

## TRENDS IN INDIAN HIGHER EDUCATION SYSTEMS

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### **Abstract**

*A trend in Indian education system in the 21st century is leading the ways for blended learning. The COVID-19 pandemic also put lots of opportunity to adopt the ICT applications tremendously. The influence of technology has given opportunities to change the face of today's Indian higher education system at a large. Technology has also enabled the education easy accessible, flexible to learn from home and approachable. India holds the largest networks of higher education system and plays a vital role in the global education sector. Education made open and accessible through Massive Open Online Courses (MOOCs) courses. India Brand Equity Foundation (IBEF) stated that 500 million Indian populations are aged between 5-24 years which offers an extensive opportunity for the global education industry. Calling foreign branch campuses (FBCs) in India is one of the main objectives of NEP 2020.*

**Keywords:** *Indian Education, Higher Education, E-learning, Swayam, Education Tools;*

### **Introduction**

Indian education system drastically changed due to COVID-19 pandemic in terms of adopting the process of online teaching and learning in year 2020 and 2021. Almost across the world announced lockdowns. Schools and Higher Education institutions enforced to close down. This set the new life style of the academic community for the rapid transformation for e-learning. Teachers' work-load has been increased to cope up with the online teaching very quickly. Teachers are greatly appreciated for adopting the situation and handling well. Students had great opportunity to learn from home with influence of Information and Communication Technology (ICT). Many edu-tech companies join hands to provide services at free of cost across the globe, especially for online meeting and learning management systems at a large. Edu-tech sector has been made enormous growth during this pandemic. Jain (2020) noted that e-learning, web-based-learning, open-learning, computer-mediated-learning, m-learning, provides wonderful opportunity to the academic community to learn-teach anywhere, anytime and with any means. Teaching and learning has set the process with fast changes in delivering optimistic approach to education systems. IBEF listed the that Foreign Direct Investment (FDI) equity has stood at US\$ 4,495.19 million from April 2000 to March 2021, as per the Department for Promotion of Industry and Internal Trade (DPIIT).

## Higher Educational Institutions in India

Figure.1 clearly shows that out of 55,165 higher education institutes listed in All India Survey on Higher Education (AISHE), there were 42,343 Colleges, 1,043 universities, and 11,779 Stand Alone institutions. Out of 55,165 higher education institution, there were only 47,726 actual responses received in 2019-20 survey. 17 universities are exclusively for women, in which 3 of them are located in Rajasthan, 2 of them in Karnataka & Tamil Nadu, 1 in each Assam, Andhra Pradesh, Bihar, Haryana, Delhi, Maharashtra, Himachal Pradesh, Uttarakahnd, Odisha and West Bengal respectively. There are 8 top states having the highest number of colleges in India followed by Uttar Pradesh, Maharashtra, Karnataka, Rajasthan, Andhra Pradesh, Tamil Nadu, Madhya Pradesh and Gujarat.

	Universities	Colleges	Stand Alone Institutions
Listed for AISHE 2019-20	1043	42343	11779
Actual Response in AISHE 2019-20	993 (95.2%)	38102 (90.0%)	8631 (73.3%)
Total number of Institutions after pooling data from AISHE 2017-18 to AISHE 2018-19	1019 (97.7%)	39955 (94.4%)	9599 (81.5%)

(Source: ASSHE 2019-20)

**Figure 1 Number of Higher Education Institutions**

As reported in Times of India that the student enrolment was increased upto 11.4% in the period of 2015-16 to 2019-20 and women enrolment increased 18.2% in the same period (Gohain, 2021). Sector wise growth analysis negative (-13.4) reported for science and technology, while medical enrolment increased 51.1%. Also the author stated that in the same period 30.5% of the universities and 8.4% of the colleges increased.

## Online Learning

E-learning offers great potential flexibility and freedom of choice to the learners' community. Students can study, access pre-recorded-content from anywhere at any time. Learners have numerous choices of Massive Open Online Courses (MOOCs) through web-based platforms throughout the world. SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) platform got more popular in India. Ghose (n.d) listed out the following important benefits of e-learning in the Education World magazine as follows;

- Flexibility
- Accessible e-content 24/7
- Cost-effective
- Personalized learning
- Eco-friendly

According to India Brand Equity Foundation (IBEF), India poses the world's second major market for E-learning after the United States of America (USA). Education sector in India is targeted to grasp US\$ 1.96 billion by year 2021 with reach of 9.5 million potential users. The online teaching and learning sector is forecasted to touch US\$ 11.6 billion by 2026. IBEF listed the following Foreign Direct Investment (FDI) equity in Indian education and training sector from April 2000 to March 2021, as follows;

- GMR aviation academy had collaborated with UAE-based emirates security and will jointly offer various aviation and security courses in India.
- Institute of Health & Management (IHM), Australia had announced in May 2021 for offering a scholarships for the value of US\$1.3 million which is equal to Rs.10 Crore to the Indian nurses for recognizing their dedication during COVID-19 pandemic, those who will undertaking the "Gateway to global nursing programme".
- Through Rebright partners, "Virohan" healthcare ed-tech offered a vocational training programme for paramedics in May 2021 which gained US\$3 million through series A Funding.
- NISHTHA is providing the training programme for the 5.6 million teachers in the year 2020-2021.

Also IBEF listed some of the Indian government initiatives as shown below;

- India joined hands in United Nation's E9 initiative in April 2021 with Brazil, Egypt, China, Bangladesh, Mexico, Nigeria, Indonesia, and Pakistan on digital learning and skills for marginalized children and youth, particularly for girl children.
- Government allotted for higher education Rs.38,350.65 (US\$ 5.28 billion) crore and Rs.3,000 crore for Rashtriya Uchchar Shiksha Abhiyan (RUSA).
- Indian Government has set-up the National Digital Educational Architecture (NDEAR) for strengthening the nation's digital infrastructure for education in the Union budget 2021-22.
- Ministry of Education released the guidance for identifying migrant children during COVID-19 pandemic, admitting them for continued education.
- The Ministry of Skill Development and Entrepreneurship collaborated with TATA Indian Institute launched 2 short-term courses in the field of industry automation.

**To acquire any new knowledge, we don't need any special skills and coach,**

**Need a habit of **Self-learning**. – Dr.N.Sundar**

## SWAYAM

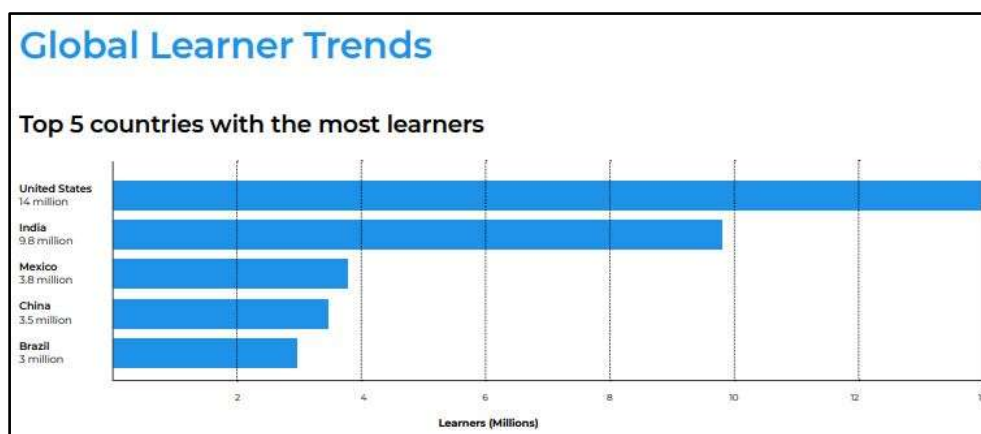
SWAYAM (Study Webs of Active-Learning for Young Aspiring Minds) platform got more popular and one of the greatest initiatives for massive open online courses by Government of India which offers an opportunity for a life-long-learning. *"The current SWAYAM platform is developed by Ministry of Education and NPTEL, IIT Madras with the help of Google Inc. and Persistent Systems Ltd."* (<https://swayam.gov.in/about>). This e-learning platform offers course, taught in classes from 9<sup>th</sup> standard to post-graduate by the Indian and foreign experts. Anybody across the world can enroll courses. There are nine National Coordinators appointed by MHRD respectively UGC, NPTEL, CEC, IGNOU, NCERT, NIOS, IIMB, NITTTR and AICTE for preparing specific electronic courses. These courses offered in four quadrants which include video lecture, hand-outs that can be downloadable, self-assessment tests & quizzes and online discussion forum respectively to enrich the better learning experience through technology.

National Programme on Technology Enhanced Learning (NPTEL / <http://nptel.ac.in>) is a largest electronic repository in the world of courses in the field of basic sciences, engineering, selected humanities and social science subjects which is initiated by MHRD in India. As on August 28, 2021, SWAYM completed 2,471 courses, student enrollment reached 1,25,63,084, exam registrations 11,39,494 and successful certification reached 83,266.

Credit and non-credit based courses are offered by SWAYAM. Credit based courses are taught for at least one semester duration as part of a subject. Non-credit courses are taught skill development which is not part of any curriculum.

## Coursera

Indian academicians are also pursuing online course from other countries. Blow figure.2 revealed that India poses 2<sup>nd</sup> place in the global learner trends of Coursera. It shows that 9.8 million Indian learners were interested in online learning and enrolled.



Source: Coursera

Figure 2 Courseera Global Learners Trends

### **Online Assessment Tools**

Students learning progress is calculated and evaluated by the assessment methods. Traditional teaching methods are focused largely on theory knowledge and examinations. Future evaluation system will be based on the practical and hands-on-training. The blended learning will have to be more flexible for the online assessments.

Most of the institutions use the following assessment tools for the course evaluation.

- Google forms
- Flexi Quiz (Paid & free Verstion)
- Hot potatoes
- Quandary
- Markin
- Insert Learning
- EduPuzzle
- H5P
- Kahoot
- Quiz
- Quizlet
- TAO

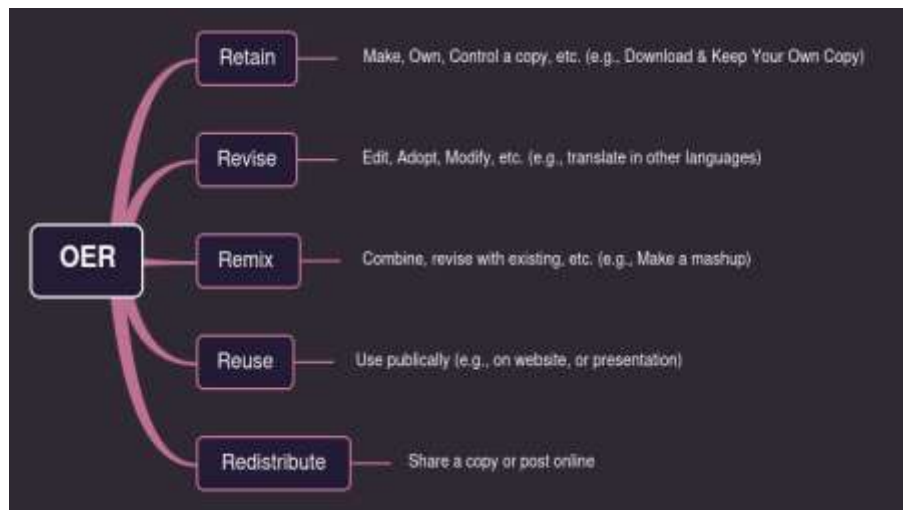
### **Anywhere, Anytime examination**

We are blessed by the technology for online teaching and assessment at difficult times. Examinations were conducted through online mode using technology enabled tools during the COVID Pandemic. Tamil Nadu government announced the online examination for college students during the Feb 1 to 20 according to the Times of India (Raman, 2022). Even though the colleges were started in regular mode in Tamil Nadu from Feb 1, 2022, examinations were conducted through online mode. Online examination reduces the teachers' workload as well students stress. Furthermore, Students have the freedom to choose the location where they want to write their exams peacefully. Proctoring the online examination is little difficult.

### **Open Educational Resources (OER)**

According to UNESCO "Open Educational Resources (OER) are Teaching, Learning and Research materials in any medium – digital or otherwise – that in public domain or under open license that permits no-cost access, use, adopt and redistribution by others with no or limited restriction". The term "**Open Education Resource**" was coined in 2002 at a forum organized by UNESCO on Open Courseware in Higher Education. "OER form part of 'Open Solutions', alongside Free and Open Source software (FOSS), Open Access (OA), Open Data (OD) and crowdsourcing platforms".

The resources are freely available on the web without any cost for access. It can be even used for commercial purpose without any copyright claim which the resources made under open license (Creative Commons). If the resources are not made freely or openly licensed, should be described as an OER. Even though the cost effective aspects, teachers can be used freely available resources for their course they teach. Most of the OER projects are funded a lot to save the students money. OER can also be termed as follows



Source: <http://opencontent.org/definition/>

**Figure 3 Open Educational Resources (5-R)**

### Education Tools

According Dojchinovska (2021) that “*trends in educational technology which include Head mounted Devices (HMD) or Virtual Reality (VR), Immersed Virutal Reality (IVR); Augmented Reality (AR), Electronic Books (eBooks) and Other online digital tools*”. HEIs have adopted the virtual learning to replace the traditional classroom teaching method by using various educational tools. Some of them are available at free, open-source and commercial. There is a main difference between free and open source are as follows;

- **Free** – control with the provider, with the limited features.
- **Open Source** - Entire control with user; user can enable, modify the features that they want.

Educational technology tools are categories in eight different types follows

1. Web conferencing
2. Learning Management System (LMS)
3. Massive Open Online Courses (MOOCs)
4. Mind Mapping
5. Infographics
6. Gamification/Assesment

7. Research Management/Visibility
8. Content Management System (CMS) (Website/blog)



Source: [http://www.eduspectra.com/V2N2/edu\\_spectra\\_v2n2\\_02.pdf](http://www.eduspectra.com/V2N2/edu_spectra_v2n2_02.pdf)

**Figure 1 Educational Tools**

### **NEP 2020 and Higher Education**

First and foremost objectives of the NEP 2020 that India's top performing universities are encouraged to set-up a branch campus in other countries. As well the top performing foreign universities will be permitted to start campuses in India. At least one multi-disciplinary higher education institution is planned to set-up every district or nearby by 2030.

All the higher education institutions will be aimed to become multi-disciplinary institutions, each will have to have 3,000 or more students by 2040. The new education policy is also aimed to achieve from 26.3% (year 2018) to 50% by 2035. Institutions will have to offer Open Distance Learning (ODL).

Arts, Music and Literature, philosophy, Dance, Theatre, Mathematics, Education, Pure and Applied Sciences, Sociology, Statistics, Sports, Economics, Translation, and Interpretation will have to be taught and reinforce in all HEIs. Curriculum will be promoted and included with Credit-based and community engagement projects, Environmental education and value-based education. Academic Bank of Credit (ABC) will be developed, which will be stored digitally academic credit students achieved from other HEIs, will be calculated and awarded accordingly.

### **Barriers of Digital Education**

Present e-learning is not completely regulated by the government of India. Academicians are willing to complete course only through the certified and Government approved organizations for the employment purposes. Online learners will face lots of discomforts while using computers/laptops/mobile phones for long hours. Zalate et al., (2021) revealed on their study that uppermost challenge for online education were insufficient or unstapled internet connectivity, inadequate computer labs, unavailability of computers/laptops, and technical problems. Study found that

the important indicators affecting online learning acceptance were aged under 40-years-old, less than 10 years of teaching experience and male gender.

## Conclusion

Artificial Intelligence (AI) has been set trends in higher education sector in India by empowering through the automation of learning process into electronic learning-teaching-research, assessments, homework tracking and much more. Both learners and instructors can benefit from this learning innovation. Personalized and adaptive learning is the key feature that influencing the 21st century HEIs in India and across the globe. Online learning environment provides comfort to the students to learn-from-home. Also educators can leverage educational tools to conduct the virtual class more engaging. Integration of cloud-based-technology with education is enhancing learning experience. Smart cloud technology merges the academic activities such as virtual classroom, assessment, and homework tracker services and instant reports. In administrative aspects this learning innovation supports online admission, fee management, parent-teacher communication, etc much easier.

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### Annexure: 1

	Swaym-Massive Open Online Courses	<a href="https://swayam.gov.in/">https://swayam.gov.in/</a>
	The SWAYAM PRABHA is a group of 22 DTH channels devoted to telecasting of high-quality educational programmes on 24X7 basis using the GSAT-15 satellite.	<a href="https://www.swayamprabha.gov.in/">https://www.swayamprabha.gov.in/</a>
	Over 74,475,612 resources can be accessed.	<a href="https://ndl.iitkgp.ac.in/">https://ndl.iitkgp.ac.in/</a>
	e-PG-Pathshala provides 700+e-Books for the Post-Graduate Courses 19,000 Videos 30,000 quiz	<a href="http://epgp.inflibnet.ac.in/">http://epgp.inflibnet.ac.in/</a>
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