

Education Through DTH in India: Initiatives of State & Central Government

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Abstract

DTH (Direct To Home) technology is reception of television signals through communication satellite. This paper covers education through DTH initiatives like VANDE Gujarat and Swayam Prabha. Both initiatives cover content for school education to high quality higher education. The students of the schools from various board CBSE, SEB's, ICSE and all lifelong learners can take free education from DTH. 2nd initiative, Swayam Prabha covering 32 channels of secondary & higher secondary, UG & PG non-technical, technical, open schooling and distance learning with teacher education under the Ministry of Human Resource Development. 40 million students from different institutions, colleges ranging from primary to higher education can be benefited of service.

Keywords: DTH Education, Swayam-Prabha, VANDE-Gujarat, MHRD, EDUSAT

1. Introduction

Day by day Indian economy is growing and GDP is increasing every year, there are approximately 314 million internet users in India as per year 2017 statistics. India has the 3rd largest education system in the world after the US and China, but effective quality education doesn't reach all corners of India due to its geographical characteristic. So, government has taken new initiative for smart, effective and quality education in India like online education, online courses, virtual classes and education through DTH etc. It is needless to mention that along with other information and communication technologies, the satellite communication technology can also play important role in bringing to education through DTH and quality education can be delivered to doorsteps at every nook and corner of the country including the states of North-East Region.

2. Education through DTH

“You can teach a student for a day, but if you can teach him to learn by creating curiosity, he will continue the learning process as long as he lives.

“Television is teaching all the time. It does more than the schools and all the institutions of higher learning.

In the world, most of the developed and developing countries are using various technologies for effective education, Government of India is also using technology for education. On 15th August 1984, UGC under the project Country Wide Class Room (CWCR), started media centers AVRCs in 6 universities, later these centers have been renamed as Educational Multimedia Research Center (EMMRC). Door Darshan (National) network started broadcasting education program for UGC, the CWCR program is being telecast on Vyas (24 hours higher education channel).



3. Satellite Technology for Education:

Satellite technology provides a more effective delivery system for communication. It was the vision of Dr. Vikram Sarabhai (a visionary and eminent Scientist). The use of satellite technology is for the development of the country, people and society.

Department of Space through Indian Space Research Organisation has launched satellites for the communication and Tele-Education. EDUSAT is the 1st Indian satellite for educational and communication services. EDUSAT has the main objective to supplement the curriculum-based teaching, effective teacher training to schools, colleges and higher levels of education and to support non-formal education including development.

Then after GSAT series (1 to 15) was launched for communication and education. ISRO's satellites GSAT-8 and GSAT-15 provides tele-education and covers entire India, and some part of Pakistan and Bangladesh. All channels by these two satellites can be received at any place of India.

Government of India and Government of Gujarat (Department of Science and Technology) initiated educational and skill development training and awareness programs through TV broadcasting. Government of Gujarat established one agency BISAG (Bhaskaracharya Institute of Space Application and Geo-informatics) for Gujarat SATCOM Network. BISAG is actively managing and broadcasting 49 channels for Education, comprises of two major national projects for education through DTH: VANDE Gujarat and Swayam-Prabha.

Gujarat government has started a pilot project for the satellite education for primary level. Then after, they expanded this initiative by establishing 16

different channels for primary to higher education, called as VANDE-Gujarat (Video Audio Network for Development and Education – Gujarat). Since over past ten years, the state government has been broadcasting programs related to education, skill enhancement, women empowerment, computer training in police stations, health, agriculture and animal husbandry, departmental training and expansion using satellite-based technology.

In the year 2017, Government of India through MHRD started 32 different channels for the higher education, for various streams like undergraduate, post graduate, distance learning, engineering and including senior secondary and teacher education this initiative is known as Swayam-Prabha.

4. VANDE-Gujarat

The Gujarat government had started DTH Channel for school, college & technical education, which is known as VANDE Gujarat. Under this program 16 DTH channels telecasting content for school, college, technical education as described below:

CH. 1 to 4:

Channel 1 is for administration & training programme of Gujarat government. Major content of this channel e.g., government events & programmes, teacher training, student development and all administrative programs is being telecasted live.

Channel 2 is for health-related (nursing and medical) education, it also focuses on public health improvement. This channel's content is developed by health department of Gujarat government.

Channel 3 is for ITI (Industrial Training Institute) and managed by Directorate of Employment & Training by Gujarat government, this education

content used for more than 11 trades, In Gujarat more than 110 colleges using this.

Channel 4 is for agriculture, welfare organization and BSF. This channel is managed and maintained by Border Security Force and Agriculture Department. Content of this channel has been developed by various agriculture state universities and BSF of Gujarat.

Channel No. 5 to 12 covers school education for standard 5 to 12. For these channels, contents have been developed by more than seven organizations like Ahmedabad Municipal Corporation, Sarva Shiksha Abhiyan, Gujarat Council for Educational Research & Training, Gujarat Institute of Education Technology, VIR, State Examination Board etc. These channels also contain contents from "GYANKUNJ"-a pilot project for smart schools by Government of Gujarat. These all channels are managed and maintained by GSEB.

Channel 13 is exclusive for higher education and managed and maintained by Higher Education Department of Gujarat Government.

Channel 14 & 15 are for the diploma & degree programs in engineering, these channels contains especially developed content as per syllabus of AICTE by Department of Science & Technology.

Channel 16 is managed and maintained by Dr Babasaheb Ambedkar Open University, especially for Open University and covers syllabus of all under graduate programs of Open University.

5. Swayam-Prabha

The Swayam-Prabha is an initiative of Government of India through Ministry of Human Resources Development for education through DTH. SP-DTH

is a group of 32 DTH channels telecasting high quality education programmed on 24X7 basis using the GSAT-15 satellite. These channels telecast 4 to 6 hours fresh content every day with 4 to 6 times repeat, all these channels are being telecast by BISAG, Gandhinagar. These channels contain contents provided by different central government organisations like NPTEL, CEC, NIOS, NCERT, UGC, NCRTC and INFLIBNET. The audio-visual contents of these channels are available on internet via specially created YouTube channels. The offline contents, web-portal and YouTube channel is being managed and maintained by INFLIBNET Centre.

Swayam-Prabha's 32 channels are distributed by subject, courses, user categories and educational level. The detailed description is as follows;

Channel No. 1 to 10 covers undergraduate and post-graduate non-technical education, all channels are being managed and maintained by CEC-UGC and various EMMRC centres. these channels telecasts contents which is developed by MHRD through NMEICT Project, 87 subjects' contents (19572+ videos modules Non-Technical -UG) developed for nontechnical undergraduate education by CEC and EMMRC of various universities, 77 Subject content (19000+ videos modules for Non-Technical PG) developed under ePG-Pathshala by INFLIBNET & UGC, some government project's content is also being telecasted by these channels. These 10 channels are mainly categorised in four subject categories, two channels for humanities, four channels for social science, one channels for economic, commerce and finance, three channels for science. Following figure 1 depicts the usage (YouTube) of UG & PG non-technical subject of last six months (up to July 2018).

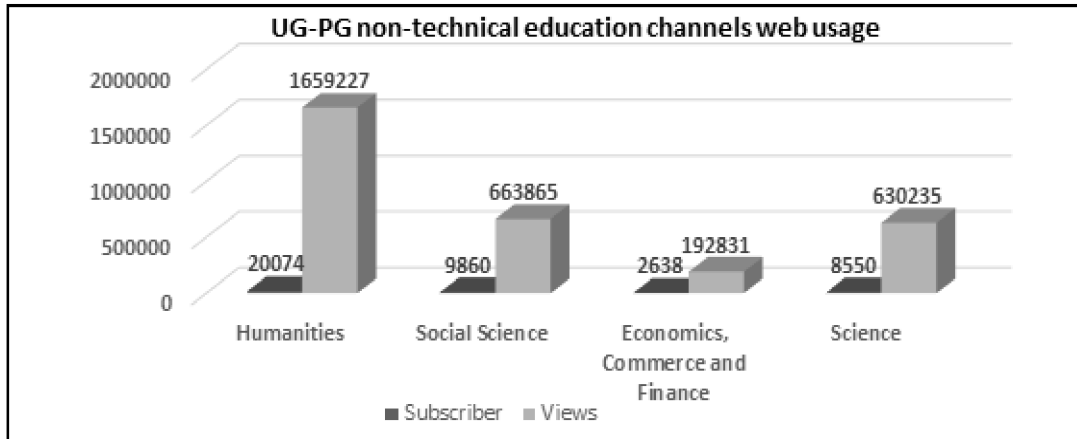


Figure 1: Web usage (YouTube) of UG & PG non-technical subject

Channel No. 11 to 18, 29, 30 covers engineering and technology education, these channel group is known as NPTEL channels. all channels are mainly telecasting video contents which is developed by MHRD through NMEICT Project NPTEL. Content of 24 engineering streams has been provided by NPTEL Channel. There is also one live channel which directly telecasts form class-room. All 10 channels

provided 6 hours fresh content with respective semester as well as syllabus, these six hours content is being repeated 4 times in day, with some repeats on Sunday. Videos are available on Swayam-Prabha web portal, YouTube channels as well as Swayam Prabha application. Below figure 2 shows web usage (YouTube) of UG & PG technical subject for last six months (up to July 2018).

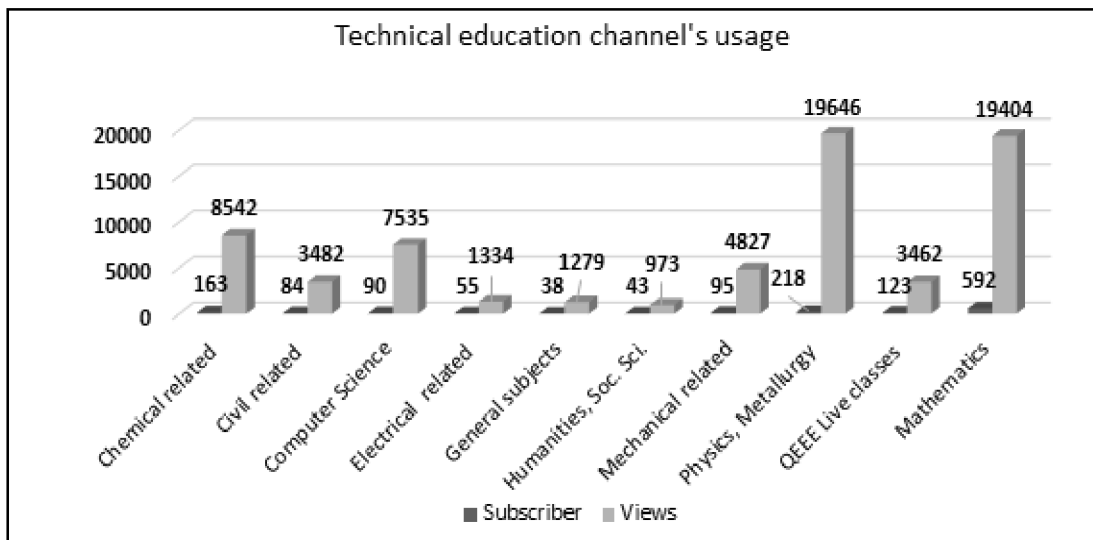


Figure 2: Web (YouTube) usage of UG & PG Technical subjects

Channel No. 19 to 22 covers chemistry, biology, mathematics & physics for 11th & 12th sciences. This channel group is known as IIT-PAL channels. IIT Delhi is anchor institute for the channels. These four-channel's content has been developed by IIT's as per NCERT syllabus. This content has been specially developed for science based competitive exams, 600+ videos lecture and modules are available. Figure 3 describes web (YouTube) usage of science for last six month (up to July 2018).

Channel No. 23 to 26 covers certificate courses in arts and humanities, agriculture, vocational and allied sciences, culture and state open universities programs etc. IGNOU is anchor institute for the channels. These four channels contain contents developed under the E-Gyankosh, Gyandhara and Gyan-Darshan as well as some content are specially developed by IGNOU for DTH. Figure 4 is web (YouTube) usage for last six month (up to July 2018).

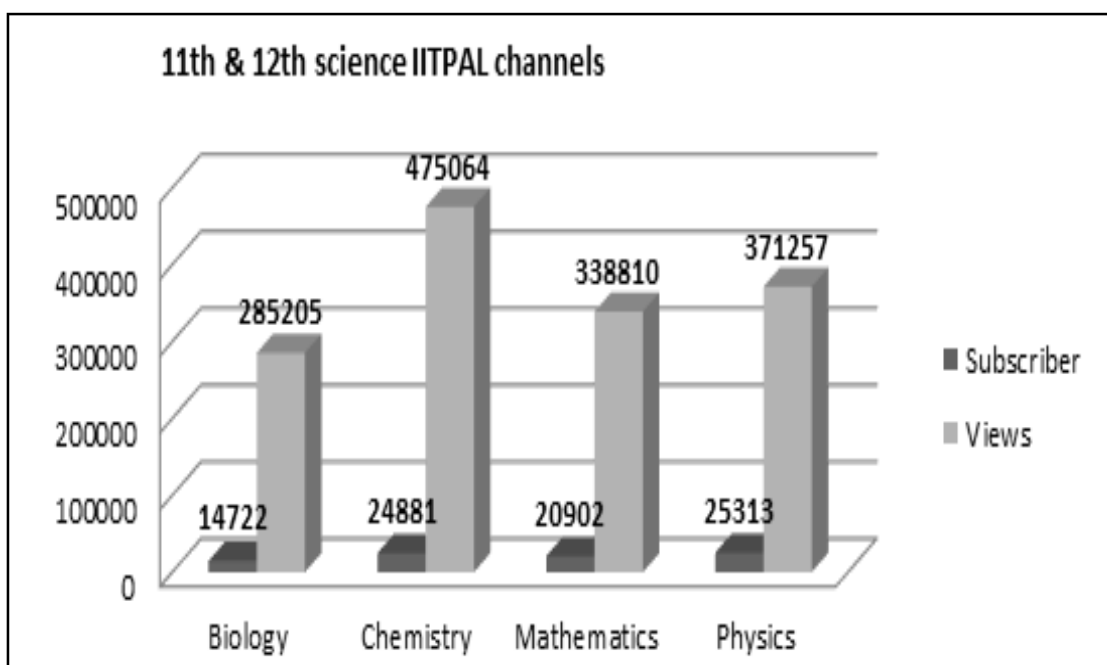


Figure 3: Web (YouTube) usage of IIT-PAL channel

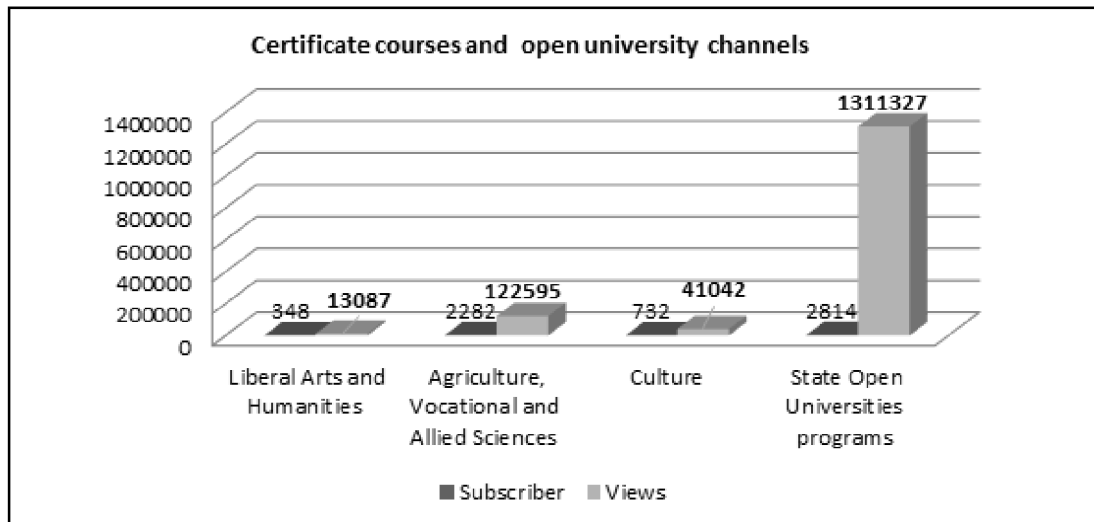


Figure 4: web usage of certificate courses and open university channels

Channel No. 27 to 28 covers open schooling education for secondary & higher secondary level. These two channels are being managed and maintained by National Institute of Open Schooling (NIOS). These channels contain more than 16+ subjects including some content developed in Assamese & Bengali language.

Channel No. 31 covers 11th and 12th standard education, managed and maintain by National

Council of Educational Research and Training (NCERT)

Channel No. 32 provides D.El.Ed. (Diploma in Elementary Education) Courses for in-service untrained teachers working in primary/upper primary schools of different states of the country. The channel is managed by NIOS & IGNOU. Figure 5 shows web Usage of Schools and teacher education Channels for last six month.

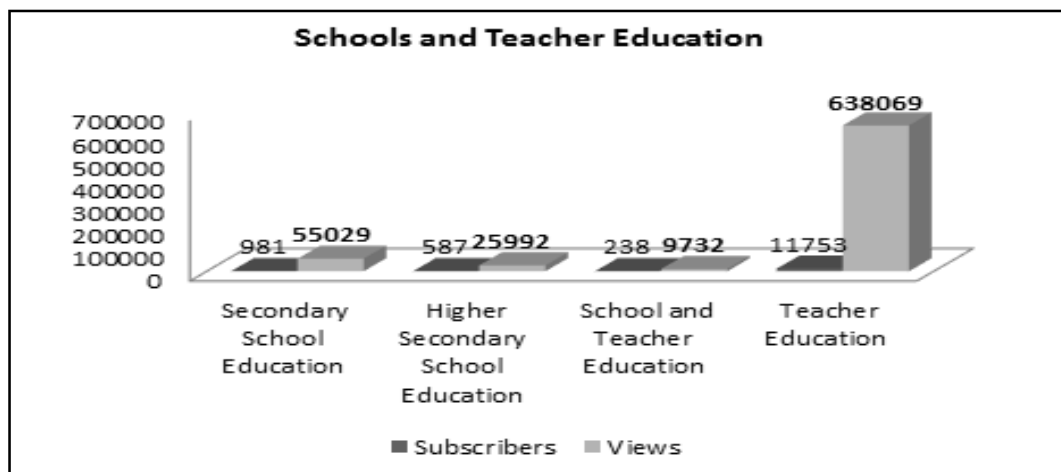


Figure 5: web usage of schools and teacher education channels.

Overall, 32 channels of Swayam Prabha have 44017+ videos, 6903851+ viewers and 148176+ subscribers as of July 2018.

6. Swayam-Prabha Portal & Application Features:

Swayam-Prabha has fully functional web portal and application for all stake-holders, which provides login-based facility for channel coordinators, BISAG, academic and national coordinators as well as administrators. This portal provides well versed search facility with multiple parameters. This portal and web application also having features of user profiles and SMS based alerts. Archival content is available on YouTube with full metadata and organized as playlists.

7. Conclusion

Education through DTH in India have two major project VANDE Gujarat and Swayam-Prabha, VANDE Gujarat through its 16 channels with content developed by 12 Gujarat government organizations for education through BISAG. 30535+ schools, 3608940 students, 65 universities and 61+ ITI institute are getting advantages from VANDE Gujarat.

Swayam-Prabha is having 32 channels for UG, PG, Technical & Non-technical, Distances Education, School Education and others, all channels can be accessed free of cost by major DTH service providers Swayam-Prabha Portal as well as 32 YouTube channels. All channels are available on multi devices. There are various stakeholders who are contributing in this initiative like individual subject experts, academic organizations, ISRO, IGNOU,

NIOS, BISAG, INFLIBNET etc. Across the India all the students studying in 842 universities, 16 IIT'S, 13 IIM's, open universities and schools from various boards will be benefitted from Swayam-Prabha.

Further Reading

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Note:

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