



RVS COLLEGE OF ENGINEERING AND TECHNOLOGY

KumaranKottam Campus, Kannampalayam (Po), Coimbatore – 641 402

(Approved by AICTE, New Delhi & Affiliated to Anna University, Chennai)



NAAC Accredited and ISO 21001:2018 Certified Institution,

7.2 Best Practices 7.2.1 Describe two best practices successfully implemented by the Institution as per NAAC format provided in the Manual

BEST PRACTICE: 1

Title

Enhancement of teaching-learning methods with modern teaching aids

Objectives of the Practice

To improve (enrich) the Student Centric Learning using modern teaching aids effectively

To enrich the regular classroom teaching with the online lectures from SWAYAM, NPTEL and other MOOCs conducted by various worldwide universities

To use modern teaching aids such as smart boards, projectors, PowerPoint presentations and animated videos for regular classroom teaching in order to enhance Student Centric Learning.

To conduct Value Added Courses to educate the students in cutting edge technology

The Context:

The fundamental ideas of the subject are difficult for students to understand through traditional classroom delivery. So, regular classroom teaching is not sufficient to teach modern technologies to engineering students. The following modern teaching tools are used to enrich the effective teaching-learning process:

Smart Classroom

A smart classroom is a technology-enhanced learning classroom that magnifies the way of teaching and learning digitally. Visual learning using smart technology elements like graphs, images, charts, presentations are highly effective to grasp the subject quicker. Smart Classrooms helps in developing critical thinking and problem-solving skills in students.



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LCD projectors

Computers with internet facilities connected to LCD projectors are available for the faculty members to use PowerPoint presentations, NPTEL video lectures, and animations for handling classes which improves the understanding of students

MOOCs

The institution established NPTEL Local Chapter which provides E-learning through online Web and Video courses for various streams. NPTEL videos of 3.5 TB are available for the faculties. Faculty members motivate and help the students to complete the NPTEL, SWAYAM and other MOOCs courses by acting as a Mentor for students. Assignments and tests in MOOCs help in improving critical thinking and problem solving ability of students

Virtual Labs

Faculty members utilize the Virtual lab facilities provided by the MHRD for doing experiments in laboratory classes. The Virtual Labs provides remote-access to simulation-based Labs in various disciplines of science and engineering.

Google Classroom

Faculty members utilize open source learning management system like Google Classroom for providing course materials, question bank, lesson plan and assignments. It was extensively used in pandemic period.

Google Forms

Google forms are used for conducting online MCQ Quizzes. The information is stored as a spreadsheet automatically records the answers. The spreadsheet then populates the responses from the quiz or survey in real-time. Participative learning is enhanced by Google Forms.

Video Conferencing

The open-source video conferencing ICT tools like Zoom meetings, Google meet, and Webex meetings are used in extra-ordinary situations like COVID-19 for conducting regular academic classes, webinars, technical talks, alumni interactions and motivational talks, etc and this provides an enjoyable learning.

Discussions with renowned academicians and the implementation of this approach of enhancing teaching and learning using modern teaching aids and methodologies provide better results.



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Practice

Our institution proposed this ‘Escalation of teaching-learning methods with modern teaching aids’ as one of the best practices. Smart boards, LCD projectors, amplifiers, speakers, Wi-Fi and internet facility in all the departments are established. The faculty members are educated to use these teaching aids effectively. They are advised to prepare their class presentations, animations, and videos and are encouraged to use available good teaching content online to support their teaching. Moreover, faculty members are trained to follow modern teaching techniques to enhance better learning. The lecture content, question banks, and study material are shared with students through Google classroom, Whatsapp group, social media networks and Email. Faculty members conduct quizzes, demonstrations with modern tools, and case studies effortlessly in day-to-day classes. It greatly enhanced students' learning.

Evidence of Success

This practise ensures that education reaches every student with various levels of understanding. Implementing this kind of classroom education improves teacher-student interaction and collaboration. The faculty members can engage in classes effectively because of all teaching materials such as presentations, lecture videos, animations, tutorials, notes, and question bank with answers prepared at the initial stage of the semester. The video lectures, animated presentations, recorded video lectures, NPTEL, YouTube lecture videos, and software simulation presentations make classroom teaching interesting for all kind of students which make them understanding the core concept easily.

Problems Encountered and Resources Required

Faculty members found it difficult to get familiarize to smart boards, use Google classroom to post content, and create online quizzes in Google form. Now orientation program is given to faculty members to use the modern tools effectively to deliver the instruction. A technical problem with the touch sensors is also faced in the smart board. Maintenance of this equipment improved its practical usage. Students reside in rural villages suffered from network issues in pandemic period.



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BEST PRACTICE: 2

Skill Based Training

Objective

The main objective the institutional skill development programmes are for the holistic development the students to meet the needs of the industry and as an engineering professional. The industry needs engineers with required skill rather more graduates. Apart from learning through regular curriculum delivery, the institution adopts various modes to impart skills through participative. Experiential and experimental modes. Moreover to develop life skills, the institution conducts training programmes for personality development and learning life skills to upgrade their abilities and to use their talents, interests and passions to transform their life. Making the students at this right age will go a long way in leading a successful professional life.

The context

- The institutions activities are way student centric and it is seen that the training imported beyond the curriculum set by affiliations university
- Communication plays an important role in learning process. Importance is given to develop communication skills from entry level to develop read, speak and write habits.
- Placement well has its own training strategy to acquire skills for employment.
- Robust industry institute relationship helps the students in getting trained by the industry.
- Experts in various fields are helpful in providing knowledge to the students community by participating as resource persons in various skill development programmes.

The practice

- A well designed curriculum by the placement and training all is used for communication training in the first year.
- The institutions provides training in soft services and aptitude through in its own faculty and experts from outside.



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This includes the enhancement of the following skills:

- Presentations skills
- Group discussions
- Resume preparation
- Interview preparation
- Leadership qualities
- Goal settling
- Time management
- Team player

Even though the curriculum is set by the affiliation university, topic beyond syllabus is taught in the class exposing the related technology to the students. In each subject five extra topics are taught as a content beyond syllabus.

- Value added courses with minimum 35 hours are conducted to learn domain specific knowledge. They are conducted by industry experts from the industry and institution with whom we have signed MoU.
- Value added course (like python, C, C++, HVAC etc.) helps them industry placements.
- Workshops with hands on training evokes enthusiastic response from students to learn skills.
- Internship and industry projects are provided to almost all the students in industry through alumni contact, faculty communication and through MoU industries. This helps in skill acquisition and to become more confident.
- Inplant training and field visits are arranged by the institute to provide them opportunity to learn about their own fields.
- By encouraging projects with innovative ideas are encouraged through the installation of Innovation and entrepreneurship centre.



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Evidence of Success

- The multifaceted and much disciplinary learning experience gives them a strong sense of confidence in handling challenging situations.
- Skill based training has provided them an opportunity to set themselves placed through campus and off campus opportunities.
- Students have developed multiple skills through the field experiences / Practical training/ Internships are able to apply theoretical knowledge in practical situations.

Problem encountered and resources required

- Prevalence of pandemic (Covid) situation have kept the students away from practical learning for about 2 years. Its takes more time and effort to cope up with the lose time.
- Since the curriculum is framed by the affiliating university no flexibility in offering required courses.
- At time Management is a problem since the semester academic schedule is fighter packed