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# **A Case Study on the National Digital Library of India and Exploring Learning Resources for School Education**

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## **Abstract**

The National Digital Library of India (NDLI) was created by the Ministry of Education as a National Mission Project on Education to engage, support, and inspire all learners across the country, regardless of age, demographics, or ability. The National Digital Library of India is a knowledge and information melting pot with a diverse range of lectures, courses, and archives in a variety of media forms organised, collated, and created by India's leading institutions. It is a platform that aims to make electronic learning resources available to all citizens of the country in order to motivate, empower, and encourage them to learn. The purpose of this research is to know the current status of the National Digital Library of India and tried to figure out how it organises its learning resources for school education. It's also important to determine the scope of learning resources and material available in terms of educational level. In addition, examine the subject's coverage, as well as the types of material available to end users in learning resources. The data for this study was gathered from the National Digital Library of India's website as of October 4, 2021. The study explored the learning resources for school education such as Computer Science, Information & General Works (130 items), Philosophy & Psychology (135 items), Social Science (1080 items), Language (397 items), Natural Science and Mathematics (2358), Technology (634), The Arts, Fine & Decorative Arts (146 items), Literature & Rhetoric (1711 items), and History & Geography (632 items) are included in NDLI.

**Keywords:** *National Digital Library of India, e-resources, Learning Resources, School Education.*

## **INTRODUCTION**

Libraries and repositories are repositories of knowledge assets that aid education, research, and humanity's general growth. Libraries are constructed in institutions or centres because information assets used to be available in physical form, primarily on paper, making them locality-bound and access-time constrained. As a result, learners cannot access library resources anywhere and or at any time. Advances in digital technology have made it

feasible to make knowledge resources available as electronic contents in the previous several decades (e-contents). E-contents may now be accessed from anywhere and at any time thanks to the internet. Further, software technology has made e-contents accessible by just a click of a button and organisable in a personalised manner (ParthaPratim Das, 2016). Due to the rise of digital technology and services, the notion of a library is changing. Many digital library projects have been launched in nearly every country, including India. Learners, on the other hand, have yet to fully appreciate the value of digital libraries and portals. Learners must still access e-resources through different websites, and they must master search and retrieval procedures independently, which is a tedious and time-consuming job. Learners frequently lose out on the most sought e-resources as a result of this procedure, regardless of their availability. As a result, technological resources available for educational and scientific growth have only been partially and ineffectively exploited (Bisma Bashir et al. 2019).

The NDLI is an online repository of educational materials that provides a wide range of services to the learning community. It's more than just a repository where one can explore and browse electronic resources. It is supported by the National Mission on Education through Information and Communication Technology (NMEICT), Ministry of Education, New Delhi. Learners can use filtered and federated searching to identify the right material with the least amount of effort and in the shortest amount of time. NDLI offers a service catered to certain user groups, such as prepare exams for university and college students, as well as unemployed people. Other services for scholars and general learners are accessible. The NDLI is intended to hold material in various languages and provide interface support for the top 10 Indian languages. It is intended for students at all academic levels, which include students, researchers and lifelong learners, as well as students from all fields, as well as children with special needs and popular access devices. Its goal is to make it easy for learners to acquire and prepare lessons based on best practises from around the world, as well as for academics to undertake interconnected research from many sources. It is an online repository which includes textbooks, journals, videos, audio books, lectures, simulations, novels, and other types of learning material. The Indian Institute of Technology, Kharagpur, is responsible for its development, operation, and maintenance of NDLI (National Digital Library of India, 2021).

## **POTENTIAL OF NDLI**

- From basic school through graduate school, there is educational material available.
- There are over 60 different types of teaching resources accessible for various disciplines.
- The items are accessible in almost 70 different languages.
- 1.5 lakh writers have contributed to over 15,00,000 pieces.
- The repository brings together data from several Indian institutional repositories.
- A wide range of reading materials, including video lectures, classic books, journal articles, theses, and audio books.
- Institutional registration is also accessible, which is free and simple to complete.
- Search functionality in a single window. Information may be tailored to the educational level of the user.
- Language options, various levels, and personalised service
- Information is available on a 24x7 basis. Users can access the digital resources at anytime and anywhere.
- Metadata is data that allows users to recognise, discover, interpret, and manage material.
- For each item, different and appropriate standards are utilised.
- A mobile phone app for Android is also available.

## **REVIEW OF RELATED LITERATURE**

Geeta Kitturand & KavitaBiradar. (2017), Traditional libraries have gone digital as a result of the advent of digital technology, which is a method of storing, retrieving, and disseminating information. The discussed an overview of digital library preservation, problems and opportunities, as well as tools such as LOCKSS, E-prints, D-space, Depot, Fedora, Greenstone, and others that may be used to build digital libraries and digital library projects in India.

Fayaz Ahmad Loan (2019) is a platform that intends to provide all citizens of the country with digital educational materials in order to encourage, educate, and promote learning. The National Digital Library of India was investigated in the present study in order to better understand its advantages, features, and contents in the international digital world.

Maya Devi, (2019), the article looked at the current state of the National Digital Library of India and tried to figure out how it organises its learning resources. It's also important to determine the scope of learning resources and material available in terms of educational level. In addition, examine the subject's coverage, as well as the types of material and languages available to end users in learning resources.

AdinathGopinathDarandale, (2017),the National Digital Library of India is one such initiative that gives legitimate sources to its users, yet, like with every system, the NDLI has its own set of pros and downsides. The National Digital Library of India (NDL), in this article discussed the concept of a library collection, and NDL's Strengths, Weaknesses, Opportunities, and Threats (SWOT).

Ashkar. K et al. (2020),the researchers used a questionnaire to obtain data from a group of students and scholars who were chosen using a multi-stage random selection approach. Despite the fact that the majority of students are aware of the NDL, its resources and services are not utilised to their full potential. Many of the respondents are still unaware of the instruments available in NDLI and have not taken use of services that are critical to their studies and research. The university library must take the initiative by hosting awareness and orientation events.

## **DEFINITION OF THE KEY TERMS**

### **Case Study**

A case study is a research technique and empirical investigation that examines a phenomena in its natural setting. Case studies are investigations into the reasons of underlying concepts that focus on a particular person, organisation, or event.

### **National Digital Library of India**

The NDLI is an all-digital library that contains metadata about various forms of digital content, such as e-books, articles, films, audios, dissertations, and other educational resources, for users of various educational levels and skills. It has a single-window search feature that allows students to find the correct materials with the least amount of effort and in the shortest amount of time.

### **School Education**

In India, there are four stages of school education: lower elementary (ages 6 to 10), upper primary (ages 11 and 12), high (ages 13 to 15), and higher secondary (17 and 18).

Students must acquire a common curriculum till the completion of high school (with the exception of regional variations in mother tongue).

### **OBJECTIVES**

- To analyse the National Digital Library of India.
- To explore the electronic resources available in the NDLI.
- To identify the organisational sources of the NDLI.
- To find out the subject-wise e-resources available in the NDLI.
- To explore the e-resources of NCERT for school education.
- To explore the types of learning resources for school education in the NDLI.

### **METHOD OF THE STUDY**

The data for this study was gathered from the National Digital Library of India's website as of October 4, 2021.

### **DATA ANALYSIS AND DISCUSSION**

India's National Digital Library has the potential to improve and assist the country's teaching, learning, and research operations. Currently, efforts are being made all around the world to encourage open access. India is likewise attempting to develop an open access system through various means. One of them is NDLI.

### **TYPES OF RESOURCES**

Most digital libraries have e-books, electronic journals, electronic magazines, and other conventional materials in digital form, according to research. However, NDLI includes digital material for conventional goods as well as a variety of other digital content such as applications, simulations, animations, datasets, and other types of digital content that were previously not covered by a single digital library.

**Table 1**

*Types of Resources in the NDLI*

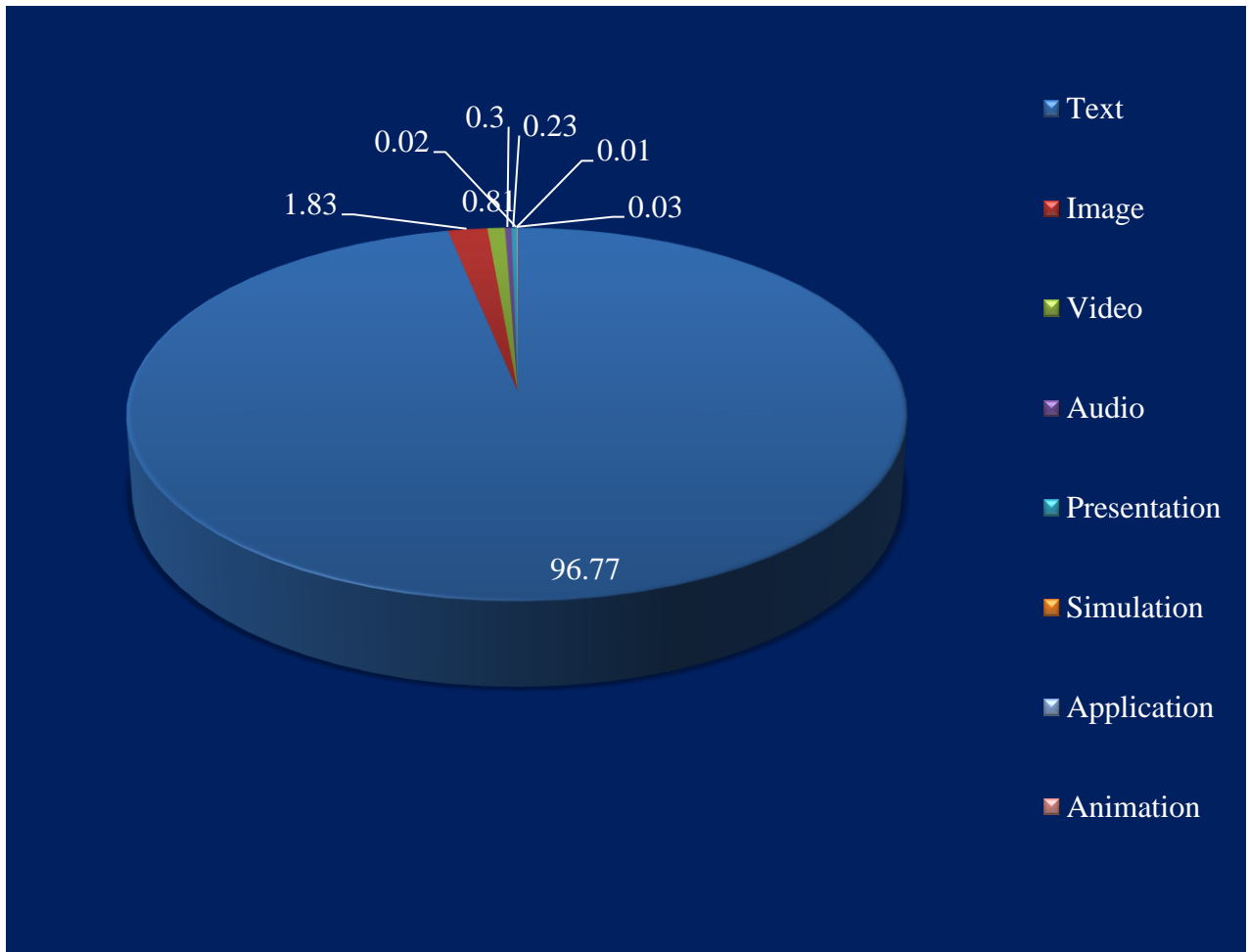
<b>Types of Resources</b>	<b>Items</b>
Text	72,962,996
Image	1,386,958
Video	608,489
Audio	247,629

Presentation	177,815
Simulation	12,504
Application	2,424
Animation	900

(Source: <https://ndl.iitkgp.ac.in/>)

**Figure 1**

*Types of Resources in the NDLI*



The categories of content covered by NDLI, as shown in table 1 and picture 1, are as follows. Text, audio, video, picture, and presentation, Simulation, Application and animation are among the 8 forms of information available at the NDLI. Furthermore, the results reveal that all of the e-resources cover the text material on the top. The five resources were covered by image in the second place. In terms of presentation and video, both were ranked third, but animation was ranked last.

## ORGANIZATIONAL SOURCES IN THE NDLI

**Table 2**

*Sources in the NDLI*

Sources	Items
NPTEL	151,279
NCERT	6235
South Asia Archive	29,969
OECD Library	102,017
Librivox	206672
Krishikosh- Indian National Agricultural Research	138,322
Inflibnet - Shodhganga	269,702
Inflibnet - N-List-Oxford Scholarship Online	771
Satyajit Ray Society	39
World eBook Library	7,526,585
Joint Admission Board of IITs	37
Graduate Aptitude Test in Engineering	183

(Source: <https://ndl.iitkgp.ac.in/>)

NDLI contains organizational resources such as NPTEL, NCERT, South Asia Archive, OECD Library, Librivox, Krishikosh – Indian National Agricultural Research, Inflibnet – N-List-Orford Scholarship Online, Satyajit Ray Society, World eBook Library, Joint Admission Board of IITs, and Graduate Aptitude Test in Engineering. The World eBook Library contains large number of items and ranked first and Joint Admission Board of IITs contains small amount of items ranked last.

## SUBJECT WISE E-RESOURCES IN THE NDLI

**Table 3**

*Subject wise e-resources in the NDLI*

Subject	Items
Computer Science, Information & general works	16,461,225
Philosophy & Psychology	609,281
Religion	227,232
Social Science	6,054,733



Language	191,633
Natural Science and Mathematics	9,806,236
Technology	12,751,564
The arts, fine & decorative arts	1,915,931
Literature & rhetoric	952,812
History & geography	974,724

(Source: <https://ndl.iitkgp.ac.in/>)

Computer Science, Information & General Works (16,461,225), Philosophy & Psychology (609,281), Religion (227,232), Social Science (6,054,733), Language (191,633), Natural Science and Mathematics (9,806,236), Technology (12,751,564), The Arts, Fine & Decorative Arts (1,915,931), Literature & Rhetoric (952,812), and History & Geography (974,724) are included in NDLI. Computer Science, Information, and General Work resource items contain a large number of items, followed by Technology resource items, and Natural Science and Mathematics resource items come in third.

## TYPES OF LEARNING RESOURCES IN THE NDLI

**Table 4**

*Learning Resources in the NDLI*

Learning Resources	Items
Audio Book	222,591
Book Review	79,413
Booklet	5,064
Case Study	186,046
News Paper	7,335,555
Periodical	14,558
Photograph	1,354,699
Poster	9,741
Script	88,285
Activity	55,656
Album	96
Almanac	3,551
Annual Report	32,675

Appendix	1,331
Article	39,763,672
Audio lecture	3,624
Auto Biography	1,826
Bibliography	10,186
Biography	13,743
Book	6,790,010
Broadcast	27,520
Calendar	4,563
Catalogue	57,975
Chapter	33,612
Chart	432
Collection	8,660
Conference Proceedings	154,986

Correspondence	29,020
Data set	242,015
Diagram	167
Diary	9
Directory	1,649
Discussion	28,210
Educational App	1,859
Educational Game	4,433
Email	165
Exercise	26,592
Film	4,702
Gazetteer	2,608
Graph	111
Handout	96
Hand on	7,894
Historical Record	533,531
Integrator	490
Interview	19
Issue	17,558
Journal	216,280
Journal Review	1
Key Table	538
Lab Material	13,241
Law Act	874,958
Law Judgment	870,120
Law Report	6,314
Law Scribe	620
Leaflet	3,198
Lecture Notes	22,582
Lesson Plan	9,586
Letter	185,005
Magazine	23,177

Manual	5,630
Manuscript	7,926
Map	1,757
Media Article	74
Medical Act	2
Model Answers	268
Monograph	18,294
Music	1,838
Music Notation	65,207
News Paper	7,440,414
News letter	10,637
Notes	1,169,884
Notice	79,418
Painting	5,783
Patent	151,830
Plan	9,888
Play	3,350
Podcast	349
Poetry	21,452
Preprint	21,708
Presentation	205,193
Proceedings	133,307
Project Report	5,731
Question	1,627
Question Paper	37,700
Question Set	37,790
Quiz	2,292
Recognition	78
Report	1,228,469
Research Highlights	2,798
Review	54,244
Self-Assessment	6,896

Series	4,190
Simulation	9,043
Solution	50,856
Source Code	105,022
Specimen	1,536
Standard	12,313
Standard	18,987
Story	18,987
Summary	6,962
Survey	2,824
Syllabus	1,829

Synopsis	18,897
Teachers Manual	1,114
Technical Manual	2,655
Technical Report	716,479
Thesis	740,635
Training Manual	765
Transcript	2
Video Lecture	447,963
Visual Artwork	1,018
Web Course	17,316

(Source: <https://ndl.iitkgp.ac.in/>)

## SOURCES OF NCERT RESOURCES FOR SCHOOL EDUCATION

**Table 5**  
**NCERT sources in the NDLI**

Subject category	Items
Computer Science, Information & general works	130
Philosophy & Psychology	135
Social Science	1080
Language	397
Natural Science and Mathematics	2358
Technology	634
The arts, fine & decorative arts	146
Literature & rhetoric	1711
History & geography	632

(Source: <https://ndl.iitkgp.ac.in/>)

Computer Science, Information & General Works (130), Philosophy & Psychology (135), Social Science (1080), Language (397), Natural Science and Mathematics (2358), Technology (634), The Arts, Fine & Decorative Arts (146), Literature & Rhetoric (1711), and History & Geography (632) are included in NDLI.

Figure 2  
NCERT sources in the NDLI

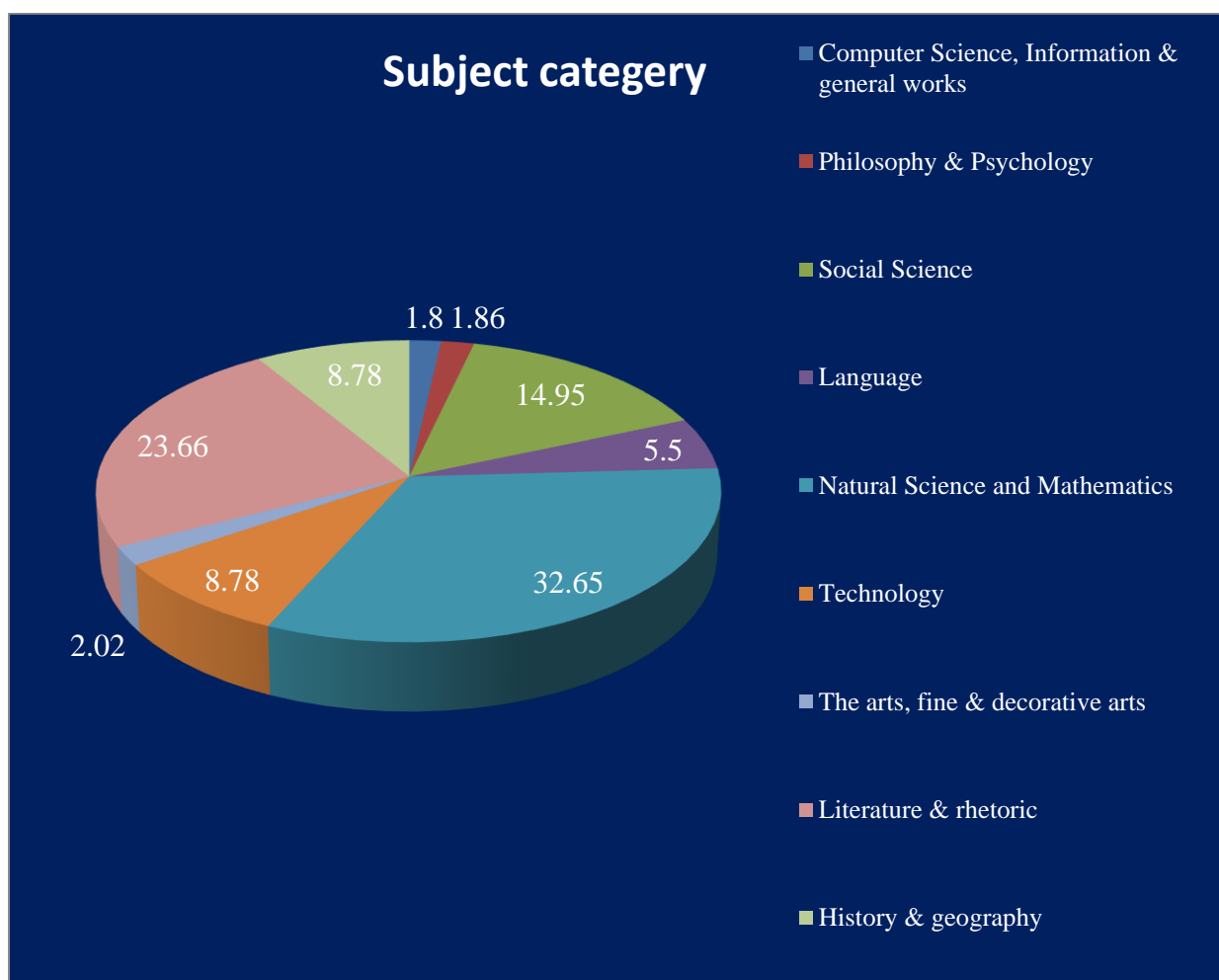


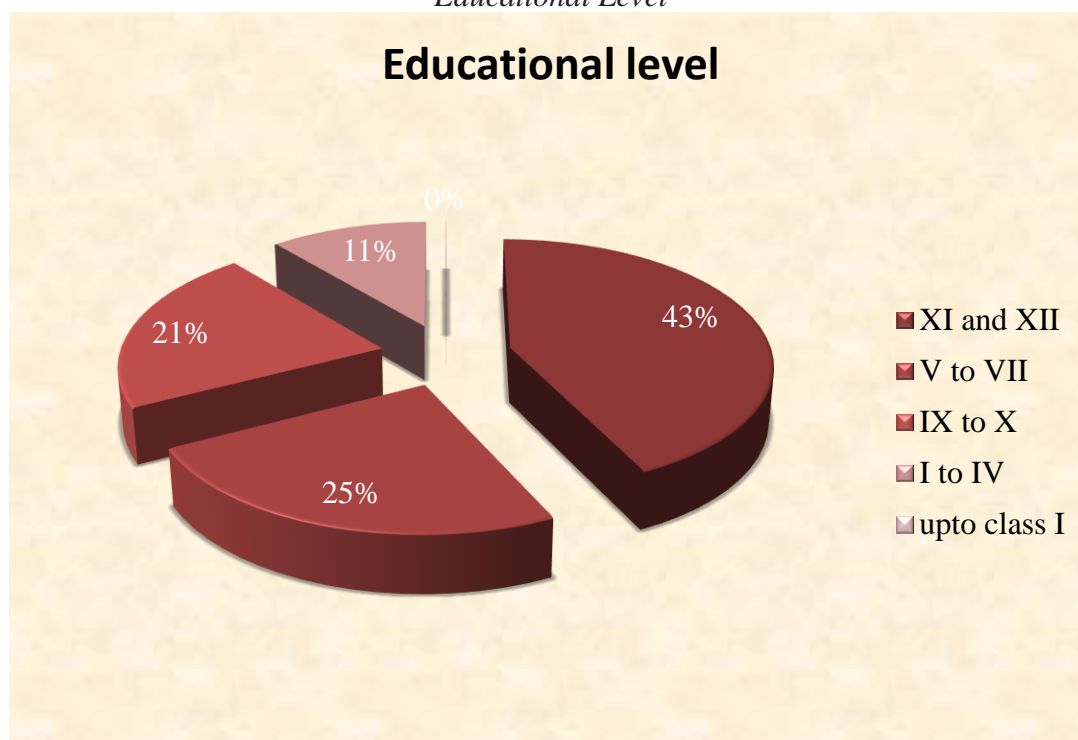
Table 6

Educational level

Educational level	Items
XI and XII	2903
V to VII	1693
IX to X	1484
I to IV	755
Up to class I	3

(Source: <https://ndl.iitkgp.ac.in/>)

**Figure 3**  
*Educational Level*



There are 2903 items of e-resources available for higher secondary students (XI and XII), 1484 items of e-resources for high school students, 1693 items for secondary school students (V to VII), 755 items of e-resources for primary school students and 3 items for lower primary schools.

**Table 7**  
*File Formats*

File Formats	Items
PDF	6230
EPUB	1

The NCERT organisation has 6230 items of e-resources available for school students. There are 6230 items of resources in the portable document format, but there is only one item in EPUB.

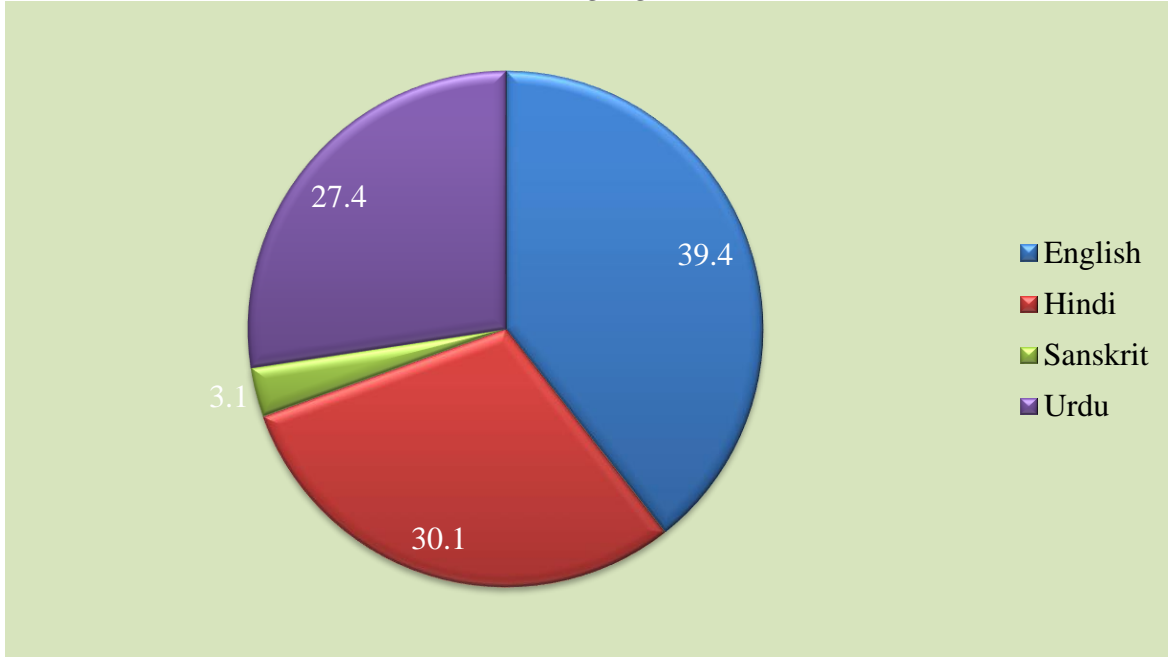
**Table 8**  
*Languages*

Languages	Items
English	2461

Hindi	1880
Sanskrit	200
Urdu	1705

(Source: <https://ndl.iitkgp.ac.in/>)

**Figure 4**  
*Languages*



There are 2461 items of e-resources available in English, 1880 items of e-resources in Hindi, 200 items in Sanskrit, 1705 items of e-resources available in Urdu.

**Table 9**

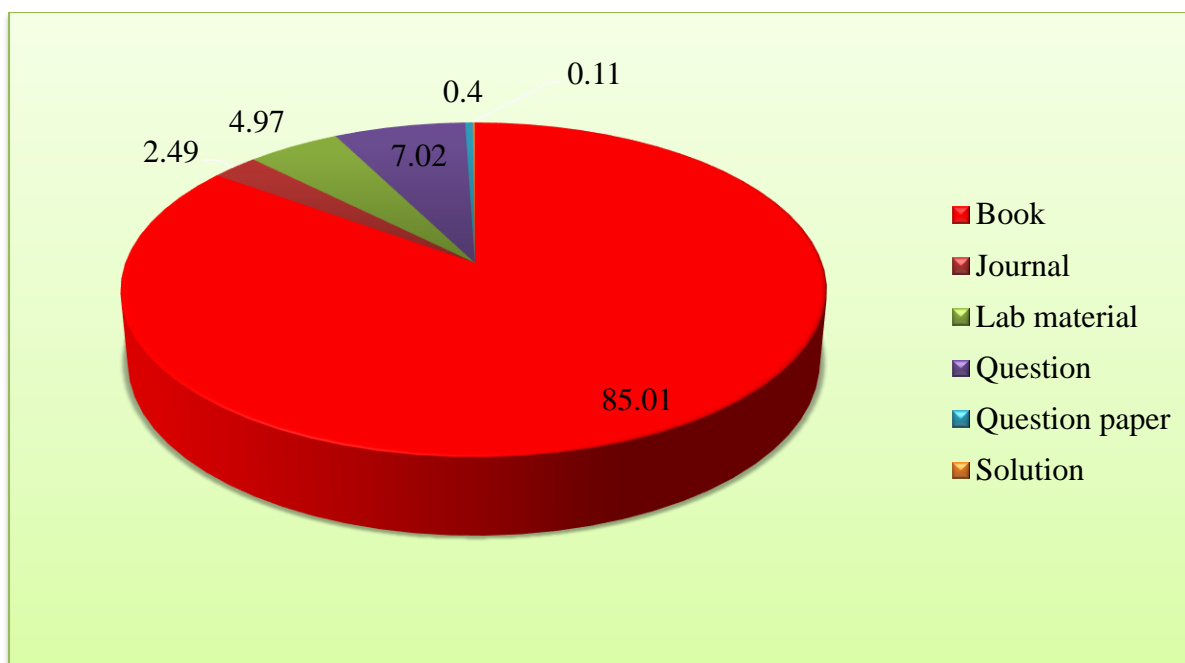
*Learning Resource Types*

Learning Resource Types	Items
Book	6042
Journal	177
Lab material	353
Question	499
Question paper	28
Solution	8

(Source: <https://ndl.iitkgp.ac.in/>)

**Figure 5**

*Learning Resource Types*



There are 6042 book items in total. The journal 177, Lab Material 353, Question 499, Question Paper 28, and Solution 8 in the NDLI.

### **MAJOR FINDINGS OF THE STUDY**

- The results reveal that all of the e-resources cover the text material on the top. The five resources were covered by image in the second place. In terms of presentation and vide, both were ranked third, but animation was ranked last.
- Computer Science, Information & General Works (130), Philosophy & Psychology (135), Social Science (1080), Language (397), Natural Science and Mathematics (2358), Technology (634), The Arts, Fine & Decorative Arts (146), Literature & Rhetoric (1711), and History & Geography (632) are included in NDLI.
- There are 2903 items of e-resources available for higher secondary students (XI and XII), 1484 items of e-resources for high school students, 1693 items for secondary school students (V to VII), 755 items of e-resources for primary school students and 3 items for lower primary schools.
- The NCERT organisation has 6230 items of e-resources available for school students. There are 6230 items of resources in the portable document format, but there is only one item in EPUB.

- There are 2461 items of e-resources available in English, 1880 items of e-resources in Hindi, 200 items in Sanskrit, 1705 items of e-resources available in Urdu.
- There are 6042 book items in total. The journal 177, Lab Material 353, Question 499, Question Paper 28, and Solution 8 in the NDLI.

## CONCLUSION

As we all know, NDLI is a single search gateway for a variety of resources. The goal of NDLI is to create a Google-like federated search experience. NDLI is a good endeavour to overcome many hurdles to education, such as communication, geography, language, and money. There are many e-resources available for school students. Due to the lockdown, schools are closed and students are attending online classes. E-resources play a vital role. During the COVID-19 pandemic period, the national digital library of India provides opportunities for school-going students to access e-resources on a 24x7 basis. The subject-wise learning resources available in the NDLI such as Computer Science, Information & General Works (16,461,225 items), Philosophy & Psychology (609,281 items), Religion (227,232 items), Social Science (6,054,733 items), Language (191,633 items), Natural Science and Mathematics (9,806,236 items), Technology (12,751,564 items), The Arts, Fine & Decorative Arts (1,915,931 items), Literature & Rhetoric (952,812 items), and History & Geography (974,724 items) are included in NDLI.

## REFERENCES

- AdinathGopinathDarandale.(2017). SWOT Analysis of National Digital Library of India. *The Criterion: An International Journal in English*.8 (7), 001-009.
- Ashkar, K., Sarasu, R., &Sayed Mohamed Jelani, A. (2020). Awareness and Usage of the National Digital Library of India in the Pandemic Situation A Study of the Central University of Tamil Nadu. *ILIS Journal of Librarianship and Informatics*, 3(1), 41–47.
- Bashir, Bisma; Nasreen, Nahida; and Loan, Fayaz Ahmad, (2019). National Digital Library of India: An Overview. *Library Philosophy and Practice (e-journal)*. 2601. <https://digitalcommons.unl.edu/libphilprac/2601>
- Burhansab, Patel Adam; Batcha, M.Sadik; and Ahmad, Muneer, (2020).Investigating Awareness and usage of Electronic Resources by the Library Users of Selected Colleges of Solapur University.*Library Philosophy and Practice (e-journal)*. 4309. <https://digitalcommons.unl.edu/libphilprac/4309>



- Das, P. P., Bhowmick, P. K., Sarkar, S., Gupta, A., Chakraborty, S., Sutradhar, B., Chattopadhyay, S., Chattopadhyay, N. G. (2016). National Digital Library: A Platform for Paradigm Shift in Education and Research in India. *Science & Culture*, 82, 4-11
- Gaffar, Sk Abdul; N, Sindhu P. Mrs; and Kumar, S. Kishore. (2021). The Green Library Initiative in Indian perspective: A Study. *Library Philosophy and Practice* (e-journal). 6189. <https://digitalcommons.unl.edu/libphilprac/6189>
- Kar, D. C. (2016). Digital Library of India: An initiative for the preservation and dissemination of the national heritage and rare books and manuscripts collection. *World Digital Libraries-An international journal*, 9(1), 45-60.
- Mal, B. K., & Bajpai, R. P. (2011). Digital libraries in India: Some major initiatives. *Library Progress (International)*, 31(1), 53-60.
- Rani, N. S., & Aswath, L. (2020). Effectiveness of National Digital Library India (NDL) Portal in the field of Education and Research. *Journal of Indian Library Association*, 55(3), 62-68.
- Varatharajan, N. and Chandrashekara, M. (2007). Digital Library Initiatives at Higher Education and Research Institutions in India. *Library Philosophy and Practice (e-journal)*. 157. <https://digitalcommons.unl.edu/libphilprac/157>
- Verma, Sapna Ms. and Margam, Madhusudhan. (2019). Altmetric Analysis of Highly Cited Publications on Digital Library in Brazil and India: A Comparative Study. *Library Philosophy and Practice* (e-journal). 2273. <https://digitalcommons.unl.edu/libphilprac/2273>
- Dhawan, S. M., Gupta, B. M., Gupta, R., Kumar, A., & Bansal, J. (2017). Digital libraries in India: A scientometric assessment of publications during 2007–16. *International Journal of Information Dissemination and Technology*, 7(3), 206-211.
- Jeevan, V. K. J. (2004). Digital library development: identifying sources of content for developing countries with special reference to India. *The International Information & Library Review*, 36(3), 185-197.
- Joshi, M. N. M. (2014). Digital Library and Library Networks in India. *Global Journal of Academic Librarianship*, 3(1), 37-44.
- Katre, D. S. (2004). Pragmatic and Usable Approach for Digital Library Initiatives in India. In *Proceedings of International Conference on Digital Libraries (ICDL), New Delhi, India* (Vol. 1, pp. 41-48).

- Chauhan, S. K., & Mahajan, P. (2013). Library consortia in India with special reference to UGC-Infonet digital library consortium. *The International Information & Library Review*, 45(3-4), 127-138.
- Maya Devi. (2019). *National Digital Library of India: A Case Study*. [Paper Presentation]. 2nd National Conference on Development of Digital Libraries in IPR Regime (December 21-22, 2019), Lucknow .
- National Digital Library of India (2021). About National Digital Library of India. Retrieved February 20, 2021, Retrieved from <https://ndl.iitkgp.ac.in/>