

BEST PRACTICES IN CSE (AIML) DEPARTMENT

Title of the practice: Design and Implementation of Online Students' Feedback System for Various Parameters

Objectives of the Practice:

- To handle student information, input on the curriculum, teacher feedback, etc.
- To manage the information effectively and timely.
- To generate reports instantly from the system.

The Context: Any teaching program's effectiveness depends on developing a curriculum that enables pupils to learn the most important information possible in the least amount of time possible. It is crucial that instructors and students establish effective communication in order to accomplish this aim. The opinions of the students may be seen as indications of the efficacy of any teaching system since they are unquestionably the finest judges of the teaching and assessment techniques. The mechanism that helps collect input from students is called the student feedback system. Additionally, it offers a means of grading the faculty members, syllabus etc. In the past, pen and paper were used to manually taking the feedback and assessing it. This has several flaws, and assessing these handwritten documents is a challenging procedure. However, using an online student feedback system eliminates the laborious task of personally going through each student's feedback page. The system also lessens the workload and effort required to retain and maintain documents manually, which call for a lot of storage space and security. Another crucial aspect of the student feedback system is that neither the administrator nor the student needs to be physically present to provide or receive input. But once the student submits the report, he or she is not permitted to make changes afterwards. The student may effectively provide comments on the faculty member's instruction using this in a variety of effective ways. Report generating using an online feedback system takes very little time.

The Practice:

- Students provide feedback for a teacher in a specific topic for a specific amount of time via an online feedback system.
- Feedback for a specific department is sent to the respective HoD.
- The Dept. of CSE (AI&ML) has implemented such practice since inception.
- Online Feedback system provided varieties of feedback option.
- Students can login, select subjects and faculty and proceed for the feedback.
- Also, students can give feedback on syllabus and satisfaction survey.
- Report with accumulative score based on standard norms are instantly generated which is considered by the department.

Evidence of Success:

- Since its beginning, the department has used the online feedback system.
- In many instances, issues with the teaching of specific subject(s), the curriculum, etc., were effectively detected without the need for manual intervention.
- Most significantly, the compilation of the report was really well-organized, and the analysis of the feedback was the portion that went the fastest.

Problems encountered:

The department has faith in the mechanism for online student feedback system that it has been put in place. However, the online system also requires regular upgrades that must be promptly integrated with the running system.

Title of the practice: Organizing Skill based workshops every year for students

Objectives of the practice:

- To acquaint students with the emerging technologies in Computer Science and Engineering.
- To enhance the skills of the students by giving hands on experience.
- To give a platform for students to take off in the related field.
- To interact with software industry experts to get the required and latest updates of the various technologies and companies.
- To provide the participation apart from academics.
- Students get to know how to work as a team.
- Students require a participatory understanding of varied domains and factors.

The context:

Most of the software industries claim that most of the engineering students coming out of the respective colleges are not having enough skills to get employment. They claim that engineering curriculum is not considering the industry needs. The industry has to spend considerable amount of their resources and time for extending training to their fresh employed engineers. Besides, the computer science being a dynamic branch of engineering, the students are expected to know the latest technologies for better employability and sustainability. To fill the gap between curriculum and industry requirements, skill based workshops are organized every year.

The Practice:

The workshops are providing the initial inputs to software projects. In every year, we have been organizing many workshops on various emerging technologies under the aegis of CSI (Computer Society of India) student branch. In 2020, we have organized a workshop on Ansible Using Linux and workshop on Networking using Linux. In 2021, a workshop on Front-End Web Development and workshop on Backend Development were organized. In 2022 (till June 2022), workshop on Machine Learning Using Python and workshop on Web Development were organized.

This exercise is win-win situation for all stakeholders. The Department get benefit to explore real time projects and problems through mentors. Students get benefit of exploring state of art tools and technologies and Industry can greatly reduce resources (time, human and revenue) which otherwise needed for training their fresh employers.

Evidence of Success:

- Recently, students of the Dept. have developed Online Feedback System in various aspects.
- Development of different mobile apps.
- Getting Knowledge on Artificial Intelligence and Machine Learning.
- Development computer applications using Python.
- Getting hands-on experience in developing application software.

Problems encountered and resources required:

Since there are new technologies coming up very rapidly, it becomes very difficult to get the best resource persons for those technologies. Another issue is that since the workshops are generally held for around 16-20 hours in the weekends, students sometimes ask for few more hours for projects on the topic. Generally, the number of participants in each workshop is restricted up to 80 due to the limited space in the lab.

Title of the practice: Teaching-Learning Process

Objectives of the practice:

- To ensure the completion of the syllabus according to the academic calendar.
- To encourage faculty to adapt ICT tools in class room teaching.
- To improve the pass percentage.
- To enhance the number of placements.
- To impart the required knowledge to clear competitive exams like GATE.

The context:

- To complete the syllabus within the stipulated time is somewhat difficult by considering slow learner students to cope up with the bright students.
- The faculty use ICT tools for explaining the complex topics and to avoid the confusion of the students.
- The faculty should find complex topics and provide the material to students.

The practice:

- Academic calendar is uploaded on the website for information to students and faculty.
- Head of the department monitors the coverage of the syllabus.
- To encourage the students for utilizing the library.
- Take students' feedback on academic activities.
- Monitor the student's attendance and take necessary steps for improving the regularity.
- Give the subject wise assignments to the students for improving the performance in the end examinations.
- The faculty members have been using ICT tools such as Smart Board, Computers, Projectors, etc.
- Conduct the remedial classes for students for improving the pass percentage.
- Give training on soft skills & technical skills during Semester breaks for improving the placements.
- Sometimes many topics are discussed at length keeping in mind the GATE exam.

Evidence of success:

- Syllabus has been completed within the time.
- Most of the faculty have adopted ICT tools in their classes.
- Material of the course is uploaded on the website and / or Google Classroom.
- Pass percentage and placements are increased.

Problems encountered and resources required:

Since the rural students and non technical faculty does not know how to use ICT tools, training has been given to them by ICT savvy faculty members. By identifying slow learners, extra classes have been conducted to improve the results and their skills.

Title of the practice: Let the student know the significance of a course before s/he starts learning and also the importance of that course in real world applications.

Objectives of the practice: To create enthusiasm and interest on the course.

The context: Normally when a faculty member teaches a course in the classroom, most of the students really don't know where it is useful or applicable. They simply take it passively and go through just to write exams and never understand the real significance of that course.

The practice: When a faculty member starts the first session of any new course at the beginning of the semester, s/he will first illustrate the importance of that course, chapters involved and where it is applicable and how it is used in the real world. This creates lot of enthusiasm among the students. They start thinking and compare the topics to the real world applications they come across and make the class more interactive.

Evidence of success: After implementing the above technique, the interaction between the student and teacher is manifold, quite effective and sometimes it is going beyond the scope of the prescribed subject.

Problems encountered and resources required: We need to play a snippet or videos from Internet. For which we need ICT-based classrooms.
