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# Open Education Platform and Resources in Indian Academics

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**Abstract:** *Open education has become a key driver of change in Indian academics, transforming how knowledge is created, shared, and used. This change is fueled by two main goals: making sure everyone has fair access to quality education, and making the most of the fast-growing digital infrastructure that now reaches even the most remote areas of the country. Recognizing the varied learning needs of its people — from children in rural villages to university students and lifelong learners in cities — policymakers have promoted open, technology-based learning models to close long-standing gaps in access and quality. Through a mix of government programs, partnerships between universities, and specialized online libraries, India has built a wide network of open education platforms. These platforms overcome traditional barriers of distance, language, and institutional limits, offering flexible, self-paced learning in multiple languages. By making top-quality resources available to all, they encourage lifelong learning, support career growth, and allow learners to choose their own learning paths.*

*This article explores India's open education system in depth — looking at how the major platforms started, how they work, and why they matter in teaching and learning. It also examines their real-world impact on students and teachers, highlights the challenges that still remain, and suggests ways to create a more inclusive, strong, and future-ready education system built on open access to knowledge.*

**Keywords:** *Open Education, Open Education Resources, Open Education Platform and Resources, Open Access, Indian Academics.*

## I. INTRODUCTION

In recent years, India's education system has moved rapidly toward digital learning to deal with the challenges of large student numbers, diverse languages, and unequal access to resources. One key approach in this shift is the use of Open Education Platforms and Resources (OEPR) — a combination of online platforms and freely available, openly licensed learning materials. These platforms act as delivery channels, while the resources they host include textbooks, lectures, videos, simulations, and other educational content that anyone can access and use without cost. OEPR makes learning more democratic and inclusive by removing barriers of geography, affordability, and institutional limitations. It allows a school student in a small village, a college learner in a regional town, or a working professional in a big city to all access the same high-quality educational material. Because India's learners come from different social, economic, and linguistic backgrounds, OEPR has become an essential tool for improving both fairness (equity) and academic quality across the country.

Government policies have played a big role in promoting OEPR. Initiatives such as the National Mission on Education through ICT (NMEICT) and guidelines in the National Education Policy (NEP) have supported the creation of digital platforms that provide curriculum-based, high-quality content to learners nationwide. These frameworks also encourage institutions to recognize online learning for credit, making OEPR an integral part of formal education.

## II. WHAT IS OEPR?

Before understanding Open Education Platforms and Resources (OEPR), it helps to first look at the idea of a platform economy. In a platform economy, a digital platform connects different users and builds a network between them. Through this network, resources or services can be channelled efficiently according to demand. In the education sector, this concept allows learning materials to be shared widely and quickly with those who need them.

The term Open Education Platforms and Resources is a combination of two ideas — Open Education Platforms (OEP) and Open Educational Resources (OER).

- 1) Open Education Platforms are online systems where educational content is publicly accessible. The academic material is usually provided by qualified content creators, such as publishers, universities, or research organizations.
- 2) Open Educational Resources are the actual learning materials — such as textbooks, lecture videos, research articles, and assignments — that are available for free use.

The roots of the OER concept can be traced back to the open access (OA) movement in the early 21st century. This movement began in American and European universities as a response to the high subscription costs charged by academic journals. Over time, open access gained global momentum, encouraging the widespread use of OER and the promotion of OA publishing models.

OER are defined as “teaching, learning, and research resources that are in the public domain or have been released under a license that allows free use and repurposing by others.” Today, many OER are licensed under Creative Commons licenses, which clearly state how materials can be used, adapted, combined with other resources, and shared.

In simple terms, Open Education Platforms and Resources are platforms that host open access educational content, making it freely available to anyone. These platforms became especially important during times of crisis, such as pandemic-related school and university closures, when the demand for online learning surged dramatically.

The background of OEPR is also linked to the rise of Massive Open Online Courses (MOOCs), first introduced in 2008, which brought the idea of large-scale, free online learning into the mainstream.

### III. MAJOR NATIONAL OPEN EDUCATION PLATFORMS

#### A. Swayam

SWAYAM is India’s flagship online learning platform, offering free courses for students from school to postgraduate level. Developed by top institutions like IITs, IIMs, and central universities, it provides video lectures, reading materials, assignments, and discussion forums. Learners can study at their own pace, and those who want official recognition can take proctored exams. Many universities across India accept SWAYAM credits under UGC and AICTE guidelines.

#### B. NPTEL

The National Programme on Technology Enhanced Learning (NPTEL) is a joint project of the IITs and IISc that focuses on engineering, science, and technology education. It offers full-semester courses with video lectures, assignments, and exams. Students and professionals can earn certificates that are valued by industry. NPTEL is widely known for its high-quality STEM (Science, Technology, Engineering, and Mathematics) content.

#### C. Diksha

The Digital Infrastructure for Knowledge Sharing (DIKSHA) is an online platform designed mainly for school education and teacher training. Managed by NCERT with support from state governments, it provides textbooks, lesson plans, interactive activities, and training modules in multiple Indian languages. A key feature is its QR code integration in textbooks, allowing students and teachers to easily access related digital content—even in areas with low internet connectivity.

#### D. National Digital Library of India (NDLI)

The National Digital Library of India is a vast online repository that brings together e-books, research articles, videos, and audio lectures from different sources.

It caters to learners of all ages—from school students to researchers—and supports searching in multiple languages. NDLI is a one-stop platform for academic and research resources.

#### E. Other Notable Initiatives

e-PG Pathshala: Postgraduate-level e-content across disciplines, developed by subject experts. ePathshala: NCERT’s platform for school textbooks, audiobooks, and interactive materials.

Virtual Labs: Remote-access laboratory simulations for science and engineering education.

### IV. FEATURES OF INDIAN OPEN EDUCATION RESOURCES

- 1) Free and Open Access: Core learning materials available at no cost; certification may require fees.
- 2) Multimodal Content Delivery: Videos, e-texts, simulations, and quizzes cater to diverse learning preferences.
- 3) Multilingual Availability: Content provided in multiple Indian languages to increase inclusivity.
- 4) Curriculum Alignment: Materials mapped to NCERT, UGC, and AICTE frameworks.
- 5) Credit Transfer: SWAYAM’s credit recognition mechanism links online learning with formal degree programs.

## V. IMPACT ON INDIAN ACADEMICS

Open education platforms have expanded access to quality resources beyond urban centers. Learners from smaller towns and rural areas can now access lectures by premier faculty and world-class course materials.

During periods of school and university closures, platforms such as DIKSHA, NDLI, and SWAYAM played a critical role in maintaining continuity of education. They have also supported continuous professional development for teachers and enabled students to pursue specialized skills that may not be offered locally.

## VI. CHALLENGES

Despite their promise, open education platforms face several persistent challenges:

- 1) Digital Divide: Limited internet access, lack of devices, and uneven electricity supply in rural areas.
- 2) Teacher Preparedness: Many educators require training to integrate digital resources effectively.
- 3) Language Barriers: Need for more localized and contextually relevant content.
- 4) Credit Portability: While frameworks exist, recognition of online course credits is still inconsistent across institutions.
- 5) Quality Assurance: Ensuring consistent academic rigor across all open resources remains an ongoing task.

## VII. POLICY AND INSTITUTIONAL SUPPORT

Government policies have provided clear direction for the integration of OER into mainstream education. The UGC and AICTE have issued guidelines for credit recognition of online courses, while NCERT has embedded digital resources into textbooks via QR codes. State governments have also adopted DIKSHA as a backbone for teacher training and student resources.

## VIII. RECOMMENDATIONS

- 1) Expand Infrastructure: Improve last-mile connectivity and provide affordable devices for students.
- 2) Enhance Teacher Training: Offer blended professional development programs for effective digital pedagogy.
- 3) Strengthen Quality Control: Create peer review and accreditation systems for OER.
- 4) Promote Local Content: Encourage translation, adaptation, and creation of culturally relevant materials.
- 5) Streamline Credit Transfer: Broaden adoption of online course credit recognition across all universities.

## IX. CONCLUSION

Open education platforms have dramatically transformed the Indian academic landscape, breaking barriers of distance, cost, and limited institutional capacity. Today, students in remote villages can access the same high-quality lectures, course materials, and learning resources as those in major urban universities. This has been made possible through a combination of robust digital infrastructure, the availability of content in multiple Indian languages, and government policies that encourage free and open access to education.

These platforms are not only helping students prepare for exams or gain degrees but are also enabling lifelong learning, professional upskilling, and teacher training. For example, a science teacher in a rural school can enhance their knowledge through SWAYAM or NPTEL, while a student in a small town can access research papers from the National Digital Library of India (NDLI) without ever stepping into a big-city library.

The real challenge now is not just to make these resources available, but to weave them meaningfully into everyday teaching and learning practices. Teachers need support and training to integrate digital materials into lesson plans, students need guidance on how to make the most of online courses, and institutions must adapt their assessment and credit systems to include these resources. If done well, open education platforms can move beyond being repositories of information and become active, dynamic tools that truly transform the educational experience for every learner in India.

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