Open Educational Resources for Graduate and Post-Graduate students

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Abstract:

Open Educational Resources (OER) are learning, educational and research materials that are made available to the public via a range of online sites and libraries. Open educational resources are available easily in libraries to students pursuing higher education. OERs can be owned, shared, and modified in accordance with current knowledge. Graduate and postgraduate students can use certain electronic resources, such as e-Gyankosh, e-PG Pathshala, SWAYAM, Swayam Prabha, Vidya-Mitra, and Shodhganga, for their research, education, and knowledge-building. The following article provides information on various OER materials and how graduate and post-graduate students might benefit from them.

Keywords: Electronic resources, Higher education, Library, Learning Repositories, Online databases.

1. INTRODUCTION

Open educational resources (OER) are teaching learning, and research materials intentionally created and licences to be open access, free for the end used to own, share, and in most cases, modify (Belikov and Kimmons 2019). To put it another way, OERs are resources and materials that are freely available for anybody to use, remix, enhance, and distribute under certain licenses. These are intended to lower barriers to accessibility by utilizing best practices in instruction and being modified for particular local settings (Smith 2009). The development and promotion of open educational resources is often motivated by a desire to provide an alternative or enhanced educational paradigm. Further, according to Creative Commons definition of OER are teaching, learning, and research materials that are either (1) in the public domain or (2) licensed in a manner that provides everyone with free and perpetual permission to engage in the five activities including (i) retain – the right to make, own and control copies of the content, (ii) reuse – to right to use the content in wide range of ways, (iii) revise – the right to adapt, adjust, modify, and alter the content itself, (iv) remix – the right to continue the original or revised content with other materials to create something new, and (v) redistribute – the right to share copies of the original content, your revisions, or your remixes with others (Wiley and Hilton 2018). These resources include textbooks, lecture notes, course reading, syllabi, quizzes, assessment tools and other multimedia content that facilitate free access to quality e-learning platforms and foster the inclusive learning environment.

2. LITERATURE REVIEW

Tremendous literature is available published by academic community, researchers, educationists at the national and international levels. For example, Hazara and Das (2018) compared several online learning repositories, namely, eGyankosh, e-PG Pathshala, MIT rescources, and Shodhganga employing some analytical parameters like general attributes, content factors, retrieval related aspects, post-processing features and interface related characteristics. The study highlights that online learning repositories are not only very important tools for students, academicians and general users. In another study, Adil et al. (2022) explored the use pattern of OERs by students, teachers, and researchers for academic purposes. Their study elucidated the advantages and challenges associated with OERS within the academic context. Lima-Lopes and Biazi (2022) examined the development of OER from 2012 to 2017 and provided their views on maximizing the usage of

open-licensed resources. Singh et al. (2022) provided an overview of various electronic resources available at the National Digital Library of India and their study emphasized its importance in supporting research activities during COVID pandemic by scientists and researchers.

3. OBJECTIVES OF THE STUDY
To identify the Indian online learning repositories which are useful to the graduate and post-graduate students. To examine the usefulness of OERs in learning and research progress of graduate and post-graduate students.

4. METHODOLOGY
To achieve the objectives of the study, data was collected by exploring several online learning repositories of Indian origin. The study employed usefulness of OER content for learning, and research capabilities of graduate and post-graduate students.

Table 1. Indian online open educational resources available to graduate and post-graduate students

Sl. No.	Name of OERs	Institutions developing and hosting the OERs	Year of Establishment	URL
1	eGyankosh	Indira Gandhi National Open University (IGNOU)	2005	http://egynkosh.aci.in
2	ePG-Pathshala	Information and Library Network (INFLIBNET) Centre, University Grants Commission (UGC), Under the Ministry of Education, Government of India	2014	https://epgp.inflibnet.ac.in
3	SWAYAM (Study Webs of Active Learning for Young Minds)	Information and Library Network (INFLIBNET) Centre, University Grants Commission (UGC), Under the Ministry of Education, Government of India	2017	https://swayam.gov.in
4	SWAYAM Prabha	Ministry of Education, Government of India	2017	https://www.swayamprabha.gov.in
5	Vidya-Mitra	NME-ICT (National Mission on Education through Information and	2014	https://vidyamitra.inflibnet.ac.in

		Communication Technology), MHRD		
6	Shodhganga	Information and Library Network (INFLIBNET) Centre, University Grants Commission (UGC), Under the Ministry of Education, Government of India	2009	https://shodhganga.inflibnet.ac.in

5. ANALYSIS AND INTERPRETATION OF RESULTS

5.1 eGyankosh: It is a National Digital Repository to store, index, preserve, distribute and share the digital learning resources developed by the Open and Distance Learning Institutions in the India and it is managed by learning resources. This is managed by Indira Ghandhi National Open University, New Delhi and the digital resources are quite useful to graduate and post-graduate students.

5.2 e-PG-Pathshala: e-PG Pathshala is an initiative of the Ministry of Human Resources and Development (MHRD), Government of India under its National Mission on Education through ICT (NME-ICT) being executed by the UGC. The content and its quality being the key component of education system, high quality, curriculum-based, interactive e-content in 70 subjects across all disciplines of social sciences, arts, fine arts and humanities, natural & mathematical sciences.

5.3. SWAYAM - (Study Webs of Active Learning for Young Aspiring Mindsis) is a programme initiated by Government of India and designed to achieve the three cardinal principles of Education Policy viz., access, equity and quality. The objective of this effort is to take the best teaching learning resources to all, including the most disadvantaged. SWAYAM seeks to bridge the digital divide for students who have hitherto remained untouched by the digital revolution and have not been able to join the mainstream of the knowledge economy. The courses hosted on SWAYAM are in 4 quadrants – (1) video lecture, (2) specially prepared reading material that can be downloaded/printed (3) self-assessment tests through tests and quizzes and (4) an online discussion forum for clearing the doubts. Steps have been taken to enrich the learning experience by using audio-video and multi-media and state of the art pedagogy / technology. In order to ensure that best quality content is produced and delivered, ten National Coordinators have been appointed. They are: AICTE (All India Council for Technical Education) for self-paced and international courses; NPTEL (National Programme on Technology Enhanced Learning) for Engineering; UGC (University Grants Commission) for non-technical post-graduation education; CEC (Consortium for Educational Communication) for under-graduate education; NCERT (National Council of Educational Research and Training) for school education; NIOS (National Institute of Open Schooling) for school education; IGNOU (Indira Gandhi National Open University) for out-of-school students; IIMB (Indian Institute of Management, Bangalore) for management studies; NITTTR (National Institute of Technical Teachers Training and Research) for Teacher Training programme; INI (Institutes of National Importance) for Non-Technical Courses.

Courses delivered through SWAYAM are available free of cost to the learners, however learners wanting a SWAYAM certificate should register for the final proctored exams that come at a fee and attend in-person at designated centres on specified dates. Eligibility for the certificate will be announced on the course page and learners will get certificates only if this criterion is matched. Universities/colleges approving credit transfer for these courses can use the marks/certificate obtained in these courses for the same.

5.4. SWAYAM PRABHA - The SWAYAM PRABHA is a group of 40 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite. Every day, there will be new content for at least (4) hours which would be repeated 5 more times in a day, allowing the students to

choose the time of their convenience. The channels are uplinked from BISAG-N, Gandhinagar. The contents are provided by IITs, UGC, CEC, IGNOU. The INFLIBNET Centre maintains the web portal.

5.5 Vidya-Mitra - Vidya-mitra is an online learning portal for all the e-content projects developed under the NME-ICT (National Mission on Education through Information and Communication Technology), MHRD. The portal provides facility to search and browse all hosted content wherein a learner can easily access the desired material including audio/video learning material, textual material, multimedia-enriched materials etc. through a single interface. Moreover, features of faceted search, usage statistics, project-wise access, My-Space are incorporated in this portal.

5.6 Shodhganga – It is a reservoir of Indian theses and dissertations. The UGC Notification (Minimum Standards & Procedure for Award of M.Phil. / Ph.D Degree, Regulation, 2009 Amendment made on 2016) dated 5th May 2016 mandates submission of electronic version of theses and dissertations by the researchers in universities with an aim to facilitate open access to Indian theses and dissertations to the academic community world-wide. Online availability of electronic theses through centrally-maintained digital repositories, not only ensure easy access and archiving of Indian doctoral theses but will also help in raising the standard and quality of research. This would overcome serious problem of duplication of research and poor quality resulting from the "poor visibility" and the "unseen" factor in research output. As per the Regulation, the responsibility of hosting, maintaining and making the digital repository of Indian Electronic Theses and Dissertation (called "Shodhganga"), accessible to all institutions and universities, is assigned to the INFLIBNET Centre.

"Shodhganga" is the name coined to denote digital repository of Indian Electronic Theses and Dissertations set-up by the INFLIBNET Centre. The word "Shodh" originates from Sanskrit and stands for research and discovery. The "Ganga" is the holiest, largest and longest of all rivers in Indian subcontinent. The Ganga is the symbol of India's age-long culture and civilisation, everchanging, ever-flowing, ever-loved and revered by its people, and has held India's heart captive and drawn uncounted millions to her banks since the dawn of history. Shodhganga stands for the reservoir of Indian intellectual output stored in a repository hosted and maintained by the INFLIBNET Centre.

6. FINDINGS AND CONCLUSION:

It can be concluded that, ePGPathshala and SWAYAM play a crucial role in higher education by offering extensive postgraduate learning resources in various subjects. Vidya-Mitra complements these platforms with diverse resources like OER, e-texts, and self-assessment tools, supporting various learning needs. Swayam Prabha DTH broadcasting increases accessibility, especially for students with limited internet access. Shodhganga's vast theses repository highlights a robust research environment, while eGyankosh provides comprehensive courses from certificate to postgraduate levels. Together, these platforms significantly enhance the accessibility, quality, and reach higher standards in graduate and post-graduate courses.

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