

Uses of MoE-GoI Open Educational Platforms by the College Teachers of Assam: A Study Focusing on the Role of Library

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Today, the use of technology in education is the need of the hour for any higher educational institution. NEP-2020 has very clearly mentioned the roadmap for the adoption of technology in education. It has emphasized the use of open online learning platforms along with the different e-contents, information repositories, etc platforms. The OER developed under the MOE-GOI has its own credibility in terms of courses available across the higher educational institutions of our country. Various platforms like SWAYAM, NDLI, e-PG Pathshala, CEC-OER, virtual labs, etc are developed under the guidance of MOE-GOI. Even these platforms served as an alternative during the pandemic situations. Till the study was submitted, 244 numbers of colleges have already registered in N-LIST out of which 185 colleges were the present beneficiary. College libraries are providing maximum assistance to library users in using the N-LIST services. So, whether a similar approach is found to be practiced by the college libraries in the case of OER. Further whether the faculty members are using all the different open online education platforms of MOE-GOI. What challenges are faced by the college teachers of Assam in utilizing the OER? So, this paper basically deals with all these three questions mentioned above.

Introduction

The Higher education system in India has been transforming very fast in terms of using ICT applications and services. Open education platforms and Resources have balanced the maximum of the teaching-learning systems during the pandemic situation whether at the school level or higher educational level. Various e-learning and open educational resource platforms are developed under the Ministry of Education-Government of India (MOE-GOI). In school education, the importance of the DIKSHA e-learning portal cannot be ignored when it comes to online learning. Similarly, many other online resource platforms are also developed for the enrichment of learning at the school level such as e-Pathshala (<https://epathshala.nic.in>), OLABs (<http://www.olabs.edu.in/>), NISHITA platform for professional development of school teachers (<https://itpd.ncert.gov.in/>), etc. The higher education system is also no exception to it. Various online education and resource platforms are being developed under the special guidance of the Department of Higher education, MOE-GOI. At a nationalized level, the open education platform such as SWAYAM has been attracting many learners to not only gain knowledge but also to receive the proper assessment through its certifications. Open Resource platforms developed under the Ministry of Education, Government of India have been targeted to provide great relief to the learners in terms of accessing quality based learning materials.

2. NEP-2020, Open Education and Resources

The Ministry of education (earlier MHRD), Government of India has launched various ICT-based teaching learning platforms across different disciplines from the National Mission on Education through Information and Communication Technology (NMEICT). It has not only provided digital connectivity but also digital resources through its different programmes. National Education Policy-2020 in the Technology use and Integration has clearly prioritized the extensive use of teaching-learning platforms like SWAYAM/DIKSHA with qualitative content (Government of India, 2020). The policy has prioritized the implementation of the Blended mode of learning. The policy set the goal of creating the Content, digital repository, and its proper dissemination. It also gives a clear indication that for the practical infrastructure, the Virtual Labs platform needs to be extensively utilized for the learners. The NEP-2020 has opened a new opportunity for learners to complete their learning at any time and from any place. It has emphasized more flexibility and mobility of the students towards higher education in India. The Academic Bank of Credits (ABC) of the Ministry of education, Government of India has been launched with such objectives for the student's mobility across higher education in India (GOI. Ministry of Education, 2021). Further, Government of India has targeted to leave no stone unturned in making available the learning platforms and resources. With the technology integration, these tasks become much more vibrant by developing different learning and resource platforms at all levels of education.

3. ICT initiatives of Ministry of Education, Government of India (MOE-GOI)

The Ministry of Education, Government of India (MOE-GOI) has identified fourteen platforms for technology enabled learning through ICT initiatives (Ministry of Education, GOI, n.d.). These are:

- i. SWAYAM
- ii. SWAYAM-PRABHA
- iii. National Digital Library of India (NDLI)
- iv. e-PG Pathshala
- v. Shodhganga
- vi. e-ShodhSindhu
- vii. e-Yantra
- viii. FOSSEE Free/Libre and Open Source Software for Education
- ix. Spoken Tutorial
- x. Virtual Labs
- xi. University Enterprise Resource Planning (SAMARTH)
- xii. VIDWAN database
- xiii. IRINS: Indian Research Information Network System
- xiv. ShodhShudhhi (PDS) for Plagiarism detection

SWAYAM is the online education platform for teaching and learning through MOOCs. This platform also provides different qualitative learning materials prepared by the experts of the country. Similarly, SWAYAM –PRABHA is another platform for learning through satellite communication having at present 34 DTH channels. This platform is an audio-visual platform for learners. Other open resource platforms are NDLI, e-PG Pathshala, Virtual Labs, Shodhganga. CEC (Consortium for Educational Communication) has also developed the Open Educational Resource platform for various courses of different disciplines in the multimedia format.

A huge amount of time, money and labor is used from the top to the bottom level in carrying out the different activities of all these platforms. The teachers involved in teaching are highly expected to extensively use these platforms. Then only the doors will open for the students to learn and gain knowledge through all these platforms. So, a study is required to know the awareness, usage and difficulties in using the MOE-GOI open online education platforms.

4. Library's Role

The libraries of any academic institution are expected to be aware of not only the resources available at their library but also the invisible resources scattered in the web platforms. Different libraries are involved in creating awareness on different OER platforms. Today, the reference and information service of the library must be extended in terms of maximum utilization of OER platforms. In other words, the Library has to involve in awareness of different GOI online education platforms such as SWAYAM. Similarly, the library should be in a position to market the information of other GOI OER platforms.

5. OER

According to UNESCO “Open Educational Resources (OER) are learning, teaching and research materials in any format and medium that reside in the public domain or are under copyright that have been released under an open license, that permit no-cost access, re-use, re-purpose, adaptation and redistribution by others”(UNESCO, n.d.).

6. Objectives of the study

Following are the objectives of the study:

- i. To know the status of the college teachers of Assam in utilizing the SWAYAM and ARPIT (Annual Refresher programme in teaching) platforms.
- ii. To identify the challenges faced by the college teachers of Assam in adopting the SWAYAM platform for their students
- iii. To know the status of college teachers of Assam in utilizing the NDLI, CEC -Open Educational Resource platform, e-PG Pathshala, SWAYAM-PRABHA and Virtual Labs platforms.

- iv. To identify the challenges faced by college teachers of Assam in using the OER platforms.
- v. To know the different initiatives taken by the libraries for the college teachers of Assam in using the OER.

7. Limitation of the study

Assam has four universities which have been providing affiliation to the colleges. These universities are Gauhati University, Dibrugarh University, Assam University and Bodoland University. The study is confined to the teachers of different government General Degree colleges affiliated to these four universities. The study has excluded all the law and engineering colleges of Assam.

8. Methodology

The methodology used for the study is the survey method. Data is collected using the Google form. All the communication is made directly with the college teachers of Assam either through respective email id or through respective WhatsApp number or even direct audio communication. To get the maximum accuracy, the researcher has avoided the use of mass interactive social networking tools such as WhatsApp groups, Facebook posts, etc.

9. Affiliated Colleges of Assam

Table 1: Status of different affiliated colleges of Assam

Name of the University	No of Colleges	Percentage	Total Nos of Affiliated colleges in Assam(includes all private and Government)
Assam University	38	11	337
Bodoland University	23	7	
Dibrugarh University	120	36	
Gauhati University	156	46	

Source: Government of Assam, Higher Education as accessed on 27/08/2022

(https://highereducation.assam.gov.in/sites/default/files/swf_utility_folder/departments/higheredu_medhassu_in_oid_3/do_u_want_2_know/337_stream_wise_colleges.pdf)

From the above Table11, it is found that maximum numbers of affiliated colleges are under Gauhati university followed by Dibrugarh university, Assam university and Bodoland university respectively.

10. Analysis of Resonances

10.1 Status on Response Received

Table 2: University and Designation wise Response received from the affiliated colleges

Name of the University	Responses of teachers received	Assistant Professor	Associate Professor	No of Colleges covered
Colleges under Assam University	27	23	4	6
Colleges under Bodoland University	15	14	01	7
Colleges under Dibrugarh University	96	83	13	44
Colleges under Gauhati University	145	123	22	54

A total of 283 responses have been received from the 111 provincialized colleges of Assam affiliated to the four different universities of Assam. The Table-2 depicts that 51.2 % (145 numbers) of the responses are from the affiliated colleges of Gauhati University, 34% (96 numbers) are from affiliated colleges of Dibrugarh University, 9.5% (27 numbers) are from affiliated colleges of Assam University and 5.3% (15 numbers) are from affiliated colleges of Bodoland university.

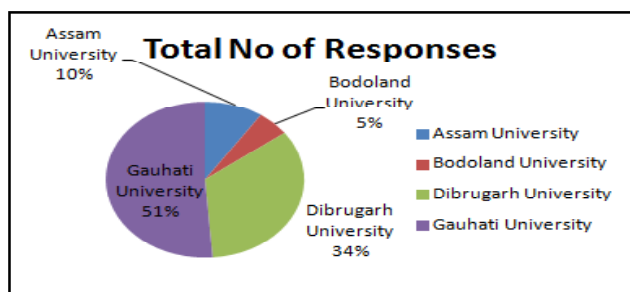


Figure 1: Graphical Representation of the University wise response received.

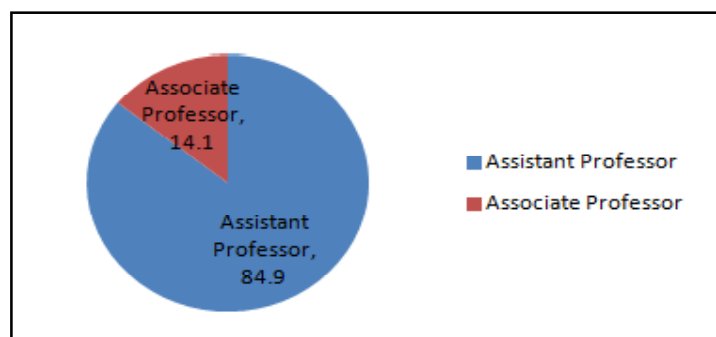


Figure 2: Graphical Representation of the Designation wise response received.

10.1.1 Age Group of the Respondents

Table 3: Responses received from different age groups

Age Group	No of Responses	Percentage
20-30 Years	25	8.8
30-40 Years	99	35
40-50 Years	104	36.8
Above 50 Years	55	19.4

The above Table - 3 depicts that maximum of the response received is from the age group of 40 to 50 years followed by 30 to 40 years.

10.2. Library Visits by College Teachers

Table 4: Status on Library visit by the selected college teachers of Assam

Description	No of Responses	Percentage
Daily	109	38.5
Weekly	118	41.7
Quarterly	27	9.5
Monthly	18	6.4
Others	11	3.9

***Others:** Need based, leisure time, rarely, 3 to 4 days in a week.

From the above Table44, it is found that the maximum number of the respondents visits their college library either on a daily basis or on a weekly basis. This indicates that the respondents are expected to be very much aware about the library resources and its services.

10.3. Teachers’ preferences on Format of Document access from their Library

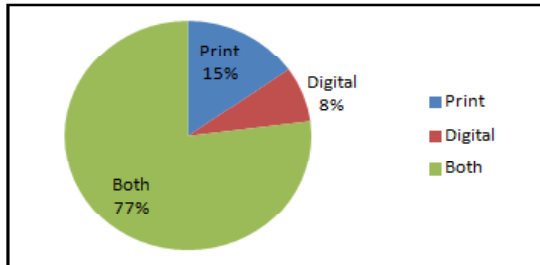


Figure 3: Graphical Representation of preference for use of library document in print or digital format

The above Figure - 3 reflect that maximum of the respondents prefer to access both the printed and digital document from their college library. It also shows that a limited percent of the respondents prefer to use either the printed format (15 percent) or the digital format (8%).

10.4 Status on usage of SWAYAM and ARPIT Platform

Table 5: Status on usage of SWAYAM and ARPIT platform by the selected college Teachers of Assam

Description	No of Responses	% of Responses	No of Responses	% of Responses
	SWAYAM Platform	ARPIT Platform		
Yes	132	46.6	50	17.7
No	137	48.4	210	74.2
Not Aware about the platform	5	1.8	17	6
Content do not matched with the Subject of the teachers	9	3.2	6	2.1

From the above Table- 5, it is found that 46.6% of the college teachers are aware and have used the SWAYAM platform. Further, 48.4% of the teachers are aware but still they are yet to use the SWAYAM platform. It is also found a few percentages i.e. 1.8% of the teachers are not aware about this online teaching and learning platform. Also, for 3.2% of the faculty members, the content of the SWAYAM platform is not matched with their respective subjects.

The above Table- 5 further reveal the usage of ARPIT platform for the professional development of the college teachers of Assam. It is found that a less percentage i.e. 17.7 % of the college teachers have used this platform till yet. The above Table also depicts that 74.2 % of the teachers are aware about this platform but they are still to use this platform. Furthermore, 6% of the teachers are not aware about this platform. For 2.1% of the teachers, the content delivered through ARPIT platform does not match the requirement of their respective subjects.

10.5 Challenges in adopting SWAYAM Platform

Table 6: Different challenges faced by the selected college teachers of Assam in using the SWAYAM platform

Challenges	No of Response	% of Responses
Lack of Provision of SWAYAM courses prescribed by the university	69	24.4
Lack of courses in regional language	47	16.6
Lack of Awareness	101	35.7
Prefer the Traditional Mode of teaching-learning	48	17
Others	18	6.3

***Others-** Not Required, Not used yet, Used other online platforms, the tenure of the course is too long, Interested to use for students, Students are not interested.

From the above Table- 6, it is found that maximum number of the faculty members, i.e. 35.7% are in the opinion that “lack of awareness” is one of the greater hindrances to the uses of SWAYAM platforms. Further, 24.4% of faculty members of the affiliated colleges further express that due to non-inclusion of SWAYAM courses in the college programmes by their parent university, it creates a hurdle in using this platform at the college level. 17% of the teachers still prefer to continue the teaching learning process through the traditional platform. 6.6% of the teachers have identified “lack of SWAYAM courses in regional languages” as a hindrance to use the platform. Further, 6.3% of the teachers have identified some “other challenges” in using the SWAYAM platform.

10.6 Usage of other OER platforms of GOI(CEC-OER, NDLI, e-PG Pathshala, SWAYAM-PRABHA, Virtual Labs)

Table 7: Status on usage of other Learning Platforms of MOE-GOI

Description	Responses Received (N=283)				Responses Received (N=54)
	CEC-OER	NDLI,	e-PG Pathshala	SWAYAM- PRABHA	Virtual Labs (only for Science Teachers)
Yes	121(42.8%)	181(64%)	129(45.6%)	86(30.4%)	29(53.7%)
No	121(42.8%)	91(32.2%)	141(49.8%)	146(51.6%)	20(37%)
Not Aware about the platform	35(12.4%)	8(2.8%)	6(2.1%)	39(13.8%)	2(3.7%)
Content do not matched with the Subject of the teachers	6(2.1%)	3(1.1%)	7(2.7%)	12(4.2%)	3(5.6%)

The above Table 7 depicts the status of usage of different online educational resource platforms by the selected college teachers of Assam. It is found that, 42.8% of the respondents are using the CEC OER (Consortium for Educational Communication) Open Educational Resource (OER) platform. Also, 42.8% of the respondents are aware about this platform but have not used the platform yet.

Maximum of the respondents, i.e. 64 percent are using the NDLI platform and 32.2 percent are although aware about the platform but have not used it yet.

45.6 percent of the respondents are using the e-PG Pathshala for teaching learning purposes. Further, maximum percentage of the respondents, i.e. 49.8 percent are although aware but have not used the e-PG Pathshala platform yet.

The usage of SWAYAM-PRABHA is found to be very less used by the respondents. It is found that 51.6 percent of the respondents have not used the platform yet. 30.4 percent of the respondents have used the platform till now.

The response of only Science faculty is considered for the usage of virtual labs platform and it is found that 53.7 percent of the respondents are using the platform and 37 percent are still to use it.

Further 12.4 % of the respondents are not aware about CEC OER, 2.8 % are not aware about NDLI, 2.1 % are not aware about e-PG Pathshala, 13.8 % are not aware about SWAYAM-PRABHA and 3.7 % are not aware about Virtual Labs platform.

Regarding the status on content delivered in the platform with the subjects of the respondents, it is found that 2.1 % respondents subject are not matched with the content delivered in CEC OER, 1.1 % not matched in NDLI, 2.7 % not matched in e-PG Pathshala, 4.2 % not matched in SWAYAM-PRABHA and 5.6 % not matched in Virtual Labs.

So, out of all the platforms, NDLI platform is the most used platform by the respondents.

10.7 Challenges in using other OER Platform

Table 8: Different challenges faced by the selected college teachers of Assam in using the GOI-OER

Challenges	No of Response	% of Responses
Lack of resources in regional languages	43	15.1
Lack of Internet connectivity	49	17.3
Difficulty in reading in Digital format	17	6
Lack of awareness.	56	19.8
Difficulty in accessing the OER.	7	2.5
All the Above challenges	50	17.7
Not find any challenges	55	19.4
Others	6	2.2

***Others**-Not unable to identify challenges as the respondent is not using, Lack of information on other platforms, Lack of facilities extended by college library.

The above Table 8 depicts the challenges of the selected college teachers of Assam in using all other OER platforms. It is found that: Maximum percentage of the faculty members, i.e. 19.8% are in the opinion that “lack of awareness” is one of the grater hindrances in using all the selected Open Educational Resource platform of MOE-GOI. Lack of Internet connectivity is also one of the focus reasons (challenges) in using all the OER which is responded by 17.3% respondents. Further, 15.1 % respondent’s belief that lack of availability of learning resources in the regional language is another great challenge in using all these resources, i.e. 15.1% respondents. 6% and 2.5% of the respondents have further identified the “Difficulty in reading in Digital format” and “Difficulty in accessing the OER” respectively as challenges for using OER. Overall, 17.7 % of the respondents are encountered with all the above mentioned challenges identified for the study. Further, 19.4% of the respondents are using the OER platforms smoothly without encountering any challenges. 2.2% of the respondents are facing some other challenges as mentioned (below the Table-8)

10.8 Initiatives of College Library for use of OER platforms

Table 9: Status of different initiatives taken by the library for the use of OER by the college teachers of Assam

Initiatives from library	No of Responses	Percentage of Responses
Link of OER in Library Webpage	29	10.2
Organizing Awareness Programme on OER	61	21.6
Organizing Seminar, workshops, Conferences on OER	42	14.8
Through the Library Display Board	17	6
Through the Social Networking sites	14	4.9
Maximum of the above initiatives	45	15.9
No any initiatives from Library	75	26.6

The above Table- 9 depicts the different initiatives taken by the college library in maximum usage of OER platforms by selected college teachers of Assam. It is found that:

21.6% of the respondents responded that their college library is organizing a different awareness programme on OER. Further, 14.8% responded that their library organizes different professional development programmes for the maximum use of OER. 10.2% of the respondents responded that their library provides links to OER in the library webpage. Further, 6% and 4.9% of the respondents responded that their library markets the information on OER through “library display board” and “Social networking sites” respectively. Overall, 15.9% of the respondents responded that their library takes maximum initiatives in making them aware about the different OER platforms and takes maximum of the above initiatives. A good number of respondents i.e. 26.6% have expressed that their library has still to take any initiatives in assisting them for the use of OER.

10.9 Digital document format preferred by the respondents in using OER

Table 10: Status of Respondents in preferring the digital document for the use of OER

Digital Format	No. of Respondents	Percentage of Respondents
Textual	65	23
Video	18	6.4
Audio	1	0.3
Image	Nil	Nil
All kinds of Digital Format	199	70.3

From the above Table 10, it is found that a maximum percent of the respondents (70.3%) prefer to use the OER in all types of digital document format such as text, audio, video, image, etc format. Further, a good number of the respondents (23%) prefer to use the OER in text format only. The study also found that a small number of the respondents prefer to use the OER either in video (6.4%) and audio format (0.3%).

11. Findings of the study

Following are the main findings of the study-

Objective 1

- i. Most of the college teachers of Assam are aware about the SWAYAM platform. Further, a large number of teachers are using the SWAYAM platform for online educational purposes. Also, a sufficient number of teachers are still to use this platform (From Table: 5).
- ii. The ARPIT platform delivered through SWAYAM is found to be utilized by a limited number of college teachers of Assam. This indicates that they prefer to pursue their professional development programme from other available platforms (From Table: 5).

Objective 2

- iii. Most of the college teachers of Assam believe that lack of proper awareness on SWAYAM courses hinders them in using this platform. Further, a good percentage of the college teachers of Assam expressed that lack of any clear guideline from its parent university in adopting the SWAYAM courses results in another great challenge for using the SWAYAM platform. A section of college teachers of Assam have expressed that they prefer to use the traditional method of teaching and learning rather than from the SWAYAM platform. An equal number of college teachers (approximately) also expressed that lack of availability of the courses in their regional language creates another challenge in using the SWAYAM platform (From Table: 6).

Objective 3 (From Table: 7).

- iv. CEC OER- A good number of the college teachers of Assam are using the CEC OER platforms. Further, the equal numbers of teachers are yet to utilize this platform. Also, a sufficient number of teachers are unable to use this platform due to the lack of proper awareness.
- v. NDLI: The selected college teachers of Assam are using the NDLI platform amongst all the selected OER platforms of GOI.
- vi. e-PGPathshala- The usage of this platform is found to be minimal as compared to the college teachers who are not using it.
- vii. SWAYAM-PRABHA- This platform is utilized by 30 percent (approximately) of the college teachers of Assam selected for the study. Further, a maximum of the college teachers are yet to utilize this platform. Also a good number of the college teachers are unable to use this platform due to lack of proper awareness.
- viii. Virtual Labs: Maximum of the selected science faculty members of the colleges of Assam is utilizing this experimentation platform. Further, a good number of faculties are still to experience this platform.
- ix. The content delivered through all these OER platforms is very important for the college teachers of Assam and is directly related with the subjects they deal with.

Objective 4

- x. Majority of the selected college teachers of Assam expressed that lack of proper awareness on OER platforms, internet connectivity, resources in regional languages, acceptability and accessibility of the resources in digital format results in a great challenge in using the Open educational resources(From Table: 8).

Objective 5

- xi. Maximum of the selected college teachers of Assam receive different assistance from their institute library in using the OER. Further, approximately 27% of the selected teachers are still to receive such assistance from their library (From Table: 9).

12. Suggestion

- i. A massive awareness is required in making the best use of SWAYAM and all the remaining OER platforms developed under the Ministry of education, Government of India. For this purpose, the college libraries may take an active role in making aware to the library users regarding the different OER platforms. Both the national and state library associations and the library network of India may come forward and may start a mission with an objective of creating awareness on different OER platforms. In this regard, the role

played by the ICT cell of Assam College Librarians' Association can be taken as a role model. During the Pandemic period 2020, the association has organized a series of awareness programme in the different colleges of Assam on use of e-resources specially the "ICT initiatives of Ministry of Education, Government of India".

- ii. The librarians of higher educational institutions may be entrusted with the responsibility of "Technical Coordinator" in creating awareness on OER of MOE-GOI.
- iii. Every college may establish a SWAYAM-PRABHA facilitation centre in their college so that the teachers and students can utilize this platform extensively.
- iv. All the four universities providing affiliation to the colleges of Assam may adopt the University Grants Commission (Credit Framework for Online Learning Courses through Study Webs of Active Learning for Young Aspiring Minds) Regulations, 2021 dated 25th March, 2021 for its affiliated colleges.
- v. The Ministry of Education, Government of India may also take initiative to develop the open online course materials in Assamese language.
- vi. The college teachers of Assam may guide their students to use all the available OER resources developed under the guidance of MOE, Government of India.
- vii. The facility of National Knowledge Network (NKN) for Internet connectivity may be extended to all the provincialized colleges of Assam.

13. Conclusion

The usage of OER resources developed under the guidance of MOE-GOI is rapidly increasing. To further promote and acknowledge these resources, various platforms are being developed such as Academic Bank of credits (<https://www.abc.gov.in/>), National Testing agency (<https://nta.ac.in/>), UGC e-resources Portal (<http://ugceresources.in/>)" etc so that the learners from any part of the country can take maximum benefit from these facilities. These OER resources developed have its own standard and features which differentiate it from the general internet free accessible resources. MOE-GOI is taking every step to popularize these resources from urban to the remote rural location of the country. The colleges of Assam which itself is a big network in terms of its human resources; infrastructure, etc are highly capable of handling these resources. Further, with the implementation of NEP-2020, the college teachers of Assam are highly expected to utilize these invisible resources and infrastructure so that the teaching learning system of higher education in the state of Assam may become more and more vibrant.

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