Growth of E-Learning Through Swayam and Moocs in India

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Abstract

According to the "Digital India Initiative and Electronic Delivery of Services," the Ministry of Human Resource Development has been entrusted with the responsibility of creating and making "Massive Online Open Courses (MOOCs)" accessible to students across the nation. "Study Webs of Active Learning for Young Aspiring Minds" is an important new effort that the Ministry of HRD has started in order to guarantee that every student in the country has access to the best higher education possible (SWAYAM). Information and communication technology (ICT)-based online courses using SWAYAM's unified platform and portal will be available for all subjects in higher education as well as courses in the skill sector. Up to 20 percent of online courses taken through SWAYAM maybe counted for credit under the "Credit Framework for Online Learning Courses through SWAYAM, Regulation 2016" that UGC and AICTE have issued. Successful students enrolled in traditional Institutes will have their grades transferred to their academic records. Within two years, it is planned to host on SWAYAM roughly two thousand courses and eighty thousand hours of educational content for school, undergraduate, graduate, engineering, law, and other professional courses.

With effect from November 15, 2016, the MHRD made the SWAYAM site (https://swayam.gov.in) public on a trial basis. SWAYAM lists over 270 online courses and about 80 MOOCs are frequently offered; several thousands of students have enrolled in these courses. Phase-II SWAYAM, which has better features, is anticipated to be released in the second quarter of 2017, and other features will include built-in credit transfer mechanisms. Through SWAYAM and MOOCs, an analysis of the growing performance of online education in India has been made. Based on the results, the study will recommend some steps for the expansion of e-learning.

Keywords: *E-learning, SWAYAM, NPTEL, MOOCs, Growth.*

Introduction: -

The emergence of computers and the internet in the late 20th century led to an expansion of e-learning tools and delivery techniques. India has long seen education as the main driver of national growth, from the early 1970s when satellite technology was first used to the current interest in a specialized SATellite for EDUcation (EDUSAT). The newest method of education is Massive Open Online Courses (MOOCs). MOOCs offer synchronous online courses on a weekly calendar basis or according to a predetermined timetable. Participation in the lectures and completion of the assigned exercises can be done at the user's convenience from anywhere in the world. Additionally, it facilitates attending and making up missed lectures at the convenience of the users. The penetration of Internet and mobile telephony in India has been enormous. Internet usage was risen by 28 percent in 2016 and currently data users are estimated to be 355 million people.

In academic journals, the media, conferences, and blogs, MOOCs generated unparalleled publicity. With a large population of young people and a middle class that is continuously looking to advance their knowledge, India was a favourable hunting ground for MOOC. MOOCs can play a significant role in delivering higher education in India, where there is a shortage of qualified

professors, as they offer equitable access to everyone regardless of socioeconomic background, gender, age, and cost affordability. It also responds to significant societal demands for learning.

The Government of India started a programme called SWAYAM. It aims to uphold the concepts of access, equity, and quality. The UGC (Credit Framework for Online Learning Courses through SWAYAM) Regulation 2016 has already been published by the UGC, recommending that institutions choose courses for which credits can be applied to students' academic records for courses taken through SWAYAM. There are occasionally insufficient classrooms, faculty members or tutors, gear, or software at the educational facility.

The idea of e-learning is highly helpful for making the teaching and learning process time and money efficient. As a result, e-learning may be superior to classroom instruction. Simply said, e-learning is a cutting-edge educational idea that makes use of technology to enable studying anywhere, anytime. The integration of online learning into the educational system is a positive development since it encourages the interaction of knowledge, expertise, and technology. Online lectures, interactive activities, discussion forums, in-depth explanations, and concept-driven exams, it has revitalized the educational spectrum. Numerous institutions, including universities, colleges, and others, offer organized online learning.

Methodology

The researcher collected and used secondary data for this present study. The secondary is collected from SWAYAM website, NPTEL portal, and NPTEL statistics, IGNOU-COE, UGC, COE, Annual report of Ministry of Education, Journals and MOOCs website. In SWAYAM portal, the national coordinator's data and year wise statistics data were collected from the period of 2014-2022.

Result and Discussion

Growth performance of SWAYAM and NPTEL

The table 1 explains the growth performance of SWAYAM NPTEL period from 2014to 2021. It analyses the Number of students enrolled, registered, present and successful completion of course with percentage of registered, pass and attendance.

Table 1: Students Enrolled, Registered, and certified wise (2014 to 2021)

Run	Period	No. of Courses	Enrolled	Registered	Present	Certified	Toppers	Registered %	Pass %	Attendance %
1	Jan-June 2014	1	53807	1380	1182	546	48	2.56	46.19	85.65
2	Jul-Dec 2014	2	58947	1653	1549	1526	100	2.8	98.52	93.71
	2014	**3 (0.08%)**	**1,12,754 (0.71%)**	**3,033(0.19%)**	**2,731**	**2,072**	**148**	**2.6%**		
3	Jan-June 2015	18	89045	2564	2113	1931	156	2.88	91.39	82.41
4	Jul-Dec 2015	36	160819	7291	6006	3165	348	4.53	52.7	82.38
	2015	**54 (1.54%)**	**2,49,864 (1.58%)**	**9,855 (0.62%)**	**8,119**	**5,096**	**504**	**3.9**		
5	Jan-June 2016	64	241691	17292	15292	10252	884	7.15	67.04	88.43
6	Jul-Dec 2016	104	401176	31444	26544	19595	1159	7.84	73.82	84.42

	2016	**168 (4.80%)**	**6,42,867 (4.06%)**	**48,73 (3.09%)**	**41,836**	**29,847**	**2,043**	**7.5**		
7	Jan-June 2017	130	535223	44099	38405	31117	1706	8.24	81.02	87.09
8	Jul-Dec 2017	159	1049265	70316	63398	54092	3026	6.7	85.32	90.16
	2017	**289 (8.2%)**	**1,584,488 (10.02%)**	**114,415 (7.26%)**	**101,803**	**85,209**	**4,732**	**7.2**		
9	Jan-Apr 2018	226	934182	86954	76126	66141	3693	9.31	86.88	87.55
10	Jul-Oct 2018	270	1330816	161300	144078	124317	6937	12.12	86.28	89.32
	2018	**496(14.18%)**	**2,264,998(14.33%)**	**2,48,254(15.75%)**	**2,20, 204**	**1,90,458**	**10,630**	**10.96**		
11	Jan-Apr 2019	291	1619065	204061	183282	161902	12262	12.6	88.33	89.82
12	Jul-Dec 2019	359	1827564	253387	222826	164765	9641	13.86	73.94	87.94
	2019	**650 (18.58%)**	**3,446,629 (21.81%)**	**4,57,448 (29.02%)**	**4,06,108**	**326,667**	**21,903**	**13.2**		
13	Jan-June 2020	391	2042505	87086	30614	24350	1640	4.26	79.54	35.15
14	Jul-Dec 2020	417	2064105	191653	170043	125747	7478	9.29	73.95	88.72
	2020	**810 (23.16%)**	**4,106,610 (25.99%)**	**2,78,739 (17.68%)**	**200,657**	**150,097**	**9,118**	**6.78**		
15	Jan-Apr 2021	505	1663929	178687	141824	105073	2813	10.74	74.09	79.37
16	Jul-Dec 2021	524	1726213	236628	225530	163098	8788	13.71	72.32	95.31
	2021	**1029 (29.42%)**	**3,390,142 (21.45%)**	**415,315 (26.35%)**	**367,354**	**268,171**	**11,601**	**12.25**		
Total	**2014-2021**	**3497 (100%)**	**15798352 (100%)**	**1575795 (100%)**	**1348812**	**894316**	**60679**			

Source: NPTEL portal.

Table 1 reveals that 3497 courses have runned by SWAYAM-NPTEL program during 2014-2021 of the total enrolment of 1.1 lakh in 2014, 2.4 lakhs in 2015, 6.4 lakhs in 2016, 15.8 lakhs in 2017, 22.6 lakhs in 2018, 34.5 lakhs in 2019, 41.9 lakhs in 2020, 33.6 lakhsin 2021 in total 15798352 enrollments from the period of 2014-2021. And also explains the number of students registered, presented and certified in SWAYAM-NPTEL from 2014 to 2021. This shows that the gradual increase in every year of student enrolment in the courses. From 2014 to 2021, the number of courses is increased from 0.08 percent to 29.42 percent. Students enrolled rate is increased from 0.71 percent to 29.42 percent and also students registered for exam is increased from 0.19 percent to 26.35 percent. But there is a far variationbetween number of students enrolled and registered. Maximum of 13.2 percent registration in2019 compared to enrolment of students.

Figure 1: Number of Enrolled and Registered from 2014-2021

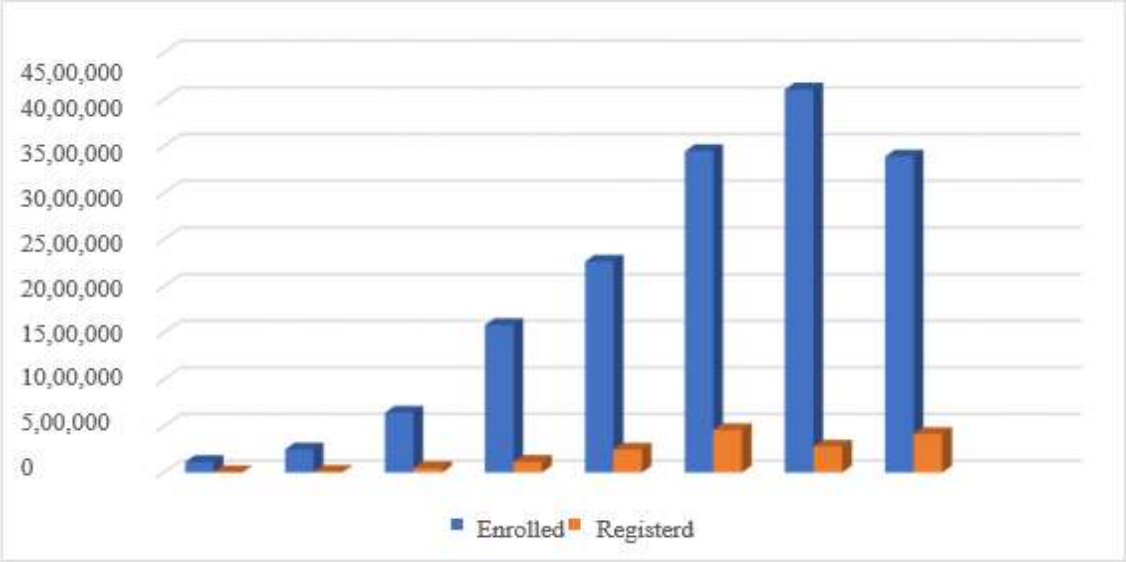


Figure 2: Number of Registered and Present from 2014-2021

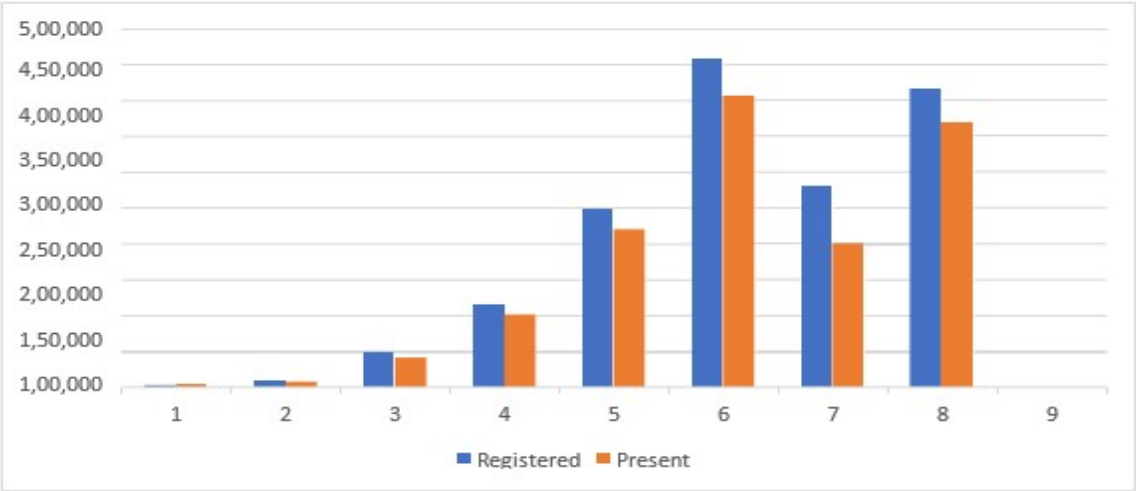


Table 2: Details of IGNOU SWAYAM courses

IGNOU is one of the national coordinators of SWAYAM to offer certificate and Diplomalevel courses including skill-based courses and courses related to life long learning.

Cycle	Total Courses	Total Enrollment	Total Appeared for the exam	Total Passed
JULY 2017	11	15130	Not conducted	Not conducted
JULY 2018	13	21784	318	243
JAN 2019	10	9792		
JULY 2019	16	39550		
JAN 2020	21	56570		
JULY 2020	73	153094		
JAN 2021	106	264854		
JULY 2021	129	181239		
JAN 2022	151	140040		

Source: COE, IGNOU

Table 2 reveals that the IGNOU SWAYAM courses runned from 2017 to 2022. Itclearly shows that the total courses conducted by IGNOU are increased with the year. But thereis no proper conduction of Examination in last 2 years.

Table 3: Overall SWAYAM Courses on various National Coordinators

National Coordinators	Partnering Institutes	Completed courses	Enrollment	Registration	Completion
AICTE	7 (3.44%)	289 (3.56%)	1090420 (3.81%)	160057 (14.67%)	18559 (11.59%)
CEC	19 (8.92%)	1117 (13.78%)	2489364 (8.72%)	61236 (2.45%)	34658 (56.59%)
IGNOU	3 (1.40%)	717 (8.84%)	1250916 (4.38%)	21418 (1.71%)	9123 (42.59%)
IIMB	3 (1.40%)	203 (2.50%)	571767 (2%)	16124 (2.82%)	8902 (55.2%)
NCERT	8 (3.75%)	201 (2.48%)	358263 (1.25%)	0 (0%)	0 (0%)
NIOS	1 (0.46%)	343 (4.23%)	3327638 (11.65%)	0 (0%)	0 (0%)
NTTTRC	3 (1.40%)	157 (1.93%)	358383 (1.25%)	8980 (2.50%)	5111 (56.91%)
NPTEL	26 (12.20%)	4813 (59.39%)	18813698 (65.90%)	1946575 (10.34%)	1094577 (56.23%)
UGC	133 (6.10%)	263 (3.24%)	284812 (0.99%)	12310 (4.32%)	9327 (75.76%)
TOTAL	**203 (100%)**	**8103 (100%)**	**28545261 (100%)**	**2226700 (7.8%)**	**1180257 (53%)**

Source: SWAYAM

Table 3 explains the national coordinators contribution of E-learning in SWAYAM. There are 9 national coordinators in which NPTEL plays a major role in E- learning. NPTEL has 12.20 percent of partnering institutions, 59.39 percent of completed courses, 65.90 percent of enrolments and 10.34 percent of registrations. AICTE has 3.44 percent of partnering institutions, 3.56 percent of completed courses, 3.81 percent of enrolments and 14.67 percent of registrations. CEC has 8.92 percent of partnering institutions, 13.78 percent of completed courses, 8.72 percent of enrolments and 2.45 percent of registrations. IGNOU has 1.40 percent of partnering institutions, 8.84 percent of completed courses, 4.38 percent of enrolments and 1.71 percent of registrations. IIMB has 1.40 percent ofpartnering institutions, 2.50 percent of completed courses, 2 percent of enrolments and 2.82 percent of registrations. NCERT has 3.75 percent of partnering institutions, 2.48 percent of completed courses, 1.25 percent of enrolments. NIOS has 0.46 percent of partnering institutions, 4.23 percent of completed courses, 11.65 percent of enrolments. NTTTRC has 1.40 percent of partnering institutions, 1.93 percent of completed courses, 1.25 percent of enrolments and 2.50 percent of registrations. UGC has 6.10 percent of partnering institutions, 3.24 percent of completed courses, 0.99 percent of enrolments and 4.32 percent of registrations.

Conclusion :

The Growth of SWAYAM and MOOCs is depending on number of students has successfully completed the course. The success of SWAYAM is depends on the quality of

courses it offers to the public and the relevance and the success of the candidates who are all taking these courses. National coordinators contribution and their quality is Good. But there is limitation of successful completion of courses. While concluding, it is suggested that there is a need of creating awareness among the students to do registration for examination to complete the course successfully. For this the national coordinators, institutions and government should encourage the students to use the task-oriented modules, giving incentives like badges, and awareness programs for students in their institutions/Universities.

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