

## Case Study of Skill Development and Capacity Building of Space Science in Rural Areas by Pillai HOC College of Engineering and Technology ( PHCET) - A IIRS ISRO Outreach Network Institute

Karthik Nagarajan\*

\*IIRS ISRO Outreach Network Coordinator and Associate Professor, Pillai HOC College of Engineering and Technology, Rasayani , Maharashtra- 410207

[knagarajan@mes.ac.in](mailto:knagarajan@mes.ac.in)

+91-9819420975

### Abstract

The objective of this paper is to understand the role of IIRS Outreach Centre conducted by Pillai HOC College of Engineering and Technology ( PHCET) in rural and urban India. Looking at the evolution of Remote Sensing and GIS evolving in our institute, this subject is also included in UG and PG courses. From July 2017 till date, about 32 Outreach courses were conducted in this rural area with registration about 4500 students. The paper summarizes the feedback taken from these students after completion of courses on various skill parameters and explains how the rural students take part in these courses , there research interest towards space science and joining ISRO to serve our country.

**Key words:** Skill development , IIRS ISRO Outreach Programme, Capacity Building

### 1. Introduction

Globally the role of Remote Sensing(RS) , GIS and space science is increasing rapidly across many country so as in India and the recent development in the past few decade has brought lots of awareness in this field of space science .IIRS Outreach programme focus on strengthening the academic and user segments in space technology and its applications using online learning platforms. The syllabus content in various institutions across India cover a very less amount RS and GIS in UG and PG level. Looking at the evolution of this technology, now RS and GIS subject is also included in UG and PG in Mumbai University. As IIRS ISRO has appreciated our institute Pillai HOC College of Engineering and Technology (PHCET) for contribution towards capacity building by awarding the best coordinator award in 2018 to the author. This paper is to understand the various activities which had been conducted to improve capacity building in the area of RS, GIS and space science.



Out Reach Network Institute : PHCET

<http://www.phcet.ac.in/students/ISRO-pillai-PHCET-outreach-network-institute.asp>

PHCET Network Coordinator Details-

<http://www.phcet.ac.in/students/contact-ISRO-coordinator-for-course-details.asp>

Past Course conducted

- <http://www.phcet.ac.in/students/past-course-conducted-in-remote-sensing-and-GIS-courses.asp>

Future Course

<http://www.phcet.ac.in/students/future-course-to-be-remote-sensing-and-GIS.asp>

Figure 1: Methodology and PHCET Outreach Centre Details

### 2. Methodology

Till date about 32 Outreach Programme, have been conducted in which around 4500+ students registered and over 1000+ students got certified through these programmes(Refer figure 1). 7 workshops and 2 STTP were also conducted in which various Scientist from ISRO (Dehradun,

Ahmedabad etc ) and other Network coordinators from various other Outreach Institute were invited to our institution and they interacted with our students through STTPs, seminars, workshop etc. Many teachers from PHCET have taken NNRMS training at IIRS and understood the concepts in this course which is later transferred to the students in their academic. Till date 3 Research scholars , 4 PG students and 3 UG students have taken training at IIRS ISRO Dadrudun. Spreading awareness to children of rural area under ISRS-Mumbai Chapter was a big success in the recent past

### 3. Result

An overall feedback from 428 random students were taken and the figures are quite promising. Figure 2 shows feedback analysis of various questions asked to improve the outreach centre and bring quality education and increase capacity building. About 97.3% are from Engineering background as shown in figure 2

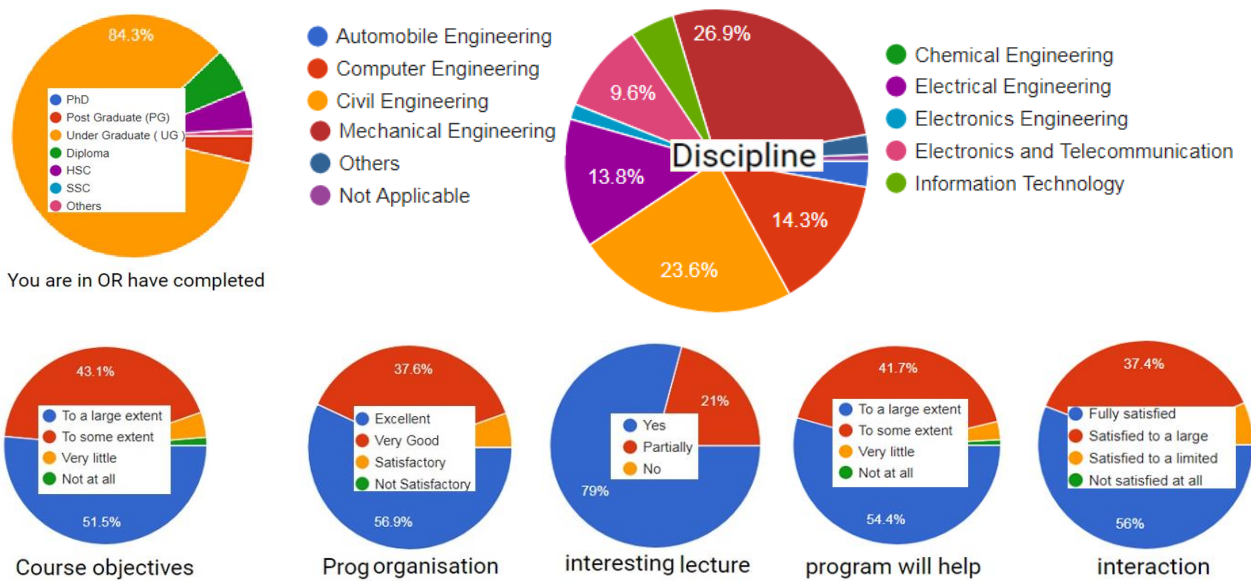


Figure 2: Feedback from students of IIRS Outreach Centre ( PHCET )

### 4. Conclusion

Feedback shows that 69% students are interested in learning how to make satellites , 44.2% are interested in Rocket science , 30.3% showed their interest in making mars and moon rovers.94.6% students commented that the objective of the course covered to a large extent. Table 1 shows the total capacity building development at PHCET Outreach centre from July 2017 till date

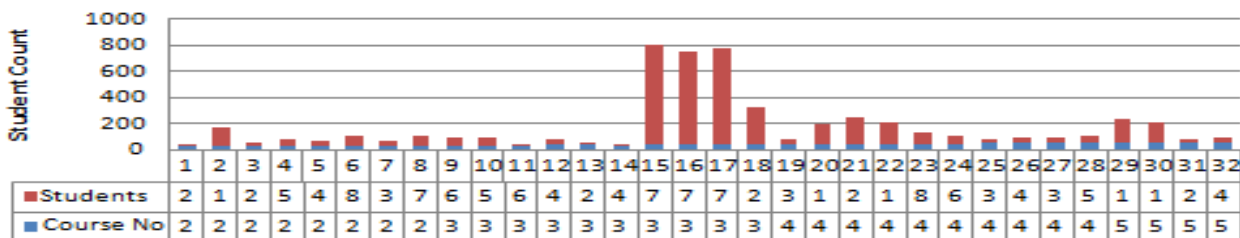


Table 1: Capacity Building at IIRS Outreach Centre ( PHCET )

### 5. Acknowledgement

Indian Institute of Remote Sensing ( IIRS ) and Indian Society of Remote Sensing ( ISRS)

### 6. References

[1] Naslund, John A. PhD; Shidhaye, Rahul MD; Patel, Vikram MD, 2019, Digital Technology for Building Capacity of Nonspecialist Health Workers for Task Sharing and Scaling Up Mental Health Care Globally Harvard Review of Psychiatry: May/June 2019 - Volume 27 - Issue 3 - p 181–192