



ADITYA ENGINEERING COLLEGE (A)

Aditya Nagar, ADB Road, Surampalem

Department of Mechanical Engineering

Innovations by the Faculty in Teaching and Learning

Understanding the instructional models that capture, define, and convey knowledge from faculty members to learners can increase teaching effectiveness. These entail a thorough comprehension of the topic content, planning, classroom instructional tactics, evaluating the students' understanding, and analysing the learning outcomes.

The Department of Mechanical Engineering practices innovative, traditional teaching and learning strategies that include publishing instructional videos and expert lectures in the college website. Critic reviews are taken from stake holders for continuous improvement.

For peer reviews, the faculty's initiatives to adopt novel teaching and learning techniques are amply documented in our files and on the institute website. The implementation of teaching learning practices is shown below.

The innovative teaching learning strategies provide opportunities for students to work in teams, learn from peers, and learn from themselves. Also the students have the opportunities to engage in sophisticated and complex levels of cognitive activity – define, analyse, evaluate, reflect, access, and solve real-world problems. The evaluation suggests that implementation of these methodologies in the engineering courses improve the higher-level skills of the students as well as integrated theory, design and practice.

Innovative Teaching Methodologies

To improve the quality of teaching learning and to make the students actively participate in the class environment, the following are the few of the appropriate innovations followed by the faculty in our department. However, our methods are subject to improvement. Some of our cutting-edge techniques are:

- Innovative assignments and real-time problems
- Flipped classroom
- Technical presentation
- Value added courses
- On-site learning
- Inquiry-based learning
- Ask open-ended questions

- Peer learning
- Quiz
- Learning from experts
- Videos demonstration
- Developing digital content materials

Head of the Department



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Innovations by the Faculty in Teaching and Learning:

S. No.	Name of the Faculty	Name of the course	Year & Semester	Topic	Innovative methods	Website
2021-22						
1.	Mrs. Mylavarapu Anusha	Production Planning and Control	IV & II	Inventory Management	Ask Open-Ended Questions	https://www.aec.edu.in/?p=MECH#ab16

Head of the Department

Ask Open-Ended Questions:

It's possible that students, particularly successful ones, relied too heavily on textbook solutions. They have become accustomed to believing that there are only correct and incorrect responses over time. Open-ended questions work best for engaging students in discussion, as they offer the opportunity for debate.

Objectives of asking open ended questions:

An open-ended question is asked to establish a platform for better understanding and enables a student to :

- Practise conversational skills and empathy in today's contentious public discourse.
- Interact and communicate based on their individual needs.

By posing open-ended questions, the best lecturers always facilitated lively in-class discussions. Students synthesise various bits of information or personal experience to create coherent points. It encouraged students to express themselves and discover their own voices.

Plan of Execution:

Open-ended questions show students that their faculty trust them to have good ideas, think for themselves, and contribute in valuable ways. The resulting sense of autonomy, belonging, and competence leads to engagement and deep investment in classroom activities.

- Begin a lesson by posing students a question to answer from the last lesson.
- Allow time for groups/ pairs of students to research answers to more complex questions.
- Help students identify opinion and utilise evidence to support their argument - the point of argument being to convince rather than to simply expound both sides of an issue
- Use questions to promote collaboration
- Involve students in forming and asking questions.

Benefits over Conventional Teaching Methods

Open-ended questions gives the students freedom and space to answer in as much detail as they like, too. The benefits of this method are as follows :

- Allow an infinite number of possible answers
- Collect more detail
- Learn something you didn't expect

- Get adequate answers to complex issues
- Encourage creative answers and self-expression
- Understand how our students think

Mapping of Innovative T-L Method to Subject

Name of the Faculty	Name of the course	Year & Semester	Topic	Innovative methods
Ms. Mylavarapu Anusha	Production Planning and Control	IV & II	Inventory Management	Ask Open-Ended Questions



Open-ended questions by student