



Institute of Chemical Technology, Mumbai

Deemed to be University under Section 3 of UGC Act 1956
Elite Status and Centre of Excellence, Govt. of Maharashtra

BEST PRACTICES IN MY INSTITUTION

BEST PRACTICE#1

1. Title of the practice

Smart Learning/ Smart Classroom Teaching

2. The context that required the initiation of the practice

The institute believes in advanced pedagogy practices with a major focus on enhancing the performance of students.

3. Objectives of the practice

To include: 1) Lecture Recording System 2) Use of smart Board to teach Engineering Drawing 3) Use of Wi-Fi connected LCD in all classrooms 4) Use of e-Books and e-Journals 5) E-Attendance System in the existing teaching and learning systems at the Institute

4. The Practice

To improve understanding of the course content of students the institute has built and installed custom-made lecture recording systems in all the classrooms. The Institute emphasizes the use of modern teaching tools like PowerPoint presentations, demonstrative videos, and other e-files for a better understanding of the subjects. The e-library platform helps to check the availability of particular books on the shelf anytime and easier record management. The recorded lectures are available on the institute website and students can revisit these recorded lectures and clear their doubts at their convenience. The concept of smart boards is introduced in teaching to demonstrate several simulation software and engineering drawings for a better understanding of the subject. All classrooms are equipped with Wi-Fi-enabled LCD

projectors to show PowerPoint presentations, videos, etc. during classroom teaching. The Institute has developed a custom-made biometric attendance system for student's attendance and to ensure delivery of the content. The main objective of having such a system was to attract students who tend to stay away from the lectures because of several distractions in terms of internet surfing and mobile apps. The system is based on wireless transmission of the attendance to a central server. Each class has a safe biometric lock which is opened only by the faculty member. The faculty initiates the lecture by selecting his/her course and class in a drop-down menu using the app on a tablet. A biometric machine is circulated amongst the students with preregistered fingerprints, so that each student, present in the class gets registered on the machine. At the end of the class when the app is closed, the names of registered students are sent to the central server.

5. Obstacles faced if any and strategies adopted to overcome them

Initial instalment and implementation of the necessary software led to several obstacles with respect to optimization of the system. But consistent and dedicated efforts by the ICT team have resulted in smooth functioning of the module.

6. Impact of the practice

Improved learning system helps students to get access to the recorded lectures as and when required. The average attendance post-implementation of the E-system has improved from 50-60% to more than 90%. This new system has not only ensured the attendance of the students but also helped in conducting timely lectures by the faculty. Students have the provision of giving feedback at the end of the class which is noted by teachers. Besides, students' performance is enhanced as now they do not miss out on the continuous assessment tests that teachers conduct, sometimes as surprise tests.

The e-library platform helps to check the availability of particular books on the shelf anytime and easier record management. The institute has electronic access to world-class leading research journals.

7. Resources required

Recording gadgets, Smart Boards, Wi-Fi connectivity, Projectors & LCDs, subscription to e-Books and e-Journals, Tabs for E-Attendance

8. About the Institution

i. Name of the Institution: Institute of Chemical Technology, Mumbai

ii. Year of Accreditation: 2017

iii. Address: Nathalal Parekh Marg, Matunga, Mumbai - 400019

iv. Grade awarded by NAAC: A++

v. E-Mail: vc@ictmumbai.edu.in

vi. Contact person for further details: Dean IQA - 9372373309

vii. Website: <https://www.ictmumbai.edu.in/>

BEST PRACTICE# 2

1. Title of the practice

Management Information System (MIS)

2. The context that required the initiation of the practice

Efficient and minimal error prone functioning of academic and administrative activities through online management system in order to achieve targeted accomplishments in the prescribed timelines.

3. Objectives of the practice

To manage all academic and administrative activities through online system for easy and monitorable functioning

4. The Practice

The Institute has adopted a new Management Information System (MIS) which takes care of all the activities related to academics, research, students, library, employees life cycle analysis, regulatory bodies compliance and accreditation, back-office work related to salaries, maintenance of leave musters, inventory stock, hostels, mess, library, etc. with a single database. The MIS system has been implemented for faculty recruitment, official documentation, attendance system, examination process, thesis approvals and submission formalities, grievances, counseling, admissions, appointment procedures, Internal quality assessment, etc. There are many modules of this system that have helped in streamlining and transparent functioning of various activities at the Institute. The MIS helps declare results of the Masters and Ph.D. entrance exams on the same day. The store inventory management including order placement, collaboration with the finance department has become much streamlined and sorted. The complete information of different modules and respective data in those modules including the feedback surveys is available 24x7 as the entire campus is Wi-Fi enabled. The information is also available on the cloud and can be accessed through a mobile application.

5. Obstacles faced if any and strategies adopted to overcome them

Initial stages of development for MIS platform involved difficulties in integrating several academic and administrative modules like admission process, examination centre activities, result declaration, attendance of students and faculty, purchase department activities, accounts and salary disbursement, faculty profiles and leave management, students and alumni feedback, research activities including Ph.D Thesis evaluation etc. However, consistent efforts towards addressing all minor and major issues finally led to proper and smooth functioning of MIS.

6. Impact of the practice

Proper management of each and every module on MIS has led to streamlined, timely and paperless functioning of various administrative and departmental activities at the Institute.

7. Resources required

Internet service, software development, integration and optimization

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