



## SWAYAM AND NATIONAL MOOC PLATFORM: IMPLEMENTATION AND IMPACT

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### RESEARCH ARTICLE



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#### Abstract

The national Massive Open Online Course (MOOC) system in India SWAYAM (Study Webs of Active Learning for Young Aspiring Minds) started in 2017 as part of the Ministry of Education has become a paradigm shift in the democratization of quality education and the reinforcement of the digital learning environment in the country. The platform was designed based on the goals of access, equity and quality, and to solve significant issues in Indian education, such as low institutional capacity, faculty shortage, and the geographical inequality of learning access. SWAYAM has over 5.6 crore enrollments, 1.21 crore registered users, more than 11,800 completed courses and 4.4 million certifications awarded to date, having proliferated affordable, flexible learning to a wide range of learners, including high school and postgraduate students. Its e-tutorials, e-content, e-discussion forums and self assessments four-quadrant instructional design allows them to have a comprehensive learner-centric experience. With the assistance of national coordinators like NPTEL, AICTE, UGC, CEC, NCERT, NIOS, IGNOU, IIM-B and NITTTR, the platform incorporates quality academic content of the leading institutions like IITs and IIMs. UGC-identified credit transfer of a maximum of 40% has made the formal approval of online learning in the higher education possible. SWAYAM showed remarkable capacity to endure the COVID-19 crisis and keep the enrollment and learning continuity unchanged and providing more courses in AI, data analytics, and programming to achieve greater employability. Despite the current obstacles in the area of completion rates, digital access, and learner participation, SWAYAM continues to be an important element in the realization of the vision of the National Education Policy (NEP 2020) of a technology-driven, inclusive, and lifelong learning ecosystem.

**Keywords:** SWAYAM, Digital Education, Online Learning, Credit Transfer, Lifelong Learning, Digital Divide

#### Introduction

SWAYAM is an ambitious project of India to democratize education by a digital learning platform based on a massive level that was introduced by the Ministry of Education in 2017. Being the national Massive Open Online Course (MOOC) platform, SWAYAM reflects the vision of the government to reduce the digital divide and provide equal access to quality higher education within the wide geographical and socio-economic environment of the country. The platform uses the information and communication technology to provide free online courses at high school level up to postgraduate level in fields such as engineering and sciences to humanities and social sciences. SWAYAM was created based on the themes of accessibility, affordability, and inclusiveness to solve the most pressing issues within the system of education in India such as a shortage of quality faculty, infrastructural inaccessibility in rural regions, and the inability of traditional organizations to keep up with the increased student population. The platform combines video lectures, e-content, assessments, and discussion forums, and is held to academic standards by offering participation in universities and institutions via the framework of the University Grants Commission. SWAYAM can collaborate with the leading educational institutions (such as IITs, IIMs, central universities, etc.) to provide the quality of content and at the same time, make teaching of the highest quality accessible to all, previously available only to the elite institutions. This project is based on the attractiveness of the National Education Policy of India in establishing technology-related learning opportunities and is a paradigm shift to flexible and learner-focused education across the traditional classroom border, ultimately interested in making India a knowledge economy through arming millions of learners with skills and qualifications that would be required in the modern workplace.

#### Overview of Swayam

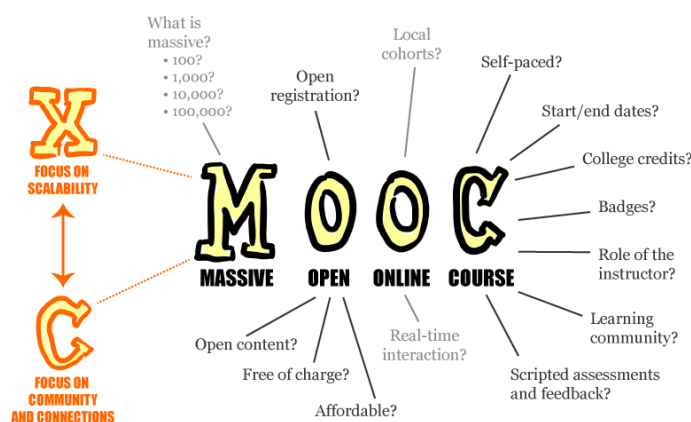
SWAYAM, was a national MOOC platform, launched by (Pranab Mukherjee, President of India) the Government of India on 9 July 2017 as part of the Digital India initiative to deliver online education to students aged Class 9 to postgraduate level with

high quality and at no cost. SWAYAM is a developed course platform by the Ministry of Education and AICTE, and it is based on technical assistance: There are thousands of courses offered on it, taught by the faculty of the leading institutions like IITs, IIMs, IISERs, and IGNOU. The platform has four well-organized features such as e-tutorials, e-content, discussion forums, and self-assessment, that facilitate an interactive learner based digital learning experience. SWAYAM has been able to become one of the biggest online learning environments in India with more than 1.21 crore registrations, 4 crore + enrollments, more than 11700 total courses, and lakhs of certifications. Courses are developed in other areas of education by ten national coordinators that include AICTE, NPTEL, UGC, CEC, NCERT, NIOS, IGNOU, IIMB, NITTTR, and INI. The platform also endorses accessibility efforts such as ISL-based video content of PM eVIDYA and would closely suit the NEP 2020 objectives, which prioritize inclusive, flexible, and technology-based education. In general, SWAYAM is a transformative tool in terms of democratization of education through free access, digital literacy, and lifelong learning in various fields.



### MOOCs and India's Educational Transformation

Massive Open Online Courses (MOOCs) are a disruptive form of education, an organised learning framework done online and accessible freely to literally unlimited numbers of students and India has become a strategic player in tapping into this potential through its national programmes such as SWAYAM to deal with its deep rooted issues of scale, access, and quality. The government capitalizes on the main MOOC principles, which include enormous scale, open access, online provision and a structured course structure, in order to democratize education, including free courses at the school levels up to post-graduation levels, designed by the leading institutions, such as the IITs and NCERT. The transformative potential of such platforms is considerable, but at the same time, they offer flexible and cost-efficient learning and allow credit transfer, inconclusive results persist, such as the digital divide and more active involvement of learners. Therefore, MOOCs in India are not only online classes but a national tool of significant importance to promote an inclusive, skilled, and informed society with the goal of sealing gaps in education and empowering millions of learners in the nation.



### Implementation of the Swayam Platform

The national platform of MOOC in India is the SWAYAM platform, the initiative of the Ministry of Education, aiming to offer free quality education to everyone. It is implemented based on a particular four-quarter strategy, 9 national coordinators and credit transfer framework.

#### Implementation Details

**Core Principles and Objectives:** Access, equality, and quality are the three main goals of the education program. On July 9, 2017, SWAYAM was launched to meet these goals. The main goal is to close the digital gap between students who haven't had access to good education and those who do by providing an engaging e-content platform from high school through post-graduation.

**The "Four-Quadrant" Approach:** All courses on the SWAYAM platform are structured using a four-quadrant instructional design approach to ensure a comprehensive learning experience:

- **e-Tutorial (Video Lectures):** Audio and video materials that are organized and taught by experienced teachers. These materials include cartoons, exercises, and virtual labs.

- **e-Content (Reading Material):** Specially prepared, downloadable, and printable reading materials (e-books, articles, case studies, etc.) to support self-study.
- **Self-Assessment Tests:** A series of tests, quizzes, assignments, problems, and solutions to help students evaluate their understanding and progress.
- **Online Discussion Forum:** An online platform for students to interact with peers and course coordinators/faculty to clarify doubts and engage in discussions.

**National Coordinators:** Nine national-level institutions are responsible for curating, developing, and delivering the course content for specific educational sectors:

National Coordinator	Responsibility
AICTE	Self-paced and international courses, and technical education
NPTEL	Engineering and physical sciences
UGC	Non-technical post-graduation education
CEC	Undergraduate education
NCERT	School education (classes 9-12)
NIOS	School education (classes 9-12) and out-of-school students
IGNOU	Out-of-school students and distance learning
IIM-B	Management studies
NITTTR	Teacher training programs

**Mechanism of Delivery and Certification**

- **Access:** The courses are available for free to anyone, anytime, anywhere via the SWAYAM portal and mobile app, provided there is an internet connection.
- **Credit Transfer:** The University Grants Commission (UGC) and AICTE have regulations allowing universities to adopt SWAYAM courses and transfer up to 40% of the total credits for a degree program into the student’s academic record.
- **Certification:** While learning is free, students who want a formal, proctored certificate must register for the final exam and pay a nominal fee. Exams are conducted at designated centers across the country, often by the National Testing Agency (NTA).
- **SWAYAM Prabha:** To reach learners in remote areas with limited internet access, high-quality educational programs are also telecast 24x7 through 40 educational DTH (Direct-to-Home) television channels, with content archived on YouTube.

**Challenges:** Implementation faces challenges such as the need for increased awareness among students and faculty, bridging technological barriers in rural areas, and the demand for more courses in regional languages. The completion rate for MOOCs on the platform can also be low, with a need for more active mentoring and support.

**Impact of Swayam and National MOOC Platform on Indian Education**

The SWAYAM and National MOOC Platform has had a transformative impact on Indian education, primarily by democratizing access to quality education and bridging the digital divide. The platform offers courses from premier institutions free of cost, though completion rates remain an ongoing challenge.

As of recent data (up to October 2024), the platform demonstrates substantial reach and engagement:

Metric	Numbers
<b>Total Enrollments</b>	Over 5.6 crore (56 million+)
<b>Unique Users Registered</b>	Approximately 1.21 crore (12.1 million)
<b>Total Certifications Issued</b>	Over 4.4 million
<b>Total Courses Offered</b>	More than 11,800 courses completed
<b>Exam Registrations</b>	Over 4.9 million
<b>Average Completion Rate</b>	10-13% (for certification seekers)
<b>Platform Benchmark</b>	Higher than typical MOOC platforms (1-5% average)

**Key Areas of Impact**

1. **Bridging the Digital Divide:** SWAYAM makes sure that everyone has equal access to high-quality education, no matter where they live or how much money they have. Students from remote areas can access courses from premier institutions like IITs and IIMs through an internet connection, effectively democratizing higher education.
2. **Credit Transfer and Institutional Integration:** The University Grants Commission (UGC) permits universities to accept up to 40% of program credits from successfully completed SWAYAM courses. This policy formally integrates online learning into mainstream higher education, allowing students to combine traditional and digital learning pathways.

**3. Enhanced Employability:** The platform offers industry-relevant courses in high-demand fields:

- Artificial Intelligence (AI)
- Data Analytics
- Programming languages (Python, C++, Java)
- Emerging technologies

These courses directly equip students and working professionals with job-ready skills, improving their career prospects in a competitive market.

**4. Cost-Effectiveness**

Aspect	Details
Course Access	Free of cost
Certification Fee	Nominal fee for final proctored examination
Value Proposition	Access to premier institutional content at a fraction of traditional education costs

**5. Diverse Course Offerings**

Educational Level	Coverage
School Education	Class 9 onwards
Higher Education	95% of total content
Post-Graduation	Advanced specialized courses
Skill Development	Professional and vocational training

**6. Resilience During COVID-19 Pandemic:** Unlike many global MOOC platforms that experienced enrollment drops during the pandemic, SWAYAM:

- Maintained consistent enrollment levels
- Demonstrated strong growth trajectory
- Ensured educational continuity during lockdowns
- Proved crucial for uninterrupted learning access

**7. Lifelong Learning and Skill Enhancement:** The platform supports continuous professional development, allowing working professionals to upskill and reskill without leaving their jobs, fostering a culture of lifelong learning.

**Challenges:** Despite its successes, SWAYAM faces ongoing challenges:

Challenge	Details
Overall Completion Rates	While 10-13% is higher than global averages, significant room for improvement exists
Digital Infrastructure	Internet connectivity issues in rural areas limit access
Learner Engagement	Maintaining motivation and engagement in self-paced learning environments

**Conclusion**

In the end, the study concludes that the SWAYAM platform and the Indian National MOOC initiative has brought much transformation in the education system by democratizing higher quality education and eliminating the historical geographical and socio-economic obstacles to access education. SWAYAM has managed to mainstream digital learning by offering free online courses at the best institutions, merging a four-quadrant model of learning, and transferring credits up to 40% under the UGC regulations, which has helped the aspirations of NEP 2020. It has been especially effective in skills development and employability, with industry-relevant courses in the very new fields of artificial intelligence, data analytics, and programming. Its contribution in the COVID-19 pandemic also showed its significance in guaranteeing academic continuity. But there are still various challenges that include digital infrastructure disparities, insufficient interaction with learners and comparatively low completion rates. These shortcomings notwithstanding, SWAYAM is a revolutionary step towards inclusive, technology-based and lifelong learning to millions of Indian students.

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