



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 Practice 1: Functional Autonomy to all stakeholders

1.1: Objectives of the Practice:

To practice the sanctioned autonomy for the benefit of the stakeholders, i.e., students, faculty, staff, alumni, and practicing industrialists and society

1.2: The Context

Autonomy to the stakeholders is the foundation of the Institute's success when it is used judiciously by the stakeholders. The faculty members have been given complete freedom for pursuing their research interests, generate and utilize their own funds and be an ambassador outside the Institute to project the vision of the Institute and protect its interests.

1.3: The Practice

How the autonomy has been exercised to meet all the stakeholders aspirations has resulted in the increased output with respect to all the measurable parameters.

1.4: Evidence of Success

Even since we received autonomy within the University of Mumbai and later under the TEQIP, our growth curve propelled us on an exponential growth curve and finally became the Deemed to be University. The opportunities made available to the faculty, staff, and students specifically under the TEQIP have increased ICT's output many folds. When compared in terms of publications per faculty or per rupee spent, the output is probably the highest in the country. It is a place to serve and a place to live and serve the nation in harmony.

1.5: Problems Encountered and Resources Required

ICT was given functional autonomy in 2003 under the TEQIP project with financial support from MHRD. This project was expected to lead to a block grant from the State Government, which never happened. We continue to get short-changed for the funds and have to strive to get what we deserve as the Best performing Institute.

Best Practice 2: Quality Education that travels seamlessly to Research and Innovation

2.1: Objectives of the Practice:

Education in ICT has always been at the forefront of the latest developments in the Chemical field in general, including pharmacy. We update the content and the method of assessment every five years by taking a 360-degree review of the process, involving not just the academic or industry experts but also our current students and alumni.

2.2: The Context

The academic audit is a vigorous exercise that has led to a combination of basic sciences and engineering sciences as a curriculum. We have continuously evolved the method of delivering the content and the rational and objective assessment methods.

2.3: The Practice

We continuously review, anticipate, plan and execute the academic content to make our graduates and post-graduates ready for the challenges they would face in the field. ICT is driven by the knowledge created by itself in our own field. Many of the laboratory experiments have been designed by the faculty members and their research students and are built by the staff members.

2.4: Evidence of Success

The basic education seamlessly travels to research, practice schools, and applications in the field. The real-life experience of faculty members in the industry drives this momentum. Every department has been at the forefront of the latest developments in the concerned fields, and thus, students benefit the most from the practice-oriented training. The vibrant

hive of ICT provides healthy interaction amongst the students from different disciplines at all levels and multiplies the synergistic effect.

2.5: Problems Encountered and Resources Required

Space and funding have constrained us. We have to raise funds entirely through research funding and consultancy. The Mumbai campus needs urgent upgradation with additional research areas and residential space for students, particularly for the increasing women population.

Best Practice 3: Relevant research for the benefit of the Industry and Society

3.1: Objectives of the Practice:

ICT drives its research activities as a mission. Right from the inception of ICT, research has been idea based and not driven by equipment availability because, as a State-funded institute, funds have always been in short supply.

3.2: The Context

Ultimately, the need drives the innovation. We pool our resources, both material as well as expertise. Multidisciplinary culture is a norm, and it keeps widening the portfolio of the faculty members.

3.3: The Practice

We do not get funding easily. Every faculty member is tuned to raise funds for research, whether from industry or government agencies. And getting funds through research projects is a highly competitive business. The practice of being a consultant and making the knowledge available to the industry to improve its' competitiveness has been an integral part of the functions of faculty members. One-third of the consultancy fees are shared by the faculty member with the Institute and has full freedom to use one day of the week for the activities outside the Institute.

3.4: Evidence of Success

ICT is a hive of many centres of excellence. The environment of the 'Field of Chemical sciences' binds all the departments. ICT has the collective expertise that can match excellence in Chemical Technology anywhere in the world. The reason ICT attracts funds also from Industry is because of the relevance of the research. It is a judicious combination of basic and applied research. We investigate the fundamentals and keep in mind the economic outcomes of the research application in the field, whether in industry or society, in mind. Many innovative designs, products, and designs developed in ICT laboratories have found applications in the Industry, improving the operations. The successful delivery of promises makes ICT a magnet for industrially important projects

3.5: Problems Encountered and Resources Required

ICT, unfortunately, was kept out of RUSA funding. The central government officials refused to consider ICT for funding, being called a Deemed University, and no amount of explanation that it is a "State-funded University" helped to change their opinion. It is said that even our A++ NAAC ranking did not help. Similarly, AICTE does not consider us worthy of including in any scheme for PhD fellowships or any other similar programmes because of the tag of Deemed to be University, without realizing that we are state-funded; though the situation with AICTE is changing slowly.

Best Practice 4: Networking with industry and other organizations

4.1: Objectives of the Practice:

ICT encourages excellence at all levels, builds bridges between industry and society, makes the knowledge available to all, and most importantly, builds networking with others. Networking has been the best practice that we have adopted for a long. We have learned quite early that building symbiotic relations adds to our strength, whether with industries or other institutes with complementary expertise.

4.2: The Context

Our alumni in the industry have been the major driving force for the interaction with the industry. The alumni network has remained the strength of ICT, which supports infrastructure development, scholarships to needy students, seed funding to students,

internship opportunities, soft skill developments of students and staff, and several other activities.

4.3: The Practice

We have extended the same culture and helping hand to other educational institutes too. The UGC Resource Centre has been training summer trainees and faculties from other institutes in ICT premises in the chemical engineering department. We have also been taking more than 40 students as summer interns from all over the country, training them about the ICT pattern of self-development. We are also mentoring two institutes under the TEQIP program, which are in the state of Bihar and Odisha.

4.4: Evidence of Success

ICT has signed MoU's with other engineering institutes, industries, and Universities abroad for partnerships. The most significant collaboration has been with the Department of Atomic Energy in the last 15 years. This networking has led to the establishment of the Centre of Chemical Engineering Education and Research with special emphasis on areas of interest to the DAE. And the most recent collaboration has led to the establishment of ICT's Odisha campus with support from Indian Oil Corporation Ltd. The networking practices have led to the ICT to the path of exponential growth.

4.5: Problems Encountered and Resources Required

Our alumni network has been doing its bit, but considering ICT's expansion plans, we do need substantial funding, to the tune of 650 crores over 3 to 5 years, to complete the planned infrastructure development projects.