AISSMS

INSTITUTE OF INFORMATION TECHNOLOGY

ADDING VALUE TO ENGINEERING

Internal Quality Assurance Cell

Best Practices I

Title: Virtual Lab

Objectives:

- To provide remote-access to Labs in various disciplines of Engineering.
- To enthuse students to perform experiments by arousing their curiosity.
- To make available a complete Learning Management System around the Virtual Labs.
- To share state of the art equipment and resources.

The context:

Physical distances and the lack of resources make us unable to perform experiments, especially when they involve sophisticated instruments. Also, good teachers are always a scarce resource. Web-based and video-based courses address the issue of teaching to some extent. Conducting joint experiments by two participating institutions and also sharing costly resources has always been a challenge. With the present day internet and computer technologies the above limitations can no more hamper students and researchers in enhancing their skills and knowledge. Also, in a country such as ours, costly instruments and equipment need to be shared with fellow researchers to the extent possible. Web enabled experiments can be designed for remote operation and viewing so as to enthuse the curiosity and innovation into students. This would help in learning basic and advanced concepts through remote experimentation. Today most equipment has a computer interface for control and data storage. It is possible to design good experiments around some of this equipment which would enhance the learning of a student. Internet-based experimentation further permits use of resources, knowledge, software, and data available on the web, apart from encouraging skillful experiments being simultaneously performed at points separated in space (and possibly, time).
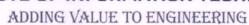
This helps to

- practice more experiments for slow learners
- perform experiments beyond syllabus for advanced learners
- self-learning

The practice:

- Teacher uploads the semester planner at the beginning of the semester.
- Teacher informs students about the date and time as per schedule in the planner.
- Teacher explains the procedure of using Vlab. for his/her subject.
- Students perform experiment and fills the in-house feedback.

Problem encountered and resource required:

- Students sometimes do not have enough IT resources at hand.
- High bandwidth internet connection is required.

Evidences of Success:

- Improvement in students' understanding of experiments.
- Improvement in practical and oral examination performance.
- This has helped students in learning basic and advanced concepts through remote experimentation.
- Joyful learning.

Best Practices II

Title: Multimodal Communication Skill Development Program

Objectives:

- To identify students with poor written, verbal communication and presentation skills.
- To make students realize the importance of communication in technical world.
- To improve presentation and communication skills of students.
- To inculcate the art of conversation among the students.
- To instill self-learning habit among the students.

The Context

Most of the students admitted in first year are from vernacular background who are technically able but weak in soft skills which makes impact on their placement. Taking this into consideration, the Institute has initiated "Multimodal Communication Skill Development Program".

Language labs are becoming center of attraction at institutions as they provide reliable and structured learning environment to the students. Technological changes are motivating faculties to create more interactive learning scenarios for the students. Theoretical learning cannot ensure effective development of language skills. To incorporate joyful and interactive learning, a "Multimodal Communication Skill Development Program" plays a key role in inculcating essential language skills such as reading, writing, listening and speaking. More comprehensive self-learning environment can be provided to the students with the use of digital media as this practice does not require any hardcore technical skills for effective implementation.

A Multimodal Communication Skill Development Program would help students with written, and verbal communication skills. For students, the program will provide a central support system as they learn to communicate in multimodal ways. Specifically, students will be able to meet with either a peer tutor or a peer mentor and students are supported in one-on-one or small group sessions focused specifically on communication.

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The practice

- **Use of Language Lab software**: For improvement in reading and verbal communication skills of the students language lab software is used.

- **Open Course Ware (OCW) assignment:** Students are asked to watch video lectures available on open course ware modules and write brief description of it in the prescribed format as an assignment. This improves the listening and writing skills of the students.

- **50-10 module:** During a 60 minutes lecture, 50 minutes are for teaching by the faculty member and 10 minutes are given to student to summarize the contents. This improves the presentation skills, verbal skills and confidence of the students.

- **Library hour:** Every week library hour is incorporated in regular time table to instill self-learning habit. The students refer to books/journals and write summary of the contents read. This helps to improve the written communication skills of the students.

- **Lexicon Power**: Every day a new word and its meaning is written on a display board to improve the vocabulary of students.

- **Campus to corporate readiness program**: To inculcate employability skills in the students, various programs are conducted at institute level in collaboration with reputed industries like Forbes Marshall, Institute of Holistic Healing etc.

Problem encountered

- Due to limited number of license for language lab, the batch size is restricted to 20.

- As the activity is carried out after regular academic time table, students are less keen to attend the session.

Evidence of success

- Noteworthy participation of students in paper publications and project competitions.

- Significant improvement in the placement.

- Students are able to solve case study assignment effectively.

- Students are able to demonstrate competent written and verbal communication skills during theory, oral and practical examinations.