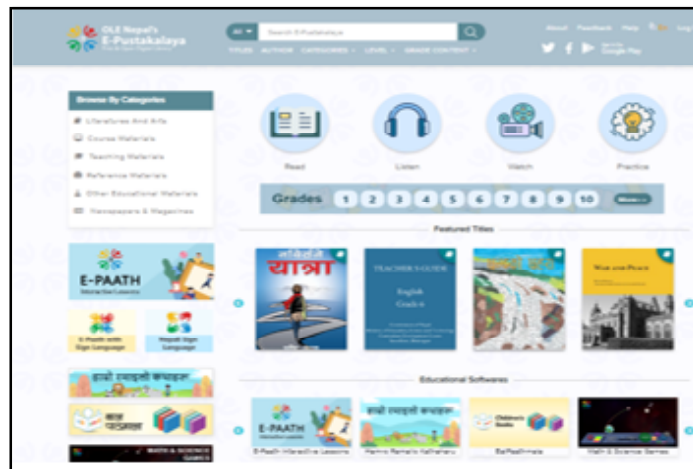
Figure 1: E-Pustakalaya Homepage

There is another open-access initiative Nepal Journals Online (NepJOL) started in Nepal in 2006 and officially launched in 2007 by INASP which is now managed by the Tribhuvan University Central Library and is hosted by Ubiquity Press. The aim of NepJOL is to promote the awareness and use of journals in all disciplines published from Nepal by giving access to their full text or providing tables of contents, and abstracts on the Internet (NepJOL, 2023).

Gradually, many other institutions started to build digital archives in Nepal. Now there are dozens of small- and medium-sized digital repositories present in Nepal. The United Nations Digital Repository in Nepal (UNDRN) is the technologically latest one. UNDRN also utilises Voice Over Search Engine, which allows users to search the content through their voice commands. The application is available on the website as well as on mobile phones. The mobile platforms also work offline (Neupane, 2018).

3. Objectives

The main objective of the research is to assess the situation of Nepal in publishing ETDs and overall open-access repositories, to highlight the importance of ETDs in research and education, to determine the availability of ETDs online in open-access media, and to evaluate the consistency in metadata used for the ETDs in Nepali institutional repositories.

4. Methodology

Some major repositories were selected purposively for the case study. The data were collected and analysed comparatively by evaluation of the repository.

The list of selected repositories for the study is as follows:

1. Archive Nepal

2. Central Open Access Repository

3.   E-Pustakalaya

4.   HimalDoc

5.   Kathmandu University Digital Repository

6.   Nepal Journals Online

7.   Nepal Health Research Council Digital Repository

8.   Nepal National Library Digital Repository

9.   Tribhuvan University Central Library eLibrary

10. United Nations Digital Repository in Nepal

The study focused on the analysis and evaluation of content, metadata and accessibility rather than the technical aspects of the repository.

5.   Results

Ten major institutional repositories, according to their popularity in the country, were selected purposively to answer the research objectives. Data from the institutional repositories of TUCL, KU, NNL NHRC, ICIMOD, NeLIC, UN Nepal, OLE Nepal, and Archive Nepal were collected and analysed for the result.

The collection of the resources in these repositories is shown in the Table 1 below:

Table 1: Name of the Repositories and Their Collection in Types of Items and Number

S.N.	Name of the Repository	Host Institution	Collected Items	Total Collection
1	Archive Nepal	Archive Nepal	Images, Videos, Journal articles, Theses, Books	34,400
2	Central Open Access Repository	Nepal Library and Information Consortium (NeLIC)	Books, Book chapters, Journal articles, Reports, Theses, Conference papers, Maps, Photographs	171
3	E-Pustakalaya	Open Learning Exchange (OLE) Nepal	Books, Newspapers and Magazines, Audios, Videos, Theses	15,182
4	HimalDoc	International Centre for Integrated Mountain Development (ICIMOD)	Books, Book chapters, Journal articles, Reports, Theses, Papers, Proceedings, Newsletters, Outreach materials	36,000
5	KU Digital Repository	Kathmandu University	Theses and Others	170
6	Nepal Journals Online (NepJOL)	TUCL and INASP	Journal articles	35,950

7	NHRC Digital Library	Nepal Health Research Council (NHRC)	Journal articles, Rules and Regulations, Reports, Newspapers, Fact-sheets, Theses, Bibliographies, Proceedings	2,171
8	NNL Digital Resources	Nepal National Library	Theses, Reports, Serials, Children's literature, Sanskrit texts	820
9	TUCL eLibrary	Tribhuvan University	Theses, Reports, Magazines, Syllabuses, Rules and Regulations	18,101
10	UNDRN	United Nations Digital Repository in Nepal	Documents of UN agencies (Books, Reports, Handbooks)	11,120

Most of the institutions except ICIMOD have just started to build institutional repositories and their collections are minimal. ICIMOD, which mainly works in climate and environmental change and focuses on socioeconomic and sustainable development in the Hindu Kush Mountain regions, has a large collection (about 36,000), most of which are its own knowledge products in its central repository HimalDoc that is also accessible to the public. Making these resources and data available through a single interface is crucial to further research, development, and policy-making. HimalDoc stores knowledge crucial to protecting the pulse of the planet. (ICIMOD, 2023).
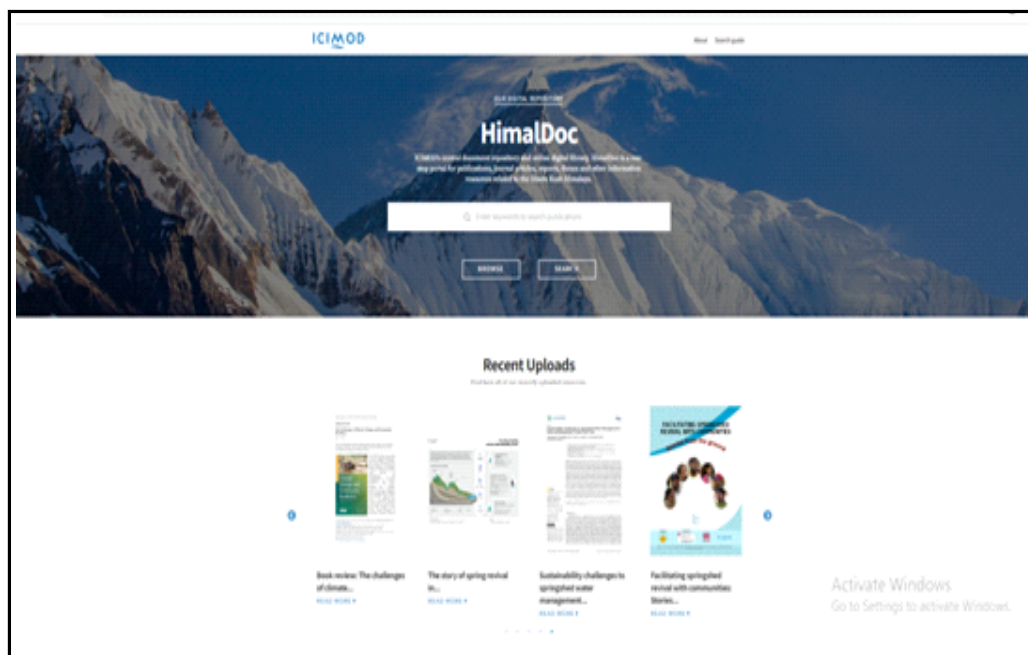

Figure 2: HimalDoc Homepage

The interface and platform of ICIMOD are well-managed and attractive.

The Table 2 below shows the platforms these 10 institutional repositories in the study use and the metadata standards they follow to manage their collections.

Table 2:Platform and Metadata Standards of the Repositories

S.N.	Name of the Repository	Host Institution	Platform for Repository Management	Metadata Standards
1	Archive Nepal	Archive Nepal	Own platform with search engine integrated	NA
2	Central Open Access Repository	Nepal Library and Information Consortium	DSpace	Dublin Core
3	E-Pustakalaya	Open Learning Exchange Nepal	Own platform designed in Python	Dublin Core
4	HimalDoc	International Centre for Integrated Mountain Development	Invenio	JSON
5	KU Digital Repository	Kathmandu University	DSpace	Dublin Core
6	Nepal Journals Online	Tribhuvan University and INASP	OJS	Coalition Publica's Metadata Working Group
7	NHRC Digital Library	Nepal Health Research Council	DSpace	Dublin Core
8	NNL Digital Resources	Nepal National Library	DSpace	Dublin Core
9	TUCL eLibrary	Tribhuvan University	DSpace	Dublin Core
10	UNDRN	United Nations Digital Repository in Nepal	Own platform designed with ASP.NET	MARC

Most of the institutional repositories have been designed using DSpace platform while HimalDoc was designed in Invenio. Some repositories have designed their own platforms.

Dublin Core metadata standards have been used for the metadata of the content in the repository by most of the repositories; some have used MARC while some have not followed any standards but used their own.

Not all the repositories have collected ETDs. Some have collected journal articles only while some have collected journals, reports, and ebooks. Institutional repositories of the universities have collected ETDs along with other publications. It shows that the ETDs are more important in academia rather than in general because writing theses and dissertations is part of their curriculum which is produced both in electronic as well as print versions. The print version is submitted for the requirement of the degree and the electronic version is archived in the repositories. Some repositories have also digitised the older print versions of the theses and dissertations and have archived them.

The collection of ETDs and its proportion in total is shown in Table 3 below.

Table 3: The Proportion of ETDs with Total Collection of the Items in Repositories

S.N.	Name of the Repository	Host Institution	No of ETDs in Their Collection	Total Collection
1	Archive Nepal	Archive Nepal	5	34,400
2	Central Open Access Repository	Nepal Library and Information Consortium	6	171
3	E-Pustakalaya	Open Learning Exchange Nepal	3	15,182
4	HimalDoc	International Centre for Integrated Mountain Development	578	36,000
5	KU Digital Repository	Kathmandu University	166	170
6	Nepal Journals Online	Tribhuvan University and INASP	None	35,950
7	NHRC Digital Library	Nepal Health Research Council	2	2171
8	NNL Digital Resources	Nepal National Library	498	820
9	TUCL eLibrary	Tribhuvan University	17,116	18,101
10	UNDRN	United Nations Digital Repository in Nepal	None	11,120

The ratio of the ETDs in their entire collection can be shown in the chart Figure 3 below:
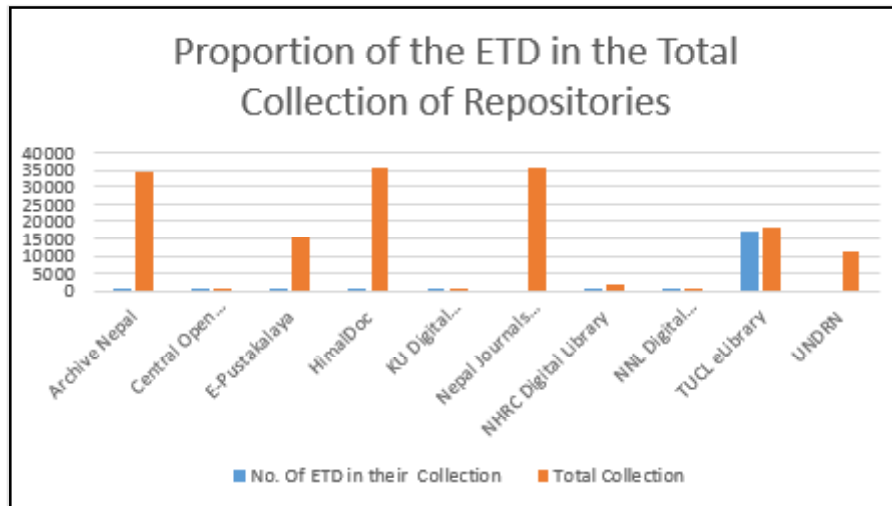

Figure 3: The Proportion of the ETDs with the Total Collection Items

This shows that only the TUCL eLibrary has a significant collection of ETDs (94.6%). Other repositories have very few numbers of ETDs in their collection. While Nepal Journals Online and United Nations Digital Repository in Nepal do not have any ETDs in their collection.

ETDs became the first choice for the content priority for the repository of educational institutes. The choice of ETDs for the repository content is not only in Nepal. Shodhganga, a digital repository hosted by INFLIBNET Centre of the University Grants Commission of India, has a large collection of ETDs because of their importance. That's why it is regarded as "a reservoir of Indian theses".

The advantage of ETDs is that non-text items such as multimedia and hypertext links can be embedded that enable other scholars to easily download the referenced materials. Since theses are usually the major output of many PhD and other scholars, easy availability of their work gives them visibility and acknowledgement, which is why many universities and libraries are digitizing old theses in their collection (Bhat & Mudhol, 2014).

Some of the repositories also contain the documents in non-English text but it is not properly tagged the language of the text and neither is provided the proper metadata in that language. Confederation of Open Access Repositories has formed "COAR Task Force on Supporting Multilingualism and non-English Content in Repositories" in August 2022 to help the management of repository and to make similarity and standard of practice for non-English contents. This task force recommends to include a "language tag in the metadata field that identifies the language of the resource, and a tag that identifies the language of the metadata (even if the resources are in English)" (COAR Task Force, 2022).

Most of the repositories are open access. Some require logging in to download the contents; however, this can be done free of cost.

6. Conclusion

Due to the continuous advocacy of open access by NeLIC and the establishment of the Central Open Access Repository, many institutions such as Tribhuvan University, Nepal National Library, ICIMOD, Nepal Health Research Council started to build open-access repositories.

However, the collection of the ETDs in Nepalese repositories is limited due to a lack of sufficient human resources as well as financial constraints to digitise the print versions. Customisation of open-source software platform DSpace is another challenge. The interface of the UN Digital Repository in Nepal, HimalDoc, and e Pustakalaya are well-designed and are attractive in comparison to other repositories, which may be due to their capacity to hire technically expert designers.

In conclusion, ETDs are very important to research scholars as well as to university students. Every university should have its own institutional repository to host ETDs and other research outputs. The government should play an instrumental role by making open-access policy for the development of higher education in Nepal. The government can establish a national repository to promote ETDs and other scholarly contents.

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