

Impact of NPTEL (National Program on Technology Enhanced Learning) Video Lectures On Students in Sree Vidyaniketan Engineering College Library: Tirupati: A Study

Dr. M. Prasantha Kumari

Assistant Professor, Dept., of Library and Information Science,
Sri Venkateswara University, Tirupati

Abstract: *The study aimed at the impact of NPTEL (National program on technology enhanced learning) videos on students in sree vidyaniketan engineering college library: tirupati: a study. Structured questionnaire was designed to collect the data. Out of 157 questionnaires 148 filled in questionnaires were received back. The present study demonstrates and elaborates the various aspects of use of NPTEL videos such as frequency of library visits, purpose of using videos, awareness about NPTEL videos, place of accessing, preferred search, search method, level of satisfaction of internet facility, and problems faced by students while using NPTEL Video lectures. And also highlights the suggestions made by the students who are the respondents of the study.*

Keywords: *Technical Education, NPTEL, Video Lectures, Sree Vidyanikethan Engineering College Library, Online Learning*

INTRODUCTION

Technical Education comprises of Engineering, Technology, Management, Architecture, Town Planning, Pharmacy, Applied Arts and Crafts, Hotel Management and Catering Technology. It has been playing an active role in human resource development of the country by generating skilled manpower, developing industrial productivity and improving the quality of life of its people.

The history of technical education in India begins with the Epic period (1000BC) and Vedic period (Prior to 500BC). During this period technical skills like Carpentry, Foundry and Weaving were braches of education. Afterwards the vocational skill was gained its glory in the medieval period. In 1794 Survey School was established by the English traders in Madras through which the modern technical education started in India. The School offered training to Indian personal in modern land survey and also aided the British surveyors. Shortly, technical

education broadens its scope to other parts of the country and was transferred from generation to generation. At first engineering education covers only two branches i.e., Civil Engineering and Mechanical Engineering while electrical engineering was started from 1882 only. The expansion of technical education in the 19th century had witnessed the birth of many branches like mining, shipping, textile, printing etc. Since, then, engineering profession is constantly changing as well as developing at a rapid rate. Its growth is never ending and becoming more and more complex.

ABOUT NPTEL

NPTEL (National Programme on Technology Enhanced Learning) was set up by Indian Institutes of Technology (IIT Bombay, Delhi, Guwahati, Kanpur, Kharagpur, Madras and Roorkee) and Indian Institute of Science (IISc) for generating course contents in Engineering and Science. NPTEL as a project originated from many deliberations between IITs, Indian Institutes of Management (IIMs) and Carnegie Mellon University (CMU) during the years 1999-2003. A proposal was jointly put forward by five IITs (Bombay, Delhi, Kanpur, Kharagpur and Madras) and IISc for creating contents for 100 courses as web based supplements and 100 complete video courses, for forty hours of duration per course. Web supplements were expected to cover materials that could be delivered in approximately forty hours. Five engineering branches (Civil, Computer Science, Electrical, Electronics and Communication and Mechanical) and core science programmes that all engineering students are required to take in their undergraduate engineering programme in India were chosen initially. Contents for the above courses were based on the model curriculum suggested by All India Council for Technical Education (AICTE) and the syllabi of major affiliating Universities in India.

OBJECTIVES

- To identify the use and impact of NPTEL videos on students
- To know the purpose of using NPTEL videos
- To know the satisfaction of users on Video lectures
- To know the problems faced by the students in accessing NPTEL videos
- To suggest the ways and means for effective use of NPTEL videos

METHODOLOGY

Questionnaire method is followed to collect the data from the students. For this, a questionnaire was prepared and distributed to 157 students. Out of 157 users, 148 users have responded. Total response from the users is 94.26%. The collected data is presented in the form of tables and analyzed by using a simple method of calculation.

SCOPE OF THE STUDY

The present study focuses on the Impact of NPTEL (national program on technology enhanced learning) videos on students in sree vidyaniketan engineering college library: Tirupati: a study

Table.1 Distribution of Students according to Gender

| Sl.No. | Gender | No. of Respondents | Percentages (%) |
|--------|--------|--------------------|-----------------|
| 1 | Male | 76 | 51.3 |
| 2 | Female | 72 | 48.6 |
| 3 | Total | 148 | 100 |

It is evident from the table 1 that 76 (51.3 %) respondents are male. About 72 (48.6%) respondents are female.

Table.2 Distribution of Students by awareness on NPTEL Videos

| Sl.No. | Awareness on NPTEL videos | No. of Respondents | Percentages (%) |
|--------|---------------------------|--------------------|-----------------|
| 1 | Yes | 148 | 100 |
| 2 | No | - | - |
| 3 | Total | 148 | 100 |

It is evident from the table 2 that 148 (100%) respondents are aware of NPTEL Videos.

Table.3: Distribution of students by place of accessing NPTEL videos

| Sl.No. | Place of accessing videos | No. of Respondents | Percentages (%) |
|--------|---------------------------|--------------------|-----------------|
| 1 | Library | 122 | 82.43 |
| 2 | Department | 21 | 14.18 |
| 3 | Internet Centres | 05 | 3.37 |
| 4 | Total | 148 | 100 |

Table 3 shows that 122(82.43%) respondents were watching NPTEL videos in the library. Whereas 21(14.18%) respondents were accessing in the department. About 05(3.37%) respondents were accessing from Internet Centres.

Table.4: Distribution of students by frequency of watching NPTEL Videos

| Sl.No. | Frequency of watching NPTEL Videos | No. of Respondents | Percentages (%) |
|--------|------------------------------------|--------------------|-----------------|
| 1 | For the last three years | 102 | 68.91 |
| 2 | For the last two years | 20 | 13.51 |
| 3 | For the last one year | 26 | 17.56 |
| 4 | Total | 148 | 100 |

It is evident from Table.4 that 102 (68.91%) respondents have been watching videos for the last three years. About 20 (13.51%) respondents have been watching videos for the last two years and 26 (17.56%) respondents have been watching videos for the last one year.

Table .5 Distributions of Students according to the purpose of watching NPTEL Videos

| Sl.No. | Purpose of watching NPTEL Videos | No. of Respondents | Percentages (%) |
|--------|----------------------------------|--------------------|-----------------|
| 1 | To get knowledge on subject | 35 | 23.61 |
| 2 | To prepare for competitive exams | 17 | 11.48 |
| 3 | To appear for GATE exam | 26 | 17.56 |
| 4 | All the above | 70 | 47.29 |
| 5. | Total | 148 | 100 |

Table .5 represents that 70(47.29%) respondents are watching to get knowledge on subject, to prepare for competitive exams and to appear for GATE exam whereas 35(23.61%) are watching to get knowledge on subject and about 26(17.56%) respondents are watching to appear for GATE exam and about 17 (11.48%) respondents are watching to prepare for competitive exams.

Table – 6 Distribution of Students according to their preferred search method

| Sl.No. | Preferred Search Method | No. of Respondents | Percentages (%) |
|--------|-------------------------|--------------------|-----------------|
| 1 | Author | 03 | 2.02 |
| 2 | Title | 11 | 7.43 |
| 3 | Subject | 126 | 85.13 |
| 4 | Keyword | 08 | 5.41 |
| 5. | Total | 148 | 100 |

It is clear from Table.6 that Students followed different search methods such as Subject search (85.13%), Title search (7.43%), Keyword search (5.41%) and Author search only (2.02%). But maximum number of respondents opt the Subject search method.

Table .7 Distribution of Students according to their preferred method of lecture

| Sl.No. | Preferred method of lecture | No. of Respondents | Percentages (%) |
|--------|--|--------------------|-----------------|
| 1 | Method of instructor speaking directly to the camera | 76 | 51.35 |
| 2 | Power point presentation | 22 | 14.86 |
| 3 | Black Board | 50 | 33.78 |
| 4 | Total | 148 | 100 |

It is clear from Table.7 that Students preferred different methods of lecture. 76 (51.35%) respondents preferred method of instructor for speaking directly to the camera. About 50(33.78 %) respondents preferred black board method. About 22 (14.86%) respondents preferred PowerPoint presentation

Table 8 Distribution of Students according to the problems while watching NPTEL videos

| Sl.No. | Problems faced while watching videos | No. of Respondents | Percentages (%) |
|--------|--|--------------------|-----------------|
| 1 | Lack of availability of computers | 23 | 15.54 |
| 2 | Slow access | 24 | 16.21 |
| 3 | No Problems | 93 | 62.83 |
| 4 | Lack of support from the library staff | 08 | 5.41 |
| 5 | Total | 148 | 100 |

Table.8 represents the problems which were faced by students while watching NPTEL videos. About 93(62.83%) respondents told that they did not face any problem while watching videos. About 24 (16.21%) and 23 (15.54%) respondents faced slow access of Internet and lack of availability of personal computers and about 08(5.41%) respondents faced lack of support from the library staff.

Table 9 Distribution of Students according to the need for orientation/training programme

| Sl.No. | Need for orientation/training programme | No. of Respondents | Percentages (%) |
|--------|---|--------------------|-----------------|
| 1 | Yes | 22 | 14.86 |
| 2 | No | 126 | 85.13 |
| 3 | Total | 148 | 100 |

From Table.9 it can be understood that 85.13% of respondents felt that no orientation/training is necessary to access videos and remaining (14.86%) felt that any orientation or training was necessary for the same.

Table 10 Distribution of Students according to participation in the discussion platform of NPTEL

| Sl.No. | Participation in the discussion platform of NPTEL | No. of Respondents | Percentages (%) |
|--------|---|--------------------|-----------------|
| 1 | Yes | 56 | 37.83 |
| 2 | No | 92 | 62.16 |
| 3 | Total | 148 | 100 |

From Table.10 it can be understood that 92 (62.16%) of respondents did not participate in the discussion platform of NPTEL whereas 56 (37.83%) respondents are participating in the discussion platforms.

Table 11 Distribution of Students according to their opinion on impact of NPTEL videos on their Study/Research

| Sl.No. | Opinion on impact of NPTEL videos on their Study/Research | No. of Respondents | Percentages (%) |
|--------|---|--------------------|-----------------|
| 1 | Yes | 99 | 66.89 |
| 2 | No | 49 | 33.10 |
| 3 | Total | 148 | 100 |

Table 11 depicts that 99 (66.89%) respondents expressed their opinion that there is an impact of NPTEL videos on their Study/Research and about 49 (33.10%) respondents replied in negative.

FINDINGS

- 76 (51.3 %) respondents are male. About 72 (48.6%) respondents are female.
- 148 (100%) respondents are aware of NPTEL Videos
- 122(82.43%) respondents were watching NPTEL videos in the library. Whereas 21(14.18%) respondents were accessing in the department. About 05(3.37%) respondents were accessing from Internet Centres.
- 102 (68.91%) respondents have been watching videos for the last three years. About 20 (13.51%) respondents have been watching videos for the last two years and 26 (17.56%) respondents have been watching videos for the last one year.
- 70(47.29%) respondents are watching to get knowledge on subject, to prepare for competitive exams and to appear for GATE exam whereas 35(23.61%) are watching to get knowledge on subject and about 26(17.56%) respondents are watching to appear for GATE exam and about 17 (11.48%) respondents are watching to prepare for competitive exams.
- Students followed different search methods such as Subject search (85.13%), Title search (7.43%), Keyword search (5.41%) and Author search only (2.02%). But maximum number of respondents opt the Subject search method.

- Students preferred different methods of lecture. 76 (51.35%) respondents preferred method of instructor for speaking directly to the camera. About 50(33.78 %) respondents preferred black board method. About 22 (14.86%) respondents preferred PowerPoint presentation.
- About 93(62.83%) respondents told that they did not face any problem while watching videos. About 24 (16.21%) and 23 (15.54%) respondents faced slow access of Internet and lack of availability of personal computers and about 08(5.41%) respondents faced lack of support from the library staff.
- 85.13% of respondents felt that no orientation/training is necessary to access videos and remaining (14.86%) felt that any orientation or training was necessary for the same.
- 92 (62.16%) of respondents did not participate in the discussion platform of NPTEL whereas 56 (37.83%) respondents are participating in the discussion platforms.
- 99 (66.89%) respondents expressed their opinion that there is an impact of NPTEL videos on their Study/Research and about 49 (33.10%) respondents replied in negative.

SUGGESTIONS

- Faculty Members may make viewing of NPTEL videos compulsory. In other cases, interested students only are viewing the lectures on their own either as a substitute or as a supplement to class lectures.

- 92 (62.16%) of respondents did not participate in the discussion platform of NPTEL. The study suggests that Faculty Members need to encourage them to participate in the forums by giving assignments to students.

CONCLUSION

NPTEL is a curriculum building exercise. The courses are well structured and are elaborate with details wherever the faculty members have felt the need. Institutions are encouraged to build their own versions of NPTEL courses based on their curriculum design using the NPTEL materials and collective experience of all IITs and IISc in TEL. They are meant to fill the large gap that exists between the current expertise level of faculty in institutions of higher learning such as the IITs/IISc and those in private and other government aided engineering institutions in India.

NPTEL contents are being used by the students of Sree Vidyanikethan Engineering College as part of their teaching-learning process. While faculty members are using these contents as part of their lesson plan to teach university curriculum, students are using NPTEL not only to prepare for technical jobs and competitive exams, but also as a platform for constant learning and updating knowledge for the ever-changing environment and market realities. There is an impact of NPTEL video lectures on Students' study and research.

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