

ELECTRONIC RESOURCES ACCESSED BY TEACHER EDUCATORS – A STUDY ON TELANGANA TEACHER EDUCATOR INSTITUTIONS

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ABSTRACT

The main aim of the present study is to know the teacher educators' access of e-resources who are working in Osmania University Teacher Education College and its affiliated colleges of Telangana state. For this purpose, the researcher collected the sample from 345 respondents using survey method during January 2023 to October 2023. The collected data was analysed using SPSS-26.0 and interpreted the results by applying descriptive statistics like frequencies and simple percentages. The findings of the study reveals that most preferred indexing electronic journal for teacher educators is Google scholar with a high percentage (53.0%). The study also found that just below forty per cent (i.e., 38.3%) of teacher educators using Indian Educational Abstracts. They (50%) access institutional E-resources through Regional Institute of Education (RIE). The respondents' access e-resources through YouTube channel (30.6%) and it is followed by e-Pathashala (28.9%). It is advised to the teacher educators to access e-resources at college library to clarify their doubts with library staff while using e-resources and better access.

Keywords: E-resources, Access, Teacher educators, Indexing, Educational institutions.

1.0 INTRODUCTION

E-resources should be readily accessible to all teacher educators and teacher trainees. Before the development of computer and internet technology, printed version of resources like books, journals, dictionaries, work books, etc., played a significant role in teaching and learning process. But these printed versions are not easily accessible to all and are also expensive in nature. In 21st century, e-version of books and e-journals are available in general have become inevitable and, hence, it is very much needed to convert the printed version into e-version for future needs. Therefore, of the different e-resources knowledge, e-resources development and preservation of them has become the need of this hour for teacher education.

E-resources are “Material consisting of data and/ or computer program(s) encoded for reading and manipulation by a computer by the use of a peripheral device directly connected to the computer or remotely via a network such as the Internet (AACR2). The category includes software applications, electronic texts, bibliographic databases, etc.”¹

E-resources for Teacher Educators: The e-resources in Teacher Education classified into two major areas viz., (a) Online e-resources and (b) Offline e-resources. The online e-resources include e-books, e-journals, e-mail, e-library e-forum, e-learning (lessons/courses), e-shops, e-dictionaries, mobile SMS/MMS, search engines and meta search engines. This can be available in 3 types of matter; (a) freely available resource contents (Websites); (b) licensed resources (databases available by logging by library card) and (c) onsite resources (websites related to particular content names). Offline e-resources which are available on CD ROM based e-resources, offline e-books, offline e dictionaries, MS Office applications (documents, spreadsheets, power points), Training software, e-prompter, resources from mobile devices and secondary storage devices.

2.0 REVIEW OF LITERATURE

Reviews on E-resources: In order to investigate how users exposed to e-resources, Indrajai (2023)² made it evident that professors heavily rely on electronic resources available online, not just for research but also to assist their instruction. This is due to faculty members' ignorance of on databases' availability or their ignorance of the library's subscription to them. It is imperative from the study that the library increase teacher and student awareness of the existence and use of its electronic resources. Humbhi et al. (2023)³ found that the majority of the faculty of University of Balochistan demonstrated familiarity with E-resources, somehow, students' familiarity level is low. Several obstacles were also highlighted in this study that prevent teachers and students from effectively using E-resources. Sahu and Tiwari (2021)⁴ demonstrated the various aspects of the Usage of electronic resources, identifies the frequency of using electronic resources, awareness of electronic resources, preferable usage of e-resources, reason of preferring, problem faced while using e-resources and know to satisfaction level of the students. Gautam and Sinha (2020)⁵ discussed in their research on the use of electronic resources (e-journals, e-books, online/offline databases, web resources) which are made available by the INFLIBNET Centre in e-resource consortium like UGC-INFONET Digital Library Consortium by the teachers and scholars of BHU as a part of doctoral research work done by one of the authors from January 2015 to July 2015.

Previous studies on E-resources for teacher educators: Mahadeva and Krishnamurthy (2024)⁶ found that most (92.22%) of the respondents mainly use e-resources for presentations such as seminars and class talks followed by study course materials (88.89%). Kishor and Bhakt (2023)⁷ ascertained that the teachers in women B.Ed. colleges can play key role in motivating the library users to use other resources apart from books. Since in the networked environment all the libraries are interconnected and resources are campus wide available online so in addition to user education programs of the central library the departmental /book bank libraries can play vital role in promoting the use of resources. Chatterjee (2020)⁸ felt that it is very much essential to improve and modernize the library facilities and services in those college libraries West Bengal B.Ed. College libraries affiliated to NCTE to increase the satisfied user. Shahzadi and Hussain (2019)⁹ concluded that majority of the teacher educators consider internet resources specifically HEC- Journals as an open access resource while majority of the student teachers consider books and internet as an open access resource. Teacher educators use internet to prepare their lectures, research and reflection while student teachers mostly use books as open access resource to prepare assigned tasks. A study conducted by Rajamansigh and Manoharan (2016)¹⁰ found that more than fifty percent of the teacher educators use the online resources regularly working in the colleges of education. Further, Sumathiral and Ravi (2016)¹¹ concluded that 87% of the selected teacher educators are utilizing e-Content but majority of the them i.e., 23% of the selected teacher educators are utilizing e-Resources frequently. Richard (2014)¹² made a recommendation for teacher educators to improve the ICT skills and develop the academic carrier and improve e-knowledge through the available e-resources.

Research gap: Based on the research papers reviewed in various journals in detail as stated in review of literature section, a research gap has been established. In order to further academic and research careers of teacher educators, whether they work at the university or

college level, need access to electronic resources. It is essential to have an understanding of the ways in which e-resources are used by teacher educators working in OU Teacher Education College and its affiliated colleges at undergraduate and graduate schools. This is the reason that has both prompted and pushed the researcher to take on the challenge of doing this study.

Objectives:

1. To find out which is the most preferred indexing electronic journal for teacher educators.
2. To know how the teacher educators access e-resources for their classroom talks.
3. To analyse the teacher educators' opinions on access of e-resources from RIE, IJTE, NCERT and SCERT.

Research questions:

1. What is the most preferred indexing e-journal for teacher educators?
2. How the teacher educators access e-resources, like e-journals, e-database, ETDs, etc.?
3. What is the opinion of teacher educators regarding access of e-resources from various educational organizations?

3.0 METHODOLOGY

The survey method was used in this study to gather pertinent information from users regarding e-resources access. The B.Ed. college teacher educators were given the self-designed research questionnaire as their primary means of gathering data. The study's sample size was 400. Of these, 345 respondents have sent the researcher their completed surveys back. Both tabular and graphical formats have been used to display the results. The current investigation was carried out between January and October of 2023. The Simple Random Technique was used for the sample strategy in order to get data from the respondents and the data was analysed using SPSS.

4.0 DATA ANALYSIS AND INTERPRETATION

4.1 E-Resources Preferences in Teacher Education

The teacher educators' preferences on various e-resources available teacher education are incorporated in the following table.

Table 1: E-resources Preferences for Teacher Educators

Sl. No.	E-Resource	Very High	High	Low	Very Low	Nil
1.	E-Books	156 (45.2%)	159 (46.1%)	21 (6.1%)	6 (1.7%)	3 (0.9%)
2.	E-Journals	114 (33.0%)	150 (43.5%)	66 (19.1%)	15 (4.3%)	0 (0.0%)
3.	E-Databases	156 (45.2%)	117 (33.9%)	66 (19.1%)	6 (1.7%)	0 (0.0%)
4.	E-Newspapers	135 (39.1%)	150 (43.5%)	51 (14.8%)	9 (2.6%)	0 (0.0%)
5.	ETDs	186 (53.9%)	138 (40.0%)	18 (5.2%)	3 (0.9%)	0 (0.0%)
6.	Videos	99	165	63	18 (5.2%)	0

		(28.7%)	(47.8%)	(18.3%)		(0.0%)
7.	Other E-Publications	96 (27.8%)	162 (47.0%)	63 (18.3%)	24 (7.0%)	0 (0.0%)
8.	Swayam	87 (25.2%)	165 (47.8%)	63 (18.3%)	27 (7.8%)	3 (0.9%)
9.	MOOCs	87 (25.2%)	141 (40.9%)	30 (8.7%)	84 (24.3%)	3 (0.9%)

Source: Primary Data

Regarding e-resources for e-books, teacher educators have two preferences: high (159, 46.1%) and very high (45.2%); when both evaluations are combined, the percentage is 91.3%. In a similar vein, E-Journals had mixed results (86.5%), high 150 (43.5%), and very high 114 (34.0%). It was high 117 (33.9%) and very high 156 (45.2%) for E-databases, totaling 79.1%; it was high 150 (43.5%) and very high 135 (39.1%) for E-newspapers. For ETDs, it was high 138 (40.0%) and very high 186 (53.9%), both of which had a preference of 93.9%. Both preferences included it at 82.6%. With two preferences added, it was 76.5%. For the videos, it was high 165 (47.8%) and very high 99 (28.7%). It was very high 96 (27.8%) and high 162 (47.0%) for other e-publications, for a total of 74.8%. The two types of preferences added total 73.0%. The Swayam database has 165 (47.8%) and 87 (25.2%) high and very high preferences, respectively. The MOOCs database shows that 141 (40.9%) people have a high preference, 87 (25.2%) people have a very high preference, and 66.1% people have both preferences.

4.2 Preferred Indexing E-Resources

The preferred indexing e-resources available for the teacher educators are presented in Table 2.

Table 2: Preferred Indexing E-Journals

Sl. No.	Indexing E-Journals	Very High	High	Low	Very Low	Nil
1.	British Education Index	108 (31.3%)	162 (47.0%)	60 (17.4%)	12 (3.5%)	3 (0.9%)
2.	PsycInfo	66 (19.1%)	177 (51.3%)	69 (20.0%)	24 (7.0%)	9 (2.6%)
3.	DOAJ	72 (20.9%)	147 (42.6%)	108 (31.3%)	12 (3.5%)	6 (1.7%)
4.	ERIC	126 (36.5%)	147 (42.6%)	63 (18.3%)	9 (2.6%)	0 (0.0%)
5.	Web of Science	114 (33.0%)	156 (45.2%)	63 (18.3%)	9 (2.6%)	3 (0.9%)
6.	Google Scholar	183 (53.0%)	138 (40.0%)	24 (7.0%)	0 (0.0%)	0 (0.0%)
7.	Australian Educational Index	84 (24.3%)	129 (37.4%)	114 (33.0%)	12 (3.5%)	6 (1.7%)
8.	Philosopher Educational Index	81 (23.5%)	174 (50.4%)	75 (21.7%)	9 (2.6%)	6 (1.7%)

9.	Education Index	129 (37.4%)	135 (39.1%)	69 (20.0%)	9 (2.6%)	3 (0.9%)
10.	SCOPUS	111 (32.2%)	123 (35.7%)	90 (26.1%)	15 (4.3%)	6 (1.7%)
11.	Social Sciences Citation Index	117 (33.9%)	135 (39.1%)	75 (21.7%)	15 (4.3%)	3 (0.9%)
12.	MathEduc	96 (27.8%)	138 (40.0%)	18 (5.2%)	87 (25.2%)	6 (1.7%)

Source: Primary Data

The British Education Index journal was selected by roughly 162 (47.0%) of the 345 respondents that took part in the study. PsyInfo was preferred by 177 (51.3%), DOAJ and ERIC by 147 (42.6%), Web of Science by 156 (45.2%), Australian Educational Index by 129 (37.4%), Philosopher Educational Index by 174 (50.4%), Education Index by 135 (39.1%), SCOPUS by 123 (35.7%), Social Sciences Index by 135 (39.15%), and MathEduc by 138 (40.0%). Only one indexing e-journal, Google Scholar, was favored by a significant portion of respondents, with 183 (53.1%) giving it a very good grade.

4.3 Use of E-Educational Abstracts

The e-educational abstracts used by the teacher educators are namely, Indian Educational Abstracts, Sociology of Education Abstracts and Education Technology Abstracts, etc. and it is presented in the following table with frequency and percent.

Table 3: E-Educational Abstracts used by Teacher Educators

Sl. No.	Name of the Abstract	Frequency	Percent
1.	Indian Educational Abstracts	132	38.3
2.	Educational Administration Abstracts	82	20.9
3.	ERA (Educational Research Abstracts)	27	7.8
4.	Sociology of Education Abstracts	45	13.0
5.	Special Education Needs Abstracts	30	8.7
6.	Education Technology Abstracts	36	10.4
7.	None	3	0.9
	Total	345	100.0

Source: Primary Data

Indian Educational Abstracts are used by 132 (38.3%) of the respondents, according to the study. In addition, the respondents used the following abstracts: 82 (20.9%) for Educational Administration, 27 (7.8%) for Educational Research Abstracts (ERA), 45 (14.0%) for Sociology of Education, 30 (8.7%) for Special Education Needs, 36 (10.4%) for Educational Technology, and 3 (0.9%) for none of them.

4.4 National/State Research Institutional E-Resources of Teacher Education

The institutional e-resources such as (i) RIE, (ii) NCTE, (iii) NCERT, (iv) SCERT, (v) NIEPA and (vi) CIET that are available in teacher education institutes are presented in following table.

Table 4: National/State Research Access of Institutional E-resources

Sl. No.	National/State Research Institutional E-resources	Frequency	Percent
1.	Regional Institute of Education (RIE)	171	49.6
2.	National Council for Teacher Education (NCTE)	78	22.6
3.	National Council of Educational Research and Training (NCERT)	54	15.7
4.	State Council of Educational Research and Training (SCERT)	21	6.1
5.	National Institute of Educational Planning and Administration (NIEPA)	6	1.7
6.	Central Institute of Educational Technology (CIET)	15	4.3
	Total	345	100.0

Source: Primary Data

Almost half (49.36%) of the participants use the Regional Institute of Education (RIE) to access teacher educators' institutional E-resources. With 78 (22.6%), the National Council of Teacher Education (NCTE) comes in second. One of the main institutional e-resources that teacher educators primarily use (15.7%) is the National Council of Educational Research and Training, or NCERT. Additionally, 21 (6.1%) of the respondents use the State Council of Educational Research Training (SCERT) to access institutional E-resources. The Central Institute of Educational Technology (CIET) is accessed by 15 (4.3%) of them. Six responders, or 1.7% of the sample, use the National Institute of Educational Planning and Administration (NIEPA) to access institutional e-resources.

4.5 OER Resources Accessed by Teacher Educators

The teacher educators access the e-content that are provided OER for teacher educators are as follows.

Table 5: Access of Open Educational Resources (OER) on Education

Sl. No.	OER on Education	Frequency	Percent
1.	e-PG Pathasala	94	27.2
2.	SWAYAM	33	9.5
3.	T-SAT (NIPUNA & VIDYA)	72	20.8
4.	CEC	33	9.5
5.	FOSSEE	18	5.2
6.	Shod Ganga	36	10.4
7.	National Digital Library	39	11.3
8.	Others (e-Kalpa, e-Acharya, Talk to teacher)	9	2.6
	Total	345	100.0

Source: Primary Data

According to the study, respondents use open educational resources (OER) for teaching purposes. One of the e-resources that 94 (27.2%) of the respondents use is E-PG Pathasala. Thirty-three (9.5%) respondents use two types of resources: SWAYAM and CEC. In a similar vein, 72 (20.8%) responders use T-SAT. 36 (10.4%) respondents use Shod Ganga, while 18 (5.2%) respondents use DTH Channels to access the necessary FOSSEE

materials. Nine (2.6%) respondents use additional resources (e-Kalpa, e-Acharya, and Talk to Teacher), whereas 39 (11.3%) respondents use the National Digital Library.

Table 6: Access of NCERT e-Resources

Sl. No.	NCERT e-resources	Frequency	Percent
1.	DIKSHA	29	8.4
2.	NISHTHA	29	8.4
3.	e-Pathashala	100	28.9
4.	Swayam Prabha	52	15.0
5.	Kishor Manch	30	8.7
6.	Youtube Channel	105	30.6
	Total	345	100.0

Source: Primary Data

The responders use NCERT e-resources to educate in their classes. Among the NCER e-resources, 29 (84.4%) respondents use DIKSHA and NISHTHA. The e-Pathashala e-resource is accessed by 100 respondents, or 28.9%. Similarly, 52 (15.0%) respondents accessed Swayama Prabha's electronic resources. 105 (30.6%) respondents access YouTube channels, whereas 30 (8.7%) respondents use Kishor Manch to access e-resources.

4.6 E-Content of Regional Institute of Education

Table 7 explains about access of e-content pertains to Regional Institute of Education by the respondents.

Table 7: Access of E-Content of Regional Institute Education

Sl. No.	E-Content RIE	Frequency	Percent
1.	E-books	87	25.2
2.	E-journals	45	13.0
3.	E-books & E-journals	147	42.6
4.	E-journals and others	6	1.7
5.	E-books, E-journals and others	30	8.7
6.	Others	12	3.5
7.	None	18	5.2
	Total	345	100.0

Source: Primary Data

According to the survey, 12 (3.5%) of them access other e-content, 45 (14.0%) access e-journals, and 87 (25.2%) access e-books. Six (1.7%) respondents access e-journals and other materials, whereas 147 (42.6%) of them access both e-books and e-journals. Additionally, 30 (8.7%) of them have access to three different types of e-content, including electronic books, journals, and other materials. According to the study, 18 (5.2%) of the respondents did not have access to any e-content.

4.7 NCERT E-Journals Accessed by Teacher Educators

Table 8 presents how the teacher educators access NCERT E-journals, such as Journal of Indian Education, School Science, the Prime Teacher, Indian Educational Abstracts and Indian Educational Review.

Table 8: Access of NCERT E-Journals

Sl. No.	Access of NCERT E-Journals	Frequency	Percent
1.	Journal of Indian Education	132	38.3
2.	Indian Educational Review	51	14.8
3.	School Science	51	14.8
4.	The Primary Teacher	39	11.3
5.	Indian Educational Abstracts	42	12.2
6.	None	30	8.7
	Total	345	100.0

Source: Primary Data

According to the report, 132 respondents, or 38.3%, use the Journal of Indian Education, or NCERT E-journals. About 51 (14.8%) of the respondents use School Science or Indian Educational Review to access NCERT E-journals. One of the NCERT E-journals that 39 (11.3%) of the respondents access is The Primary Teacher. Additionally, 42 respondents (1.2%) use Indian Educational Abstracts. Of the responders, 30 (8.7%) use any of the NCERT e-journals.

4.8 NCTE E-Resources Accessed by Teacher Educators

The NCTE electronic resources accessed by teacher educators of colleges of education such as Anweshika, IJTE, Teacher Support and IJTE are presented in Table 8.

Table 9: NCTE E-resources Accessed by Teacher Educators

Sl. No.	NCTE E-resources	Frequency	Percent
1.	Anweshika	24	7.0
2.	Indian Journal of Teacher Education (IJTE)	93	27.0
3.	Teacher Support	39	11.3
4.	Swami Vivekananda and Education (Up to 2015 it is Updated)	18	5.2
5.	Anweshika, Indian Journal of Teacher Education (IJTE)	57	16.5
6.	Anweshika, Indian Journal of Teacher Education (IJTE), Teacher Support	18	5.2
7.	Anweshika, Swami Vivekananda and Education (Up to 2015 it is Updated)	3	.9
9.	Anweshika, Teacher Support	6	1.7
9.	Indian Journal of Teacher Education (IJTE), Teacher Support	54	15.7
10.	None	33	9.6
	Total	345	100.0

Source: Primary Data

Only 24 (7.0%) of the 345 respondents' access Anweshika, 93 (27.0%) access the Indian Journal of Teacher Education, 39 (11.3%) access teacher support, and 18 (5.2%) access Swami Vivekananda and Education (recently updated as of 2015). According to the study, 57 (16.5%) respondents' access both Anweshika and the Indian Journal of Teacher Education (IJTE), 3 (0.9%) access Anweshika and Swami Vivekananda and Education (updated as of 2015), 6 (1.7%) access Anweshika and Teacher Support, and 54 (15.7%) access the Indian Journal of Teacher Education (IJTE) and Teacher Support. Anweshika, the Indian Journal of Teacher Education (IJTE), and Teacher Support are the three NCTE e-resource combinations that just a tiny portion of respondents (18.2%) use. The findings indicate that the majority of respondents (27.0%) use the Indian Journal of Teacher (IJTE), and 16.5% use both the Indian Journal of Teacher Education (IJTE) and Anweshika, two types of NCTE e-resources.

4.9 SCERT E-Resources Accessed by Teacher Educators

Table 10 presents how the teacher educators' access SCERT E-resources, such as E-Text books, Sataka Padyalu, Audio Books, etc.

Table 10: SCERT E-Resources

Sl. No.	SCERT E-Resources	Frequency	Percent
1.	E-Text Books from Class 1 to 10	225	65.2
2.	E-Text Books from Class 1 to 10, Sataka Padyalu-Audio Books	66	19.2
3.	Sataka Padyalu-Audio Books	21	6.1
4.	None	33	9.6
	Total	345	100.0

Source: Primary Data

According to the findings, 65.2% of the respondents, or more than two thirds, accessed e-textbooks from classes one through ten. An additional 66 (19.2%) respondents use Sataka Padyalu-Audio Books in addition to E-Text Books from Classes 1–10. Of the respondents, about 21 (6.1%) only use Sataka Padyalu-Audio Books, while 33 (9.6%) do not use any SCERT e-resources at all.

5.0 FINDINGS

1. It is found that majority (47.8%) respondents have given high preference for Videos and Swayam, whereas they have very high preference for ETDs and when the both preference i.e., high and very high it was 93.9% for ETDs only. Hence, it is strongly opined that ETDs are most important preferences for teacher educators.
2. The study found that most preferred indexing electronic journal for teacher educators is Google scholar with a high percentage (53.0%).
3. The study found that just below forty per cent (i.e., 38.3%) of teacher educators using Indian Educational Abstracts.
4. The findings shows that fifty per cent of the respondents access institutional E-resources through Regional Institute of Education (RIE).
5. The results shows that the respondent's access OER through e-PG Pathasala and T-SAT with 27.2% and 20.8%, respectively, for their accessing and learning.

6. Majority respondents' access e-resources through YouTube channel (30.6%) and it is followed by e-Pathashala (28.9%).
7. It is found from the study that a considerable percentage (i.e., 42.6%) of respondents access both E-books and E-journals from Regional Institute of Education.
8. It is found that about 38.3% respondents access Journal of Indian Education from NCERT e-journals.
9. It is found that 27.0% respondents expressed that they access academic work from Indian Journal of Teacher Education (IJTE) such as Anweshika, IJTE, and Teacher Support.
10. It is found that majority (65.2%) respondents access E-Text Books from Class 1 to 10 of SCERT e-resources.

6.0 CONCLUSION

It has been determined that Google Classroom is the primary website via which teacher education colleges access e-resources. Google Scholar is the search engine of choice for the majority of teacher educators. Colleges involved in this research study subscribed to the following databases: (j) ERIC, (ii) ProQuest, (iii) Education Database (ProQuest), (iv) JSTOR, (v) Online Education Database (OECD), (vi) APA Psycinfo (EBSCO), (vii) Student Reference Center (EBSC), (viii) ScienceDirect (Elsevier), and (ix) DOAJ. Videos and Swayam were given a high preference, but they also have a very high preference for ETDs; when both preferences were high and very high, it was for ETDs alone. Because of this, there is a strong belief that ETDs are the most preferred e-resource for teacher education. Indian Educational Abstracts are used by a sizable portion of responders. The Regional Institute of Education (RIE) provides institutional electronic resources to 50% of the respondents. The Regional Institute of Education provides e-books and e-journals to the respondents. The majority of responders use E-Pathashala and Diksha to access NCERT E-Resources. The majority of respondents use the Indian Journal of Teacher Education (IJTE) and the Journal of Indian Education. They also use both kinds of NCTE e-resources, such as Anweshika and the Indian Journal of Teacher Education (IJTE). The responders have access to SCERT e-resources' E-Text Books for Classes 1 through 10. The NEP-2020 technological platforms (SWAYAM, DIKSHA, etc.) for online teacher training are highly helpful. They concurred that by NCF-2023, ICT had enabled teachers and students to access a vast array of content.

7.0 SUGGESTIONS

- The study observed that the teacher educators spent one/two hours in a day for electronic resources, so, they should spare more time to access resources.
- It is advised to the teacher educators to access e-resources at college library to clarify their doubts with library staff while using e-resources and better access.
- The College librarians make aware of users in using important teacher education abstracts/journals for latest subject information.

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