

ANALYSIS OF RESEARCH OUTPUT OF PRESIDENCY UNIVERSITY, KOLKATA THROUGH SHODHGANGA THESES AND DISSERTATION (ETD) DATABASE

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ABSTRACT

The Present paper aims to evaluate the research contribution of Presidency University, Kolkata accessible through Shodhganga: an Electronic Theses and Dissertations (ETD) database of INFLIBNET. Presidency University, Kolkata erstwhile Presidency College or Hindoo College, started its journey as a university in July 2010. The University as on 20th February 2024 uploaded 97 theses to the Shodhganga platform from various departments. The authors examined various aspects of these theses. The findings indicated that the department of Life Sciences in Presidency University has been placed in a top position with the contribution of 28 (28.86%) theses uploaded in the Shodhganga repository. It is also found that the majority of the theses were uploaded in English, followed by Bengali 12(12.37%) and Hindi 9 (9.28%) as medium of writing language. Additionally, the authors analyzed 294 keywords listed in their metadata to find the important areas of research. The study is important to understand the progress of research and its areas of the Presidency University which as a college was one of the first institutes of Western-type higher education in Asia and also known for its academic excellence.

KEYWORDS: *Electronic Theses and Dissertation, ETD, Open Access Repository, Shodhganga, West Bengal, Presidency University, Research Output.*

INTRODUCTION

Institutions of higher education are creating institutional repositories to effectively manage pedagogical, research, and resource assets. Theses and dissertations, which are often recognized as primary research documents, are being digitized and housed in databases to make them more accessible to scholars. Electronic theses and dissertations abbreviated as ETDs are increasingly appreciated along with traditional print versions due to their various benefits. ETDs represent significant assets for academic research and advancement within educational establishments. Previously, research documents were inaccessible to the general public. However, the evolution of information and communication technology has revolutionized the organization, handling, and distribution of information to users. The introduction of Open Access has simplified access to information within the digital realm.

Shodhganga- A Collection of Indian Theses

While talking about Indian scenario, mention may be made of Shodhganga which is a digital archive of Electronic Theses and Dissertations of Indian created by the INFLIBNET Centre. As per the directives of the University Grants Commission Notification, university researchers need to submit electronic versions of their theses and dissertations. This criterion seeks to encourage free access to Indian academic output worldwide. The effort intends to improve research quality by making

electronic theses available online through centrally managed digital repositories. This addresses concerns such as duplication of research and limited exposure, which can risk research quality. The INFLIBNET Centre is responsible for preserving and giving access to the digital repository known as Shodhganga as stated in the Regulation. Shodhganga open access repository of Indian theses by INFLIBNET as on 15th February, 2024 has housed 15388 full-text Ph. D. theses, submitted by 753 Indian Universities through MOU.

Presidency University, Kolkata

Presidency University, Kolkata, erstwhile Hindoo College/Presidency College has a distinctive place in history for being one of the first organizations of 'Western-type' higher education in Asia. In 1817, Hindoo College was established and in 1855 it was taken over by the British Government as the 'College of the Bengal Presidency'. In 1857, the college was included under the then newly founded Calcutta University. Presidency College was considered as Bengal's well-known Centre of higher learning. On July 7, 2010, the West Bengal Legislature designated Presidency College as a university in appreciation of its long history of academic excellence. Presidency University began functioning in 2012 (8).

Among all the important steps taken by the university, signing a Memorandum of Understanding (MOU) with the INFLIBNET Centre in Ahmedabad for Shodhganga on January 23rd, 2017 is also an important one to promote open access to Ph. D. theses in digital format.

OBJECTIVES OF THE STUDY

The purpose of this study is to assess the current status of the research output of Presidency University, Kolkata through Shodhganga database.

- To analyze the ranking of State Universities of West Bengal according to the number of ETDs they have contributed to Shodhganga.
- To identify the department in Presidency University that has the most ETDs contributions in Shodhganga.
- To identify Presidency University's the language-wise distribution of the ETDs
- To investigate the annual distribution of theses uploaded to Shodhganga by the Presidency University, Kolkata.
- To explore which keywords used in the Ph. D. theses to get an insight of the thrust areas of research.

REVIEW OF RELATED LITERATURE

Kumar (2015) emphasized the present condition of electronic theses and dissertations in Shodhganga and Indian University libraries. He argued that implementing open access systems for electronic theses and dissertations will streamline information retrieval, save time, enhance research productivity, and bring benefits to all academic communities. Chakravarty (2019) conducted an analysis titled "Evaluation of Public ETD Repository Using Web Analyzer: A webometric Study of Shodhganga, India." The study emphasized the significance of ETDs as a powerful tool for disseminating previously inaccessible research. Verma and Brahma (2017) investigated the electronic theses and dissertations contributions to Shodhganga by Indian universities recognized for their Potential for Excellence. Their findings revealed that over 18000 theses spanning various disciplines were deposited by 15 universities. Pune University stood out with the highest number of departmental contributions (138), while JNU emerged as the top contributor to Shodhganga with 4679 submissions. Singh (2019)

emphasised the evolving role of professional librarians in managing ETDs in Indian institutions. Saloi (2021) conducted a study on central universities in Northeast India, which they published in the open access repository Shodhganga via INFLIBNET. Sivakumaran and Swaminathan (2020) examined the accessibility of ETDs from 16 State Universities in Tamil Nadu under the INFLIBNET-Shodhganga initiative. Their study revealed that these universities collectively provided 41,870 ETDs, with Anna University, Chennai, and University of Madras being the foremost contributors.

SCOPE AND COVERAGE

The study analysed Presidency University's research output with the help of data available in Shodhganga repository till 20th February 2024.

METHODOLOGY

Data from different websites was collected as follows:

- Shodhganga Website and UGC official website were browsed for relevant information
- To retrieve the list of all State Universities in West Bengal, UGC’s official website was browsed on 20-02-2024
- Information on Presidency University and its Ph. D. course was obtained from the website of the University.
- Data regarding research output of Presidency University, Kolkata as available in Shodhganga was collected and analysed. Then data was presented in tabular and chart format for empirical interpretation.
- On the Shodhganga platform, metadata including language and departments were analysed, focusing particularly on Presidency University. This analysis involved studying the overall Electronic Theses and Dissertations (ETD) contribution as well as dissecting contributions based on department, language, keywords, and annual distribution.

DATA ANALYSIS

Table 1: TOP 10 Contributing State Universities of West Bengal in Shodhganga (Data as on 21.02.24)

Name of the University	Abbreviation used	Year of Establishment	MoU Signed with Shodhganga	No. of Theses uploaded	Percentage (%)	Rank
University of Calcutta	CU	1857	22.12.2016	14168	51.05%	1
Jadavpur University	JU	1955	22.04.2016	3948	14.23%	2
The University of Burdwan	BU	1960	05.11.2012	3079	11.09%	3
University of Kalyani	KLU	1960	24.03.2015	2836	10.22%	4
The University of North Bengal	NBU	1962	31.03.2011	2066	7.45%	5
Vidyasagar University	VDU	1981	21.04.2017	869	3.13%	6
RabindraBharati University	RBU	1962	20.04.2015	416	1.50%	7
Raiganj University	RU	2015	14.03.2018	166	0.60%	8
Sidho-Kanho Birsha University	SKBU	2010	21.11.2017	105	0.38%	9
Presidency University	PU	2010	23.01.2017	97	0.35%	10
	Total			27750	100%	

* Percentage calculated based on the total number of theses submitted to Shodhganga by the State Universities of West Bengal. Source: Shodhganga database (As on February, 2024)

Table 1 shows the list of only top ten State Universities in West Bengal in accordance with their contribution of theses in the Shodhganga repository as on February 2024. From the above table, it is clear that the University of Calcutta has secured the first position among the state universities in West Bengal with the contribution of 14168 theses (51.05%) while Presidency University has secured 10th position by contributing 97 theses (0.35%).

Table 2: Stream Wise Details of the Subjects of Ph. D. Course Taught in Presidency University, Kolkata

Programme/Stream	Subjects	Total No.
Ph.D. (Arts)	Bengali, English, Hindi, History, Philosophy, Political Science, Sociology.	7
Ph.D.(Science)	Chemistry, Economics, Geography, Geology, Life Sciences, Mathematics, Physics, Statistics, School of Astrophysics, Institute of Health Sciences.	10

Table 2 explains that the Presidency University, Kolkata provides Ph D degree in 17 different subjects. 7 of them are under Arts Stream and 10 of them are under Science stream.

Table 3: Department Wise Contribution of Ph. D. Theses in the Shodhganga Portal

S. No.	Department	No. of Theses Uploaded
1	Life Sciences	28
2	Bengali	12
3	Chemistry	11
4	Physics	11
5	Hindi	9
6	Geology	9
7	Sociology	5
8	Geography	4
9	Political Science	3
10	Mathematics	1
11	Economics	1
12	English	1
13	Health Sciences	1
14	Astrophysics	1
	Total	97

Table 3 shows department wise contribution of Ph. D. Theses in Shodhganga by Presidency University, Kolkata. It is seen that department of Life Science has submitted maximum number of theses, followed by department of Bengali and then by the department of Chemistry and Physics.

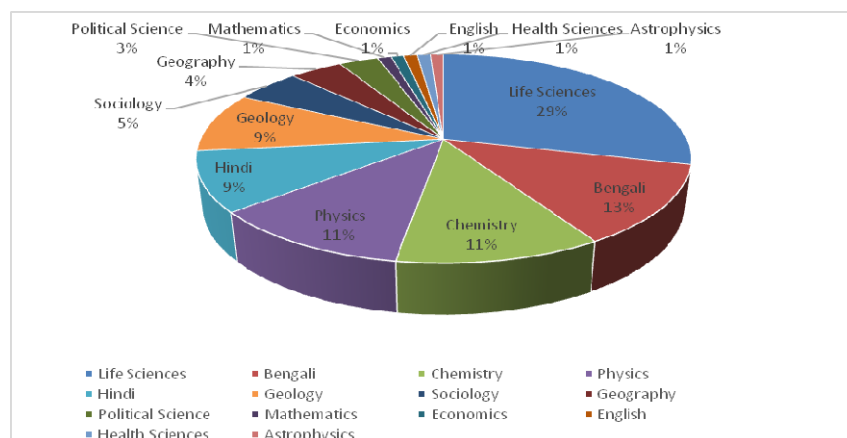


Figure 1: Department Wise Contribution of theses in the Shodhganga Portal.

Figure 1 shows the percentage of department wise contribution of Ph. D. Theses in Shodhganga by Presidency University, Kolkata. It is evident that department of Life Sciences has contributed 28.86%, department of Bengali has contributed 12.37%, department of Chemistry has contributed 11.34% and department of Physics has contributed 11.34%, department of Hindi and Geology has contributed 9.27%.

Contributed of Sociology department is 5.15%, Geography is 4.12%), Political Science is 3.09%.

Mathematics, Economics, English, Institute of Health Sciences and Astrophysics each of the department has contributed 1.03%.

It is to be mentioned that the University has started the following departments very recently. Institute of Health Sciences was started in the year 2019 and School of Astrophysics was started in the year 2022. Theses from these two newly established departments clearly indicates the progress of the academic activities in these newly established departments along with the other departments.

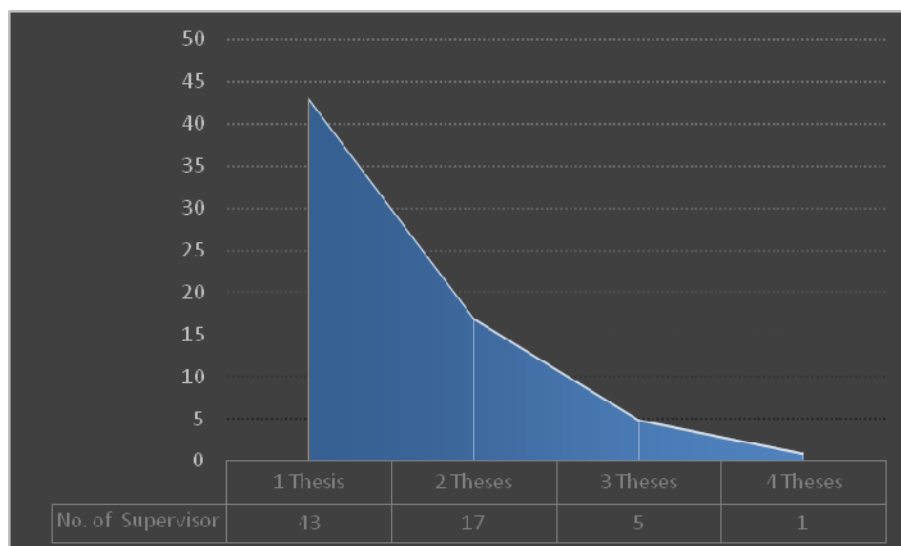


Figure 2: Total no. of Supervision Wise Distribution of the Ph. D. Theses.

Figure 2 shows there are 1 supervisor who have supervised 4 theses, 5 supervisors who have supervised 3 theses each, 17 supervisors who have supervised 2 theses each and 43 supervisors have supervised 1 thesis.

Table 4: Language Wise Distribution of the Ph. D. Theses

S. No.	Language of Writing	No. of Theses uploaded	Percentage (%)
1	English	76	78.35%
2	Bengali	12	12.37%
3	Hindi	9	9.28%
	Total	97	100%

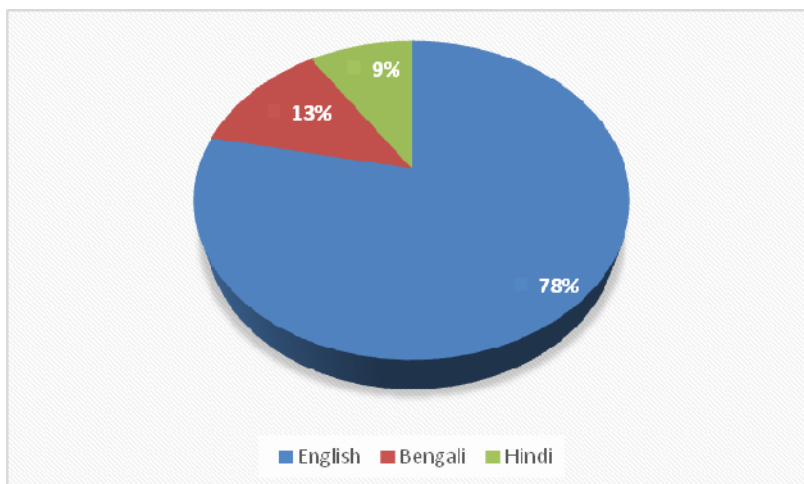


Figure 3: Writing Language Wise Distribution of Ph. D. Theses.

From Tabel-4 and Figure-3, it is clear that 78.35% of the theses is written in English Language. 12.37% of the theses is written in Bengali Language and they are research works of the Bengali department. 9.28% of the theses is written in Hindi Language and they are research works of the Hindi department. Therefore, it is evident that major language in which Ph. D. theses were written is English.

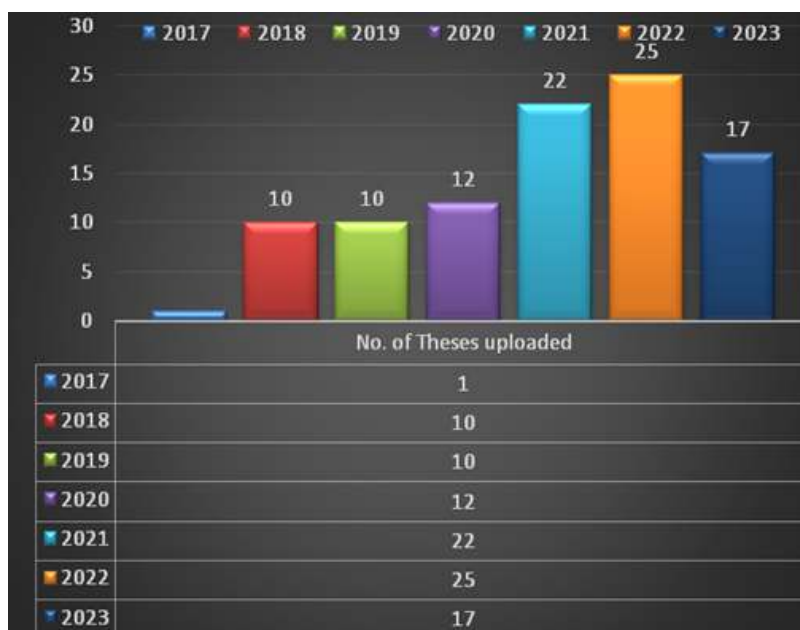


Figure 4: Year Wise Contribution and Growth of ETDs @ Presidency University.

Figure 4 demonstrate that Presidency University has contributed a total of 97 theses to the Shodhganga project. The year 2022 marked a significant increase in contributions, with 25 theses uploaded during that year, surpassing the 22 theses uploaded in 2021.

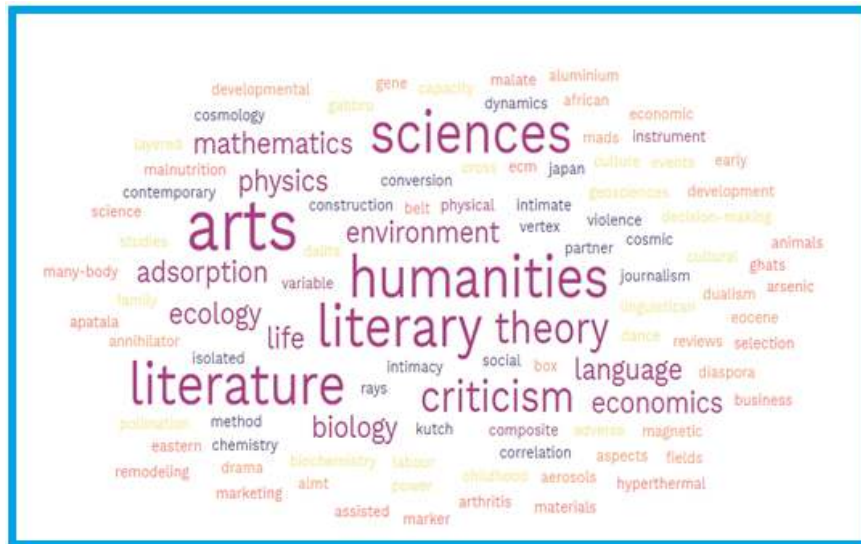


Figure 5: Word Cloud of the Top Keywords Stated in the Theses Metadata in Shodhganga ETD Repository.

Total 294 keywords obtained from the metadata of 97 theses were considered for the word cloud. The words highlighted are the words with repeated occurrences or with high frequencies.

FINDINGS OF THE STUDY

- Presidency University, Kolkata has ranked among the top 10 state universities of West Bengal as per number of contribution of the electronic Ph. D. theses in Shodhganga database.
- First theses was uploaded in 2017 and in the next six years the number rose to 97. It indicates a sharp growth.
- Most of the theses were written in English language.
- Life Sciences department (28.86%) contributed maximum number of theses.
- Maximum no. of Theses supervised by a supervisor is 4. There is one such supervisor. There are 5 supervisors who have supervised 3 theses each, 17 supervisors who have supervised 2 theses each and 43 supervisors have supervised 1 thesis.

CONCLUSION

Important aim of the university system is to prioritize education, learning, and research, where the caliber of teaching is closely linked to the standard of research. This connection fosters academic excellence within institutions. Presidency University, Kolkata being a premier institution of academic excellence, are committed towards production of quality researches. As the Shodhganga repository serves as a lifeline for scholars carrying out different research work, Presidency University, Kolkata is actively supporting the ETD submission programme for providing access of its quality research output to the larger mass.

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