

## **Practice I: Title of the Practice: “Effective Teaching Learning Methodology”**

### **Aim**

To provide environment for improving the learning skills and ensure overall personality development of students by delivering excellent professional education, thereby creating globally competent professionals.

### **Context**

Quality teaching has to be attained by employing effective pedagogical techniques to achieve learning outcomes for students, which ensures the education meets the expectations of students and employers. The learning has to inculcate in the students, the ability to adapt to evolving professional environment.

### **The Practice**

#### **a. Detailed planning**

The institute has a meticulously organized and clearly planned teaching, learning and evaluation schedule, well integrated into the total institutional scheme (Figure 1). The practice which constitutes the effective implementation of teaching learning is as follows:

- In the beginning of the academic session, the committee headed by Principal prepares an academic calendar with the consultation of heads of various departments and examination section. Thus perfect micro planning of each academic activity is being carried out before the commencement of the semester. The feedback and the performance of the students in the previous academic session are also being considered while planning the semester.
- Book stocks are updated in the central and departmental library as per the current curriculum with the co-operation of library coordinator of each department.
- Faculty Class Teachers In charges are appointed for smooth conduction of the classes.
- Faculty members update their existing course files which consist of academic calendar, time table, lesson plan, question bank, assignments, previous years question papers, syllabus, attendance sheets and notes.

- The Head of respective departments conduct weekly meetings of faculties to discuss the lacunae/ shortcomings/ problems and possible solutions to overcome them.

**b. Execution as per the plan**

- Theory and practical examination patterns and scheme of evaluation are explained to the students in the beginning of the academic year (semester wise) likewise given in academic regulations of CSVTU.
- Students are also evaluated through class tests, tutorials and discussions in class room as well as in laboratories during practical hours, seminars and group discussions.
- The evaluation of the tests, tutorials and assignments form the basis of judging the performance of the students throughout the year.
- Students are encouraged to undertake industry-based projects and projects on advanced topics. Students are motivated to participate in different project competitions. Institute regularly organizes design competitions such as Analog Circuit Maker, Robotics, Programming Skills etc wherein students get a platform to showcase their practical skills.
- Expert Lectures, interactive workshops, conferences in collaboration with industry executives and eminent personalities are regularly organized in each department. The institute is a local chapter for NPTEL certification courses and remote centre for spoken tutorial project of IIT Bombay.
- The training cell of the Institute ensures that the students undergo vocational training in various industries to enhance their practical knowhow and also understand the need of the industry.
- Personality development, Yoga, Health and Hygiene are a part of the curriculum as a soft skill course. Workshops, seminars and Experts lectures are also conducted for Yoga and value education etc.
- Individual faculty member do use assessment/evaluation outcomes as an indicator for evaluating student's performance and achievement of the Programme outcome. It is used in planning necessary corrective

measure in case of deviation from the expected outcome.

**c. Feedback**

One of the most important aspect of the effective teaching learning process is the feedback mechanism. An in-house developed student feedback system is in place in the institution which is monitored by the principal. The students give the feedback on various aspects of the curriculum including the effectiveness of the faculty and the results are analyzed by the software which are put-up to the highest level without any intervention. Thus true and timely feedback is made available to the management to take decisions. The feedback and the performance of the students in the previous academic session are also being considered while planning the semester.

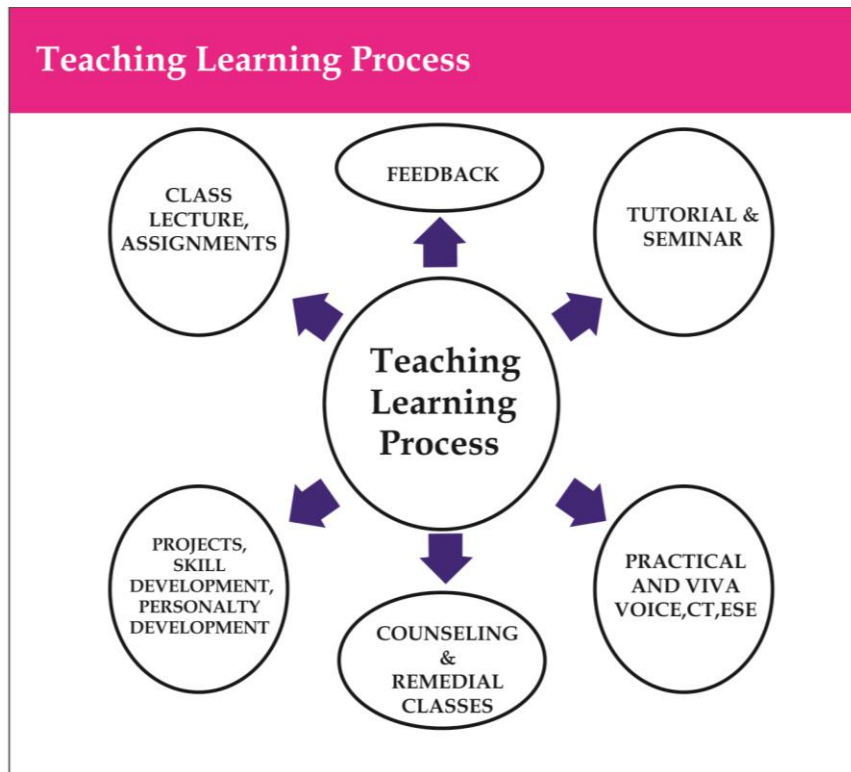
**d. Evidence of Success:** The Institute's success is evident from the positions secured by it's students in the university and various professional examination slike GATE, CAT, etc and their placement in reputed organizations.

**d. Problems Encountered and Resources Required:**

Some of the challenges encountered in effective implementation of best practice include the difficulty in completing the curriculum within the planned time frame and academic calendar and yet be effective in imparting the requisite knowledge. Although lesson plans are prepared by faculty as per teaching scheme mentioned in syllabus, some subjects require more time depending upon the difficulty level of the subject and understanding of students. To overcome this problem extra lectures are allocated in regular timetable and on weekends. For direct second year students extra lectures are conducted to cover the syllabus.

A well-designed professional development program needs to be developed.

This requires time, conviction, motivation and openness.



**Figure 1. Teaching Learning Methodology**

## **Practice II: Title of the Practice: Growth of Research and Development Activities**

### **Aim:**

The aim of this practice is to provide necessary infrastructure, human resources and motivation to nurture the research competencies among faculty members and students.

### **The Context:**

The college offers UG, PG and Ph.D. degree Programmes in various engineering and management discipline. It is the responsibility of faculty members to inculcate effective learning methodology for students to understand various engineering concepts and to develop their interest in the subject. To accomplish this, faculties need to be creative, innovative and to be in touch with latest advancement in field. Their approach of teaching / learning activities should possess holistic idea about the subjects they are teaching which requires some level of research competencies.

### **The Practice:**

The college encourages the faculty members to visit the industry/ academia during vacation to learn the latest technology available which can be used to improve the research skill and enhance the potential of faculty members. The college also encourages the faculty members to publish the research papers, attending national/ International conferences and to carry out consultancy work. The faculty members are encouraged by providing the financial reward to those who publish and present the research articles in national/ International journals and conferences. They were also sponsored to attend the national/ International conferences in India as well as abroad. Institute has collaborations/ linkages with various research laboratories/ institutes to carry out the research and consultancy activities.

### **Evidence of Success**

College is having CSVTU approved research centers in various departments. Faculty members are approved Ph.D. Supervisors of affiliated University. Currently more than 50 research scholars are pursuing their Ph.D. from the institute in various disciplines. Some faculty members are also guiding research scholars registered in MATS, NIT RAIPUR or C.V. Raman University. Nearly 32% of the faculty is presently having Ph.D. qualification. In the year 2015 – 16 ten of our FACULTIES received Ph.D. degree.

The number of Ph.D. degree holders in the institution has been increased considerably. The results of above said practice also increases the number of papers published by the faculty members. The R&D centre provides platform for students and faculty members to innovate, design and prototype industry relevant products.

The Institute has received research grants from CGCOST, AICTE, DST, UGC-DAE and various other organizations for carrying out and developing various research facilities in the institute.

**Problems Encountered and Resources Required**

The faculty members are finding it difficult to find the time to carryout independent research due to their academic commitment. The research activities need to been enhanced in the area of patents as well.