

## **Best Practices**

Higher education has become competitive and in order to survive the competition, institutions have to improve the quality of education imparted by them. Level of skill required in securing employment for students, institutions develop innovations and best practices which add value to education. Science and technology are growing alarmingly and consequently the knowledge base of all disciplines are fast expanding. The educational system is invested with the responsibility of absorbing, assimilating and delivering the new knowledge to its students. Student centric focus is gradually shifting to student friendly approaches as a result of which innovations and best practices are adopted to add value and get more mileage in delivering the knowledge.

Bhavan's College, Dakor was established by a great visionary and founder of Bhartiya Vidya Bhavan Kulpati Dr K.M. Munshi. The institute strives to instill fundamental values of education and cultural aspects associated with it. The institute offers bachelor and master degree programme in Science. The institute supports research based learning, exposure based learning, experiential learning, and laboratory based learning. Value addition is incorporated in teaching through adding extra sessions over and above the prescribed syllabus for insight development. Weak students and slow learners are supported through tutorials, counseling and mentoring.

**Title of the Practice:** Bhavan's Science Community Center

**Goal:** The goal of Bhavan's Science Community Center in this practice is to avail opportunity for students who want to excel in science faculty with high aspirations. The role of Bhavan's Science Community Center is to focus on activities apart from formal classroom teaching for students which shape the attitude as well as career of the student. Bhavan's Science Community Center focuses on three main areas:

**1) Support system for competitive exams :** The students through appearance in such exams test their capability. Competitive exams encourage students to work hard , improve their knowledge and skills. The goal of this practice is to identify shortcomings

and concentrate to rectify it. The goal is to promote healthy competition amongst students and competition builds confidence as well as sharpens skills which raise their level from other students on the same platform.

**2) Arrange expert lectures on current trends in science:** Guest lecturers at a college are usually experts or well-known in their field of expertise who provide insight in current trends in science, significance of events . They provide valuable Information from their experiences which would be a real help to the students.

**3) Celebration of National Science Day:** National Science day is celebrated by Bhavan's Science Community Center every year in the month of February. National Science Day is celebrated in India on 28 February each year to mark the discovery of the Raman effect by Indian physicist Sir C. V. Raman on 28 February 1928.

**Context:** Students who have studied in vernacular medium at secondary and higher secondary level at rural place find difficult to grasp essence of the core subject. They are sometimes burdened by this mismatch and are not sure how to prepare the subject in its totality. Activities by Bhavan's Science Center have an important role to play in shifting educational landscape for students. It helps to develop a scientific temper and attitude among students. They also find it difficult to correlate various concepts within the discipline. Students when appear for competitive exams such as NGPE, Minaxi-Lalit, CPEx, realize the future scope available to them. They are also unaware about their career prospects and preparation for such exams boosts their confidence regarding career prospects. Students are also encouraged to design innovative experiments in laboratory and participate in completion so that they can conceptualize theory into practical skills. Expert lectures keep students updated about the current trend in their respective fields and also guide them about future prospects in their career. Participation in activities related to National Science Day helps to spread a message about the importance of

science used in the daily life of the people. It is celebrated to encourage the students as well as popularize science and technology.

### **The Practice:**

#### **1) Support system for competitive exams :**

Bhavan's Science Community Center informs the students about the following exams:

- **NGPE:** National Graduate Physics Examination (NGPE) conducted by Indian Association of Physics Teachers (IAPT) It is conducted on 3<sup>rd</sup> Sunday of January each year. Scholarships are offered to students. Since last ten years, Bhavan's College, Dakor has been recognized as an examination center and favorable response has been received from students to enroll for the examination.
- **CPEX:** Competition on Physics Experiments is conducted by Indian Association of Physics Teachers(IAPT). According to the framework of the competition, first a cluster level ( institutes affiliated with same University or proximity)competition is held and from winners from various clusters , a state level competition is held among the winners and winners from state level are sent to national level competition. In the inaugural year of the competition 2017,Bhavan's College, Dakor won the cluster level as well as state level completion .
- **NCEWP:** National Competition for Essay Writing in Physics(NCEWP) is one of the three national competitions being held by IAPT every year. The competition is open to college students. Attractive cash prizes plus books / CD will be awarded to the winners separately in categories and the prize distribution takes place during the annual convention of IAPT. Students from Bhavan's College, are encouraged to participate in the exam .Since

2017 students have responded and are eager to participate in this competition . The submission of essay along with one day seminar sponsored by Gujarat Council on Science and Technology( GUJCOST) and Indian Association of Physics Teachers (IAPT-RC7) is held at Science City, Ahmedabad in the month of July.

- Minaxi Lalit Exam: These exam is conducted by Sardar Patel University

- 2) Arrange expert lectures on current trends in science:** Bhavan's Science Community Center invites experts from various disciplines to conduct guest lectures, seminars, and workshops on various topics and trends related to the current curriculum. Experts act as resource person in the enhancement of the student's educational experience. Launching of Chandrayaan-II was live telecast in the classroom and latter on an expert lecture was arranged to reveal significance of the mission to students. Director of Community Science Center, Sardar Patel University was invited to inspire students for a visit to Community Science Center and participate in various activities conducted by it. Faculty members from Postgraduate Departments of various institutes were invited in the field of Chemistry to reveal their expertise to the students.
- 3) Celebration of National Science Day:** Bhavan's Science Community Center celebrates National Science Day every year with various activities like Poster Competition Experimental Models and interactive talk from invited guest . A day long activities motivate the students for participation with their creative ideas in poster presentation and science models related to Chemistry. They are judged by distinguished guests from various institutes invited to interact with students and guide them in the right direction with suggestions, advice and cautions.

**Evidence of Success:**

Students have shown remarkable change in approach towards their studies. They are eager to interact more with the faculty members with new ideas. Students who participated in events like CPEX realized how students of other institutes prepare themselves for the competition and they learn new ideas and methods from while interacting with those students. The results of their university examination also reflect the success of this practice. One of the most important benefits derived from having expert lectures is the enhancement of the student's educational experience. Students attend these lectures for current trends and challenges of their field. Students have become more vocal in their demand for increase in such activities.

**Problems encountered and Resources required:** Constraint of time plays a major role for students as they are attending the college from a distant place with rural background. The semester system of education leaves little room for preparation. They face language barrier as their schooling, communication is in vernacular language and so resources available are limited.