INSTITUTIONAL BEST PRACTICES

Presentation of Best Practices

Even though the college has quite a number of best practices, five of them, PBAS, Technical model development, Proctor system, Academic Audit and usage of MOODLE deserve special mention. There is a growing need for higher educational institutions to be more accountable to the expectations of Stake holders. They have largely contributed to the achievement of the institutional goals as well as to the quality improvement of the activities.

Best Practice-1

1. Title of the Practice : Performance Based Appraisal System

Performance Based Appraisal System (PBAS) is an open, formal, and systematic procedure designed to assist both employer and employees in planning, managing, evaluating and realizing performance improvement in organization with an aim of achieving organizational goals.

The college has developed **PBAS** to confidentially evaluate the annual academic and Professional contributions of faculty and is implemented since 2013-14.

2. Objectives of the Practice
- To measure the performance of employees, provide feedback and assist them to improve their potential.
- To maintain records for the consideration of pay enhancement, promotions, special incentives etc.
- To identify distinctive academic talent and nurture it towards further advancement.
- To enhance teaching learning process, student projects, model developments and Innovation.
- To obtain better Industrial and sponsored research and quality publications
- To increase faculty academic qualifications and certification through online courses.
- To improve in participation and organising Conferences/STTP/FDP/Seminar/ Workshop in association with premier institutions /research organisations and industry.
- Participation in administrative activities both at department, institute level and also in Co-curricular and Extra-curricular Activities.

3. The Context

The rapid technological advancements in academic and research environment of higher educational Institutions demand multi-dimensional participation of faculty. Industry, regulatory bodies, UGC-CAS promotional guidelines have been considered in the design of Performance Based Appraisal System.

- Ineffective use of ICT Tools and online certification for effective Teaching learning process
- Less I-I-I and no.of MOU's with Industry.
- Less number of publications in peer reviewed journals.
- Less participation of faculty in CEP's outside the institutes.
- To improve motivation for R&D proposals.
- Some faculty are reluctant to participate in administrative activities.

The following are the contextual features addressed in the design and implementation of PBAS.

- Accountability: Individual employee is accountable for his/her performance and resources allocated for each activity.
- Participation: Involves employee in the process of setting up of objectives and achieving the targets set.
- Motivation: Through the evaluation of employees, performance and efficiency can be determined by the targets achieved. This very well motivates a person to improve further.
- Documentation: Helps the employee to generate required evidences for submission to PBAS which in turn will help the department to maintain records.
- Goal setting: PBAS helps the employee to understand his/her role thus creating commitment in achieving personal as well as organizational goals.

4. The Practice

PBAS evaluation is based on various parameters such as Curricular, Co-Curricular, Extra-curricular, R&D and Administrative activities on 1000 point scale. The weightage taken into consideration during the assessment and evaluation of these parameters varies depending on the cadre of the faculty.

PBAS format is updated periodically based on the expectations of regulatory bodies. Departmental Faculty Assessment committee (DFAC) is constituted by the Principal with four faculty members from different departments with a chairmanship of senior professor. This committee evaluates all the faculty in the college and the faculty have to submit the necessary evidences during evaluation of the filled format. These forms are scrutinized meticulously by the Appraisal Screening Committee (ASC) comprising of Principal as the Chairman, the DEANS as members and the Chairman DFAC as the member and submitted to the Faculty Assessment Board (FAB). Principal generally concurs with the DFAC committee's API score unless there is an obvious, abnormal and deliberate hike or lowering of API score or he/she receives a representation from the faculty member seeking justice. If the final score falls below the minimum level the faculty is counselled for improvement of the performance.

5 Evidence of Success

This practice made all the faculty to be alert and duty conscious in fulfilling the guidelines and satisfying the goals. It also motivates to become good teachers. In addition the college is experiencing

- Improved academic culture among the faculty and participation in research and administrative activities.
- Use of ICT tools and MOODLE for effective teaching learning process.
- Initiation of Innovative model development practices.
- Total Grants received from government and non-government organizations is Rs.4.7 Crores from 2014-15 to 2019-20
- Total IPRs filed during the last 6 years is 84 out of which 65 were published and 07 were granted.
- 75 Faculty were awarded Ph. D in the college during the last 6 years.
- Institute received all India 7th rank by NPTEL.
- Research papers published in journals/conferences/Books chapters is increased from 129 in 2014 to 280 in 2019.
- Considerable improvement is observed in Research publications in peer reviewed indexed journals during last 5 years.
- Most of the faculty are participating and organising FDPs, Workshops, Seminars, Guest lectures and Conferences.
- Faculty along with students are participating in extension and societal activities   like Blood donation camps, Tree plantation, donations to old age home and orphanages, social awareness camps in nearby villages.
- The Institutional ranking and accreditation is the evidence of successful implementation of PBAS since 2013-14.

6 Problems Encountered and Resources Required

Problems Encountered

- Manual evaluation of huge number of faculty involves more time and effort.

Resources Required

- Automation is needed to reduce the time at every step.

Notes (optional)

Best Practice – 2

1. **Title of the Practice: Technical Model Development**

   "An ounce of action is much worth than a ton of theory". The above saying is much relevant to Engineering Education. The students of VRSEC are encouraged to transform their innovative ideas into technical models and exhibit in Engineers day /Innovation day celebrations organised in the institute annually. The identified best models are promoted to exhibit in the events organised at national level prominent outside institutions/organisations.

2. Objectives of the Practice

- To improve the technical skills of a student and enhance creativity and innovation.
- To apply knowledge and skills to identify and solve societal and industrial related problems.
- To convert the prototype into a commercial model leading to entrepreneurship development.

3. The Context

The revolutionary change in Science, Engineering and Technology has completely changed the measure of the success of a student from theoretical to applied knowledge. There is a huge transformation from theoretical/analytical projects to projects leading to solutions of real time problems. These aspects direct the technical institutes to extend the teaching learning process towards more practically oriented courses/activities. Innovation, incubation and IPRs are becoming the key performance indicators for the national / global recognition of technical institutes.

In the present scenario, to meet the objectives of **National aim** (or) **Make In India,** the students need to acquire both product development and entrepreneurship skills.

- Lack of solutions for societal Problems.
- To bring out inherent talent (or) IQ

4. The Practice

- Students from the 2nd year are identified to develop or fabricate innovative technical models under the guidance of faculty members.
- Idea churning sessions are organised by inviting industry experts and Alumni Entrepreneurs.
- The major uniqueness in this practice is the faculty and student together to update their knowledge
- The faculty will help and guide the students to develop the innovative models. The students are encouraged to plan and prepare proposals in the field of their interest.
- Encourages the student to work beyond the syllabus in every laboratory course
- Majority of the laboratories are equipped with latest tools for implementation.
- All the completed projects are examined by a team of faculty members.
- Viable projects are financially supported for fabrication, testing and also for patenting.
- The departmental research groups helps in taking up mini/major projects by students in developing working models.
- Incubation centres are established for model making with required facilities in every department.
- Provision in Budget proposal for financial support for model making.
- At least two models may lead to Patent from each department in a year from this Platform.
- The same labs may be extended to Innovation & Incubation.

5. Evidence of Success

- 40%of the student projects are practically oriented than theoretical studies.
- Students and faculty are oriented to solve and provide feasible solutions for the society's real time problems
- The students are participating in industry driven National / Global level student Competitions like TCS – CODEVITA, NATIONAL INSTRUMENTS - The Annual Student Design

Contest (NIYANTRA), CISCO- Global Problem Solver Challenge, TEXAS INSTRUMENTS, Hackathons etc., and getting rewards and job opportunities.

Problems Encountered and Resources Required

Problems Encountered

- Inadequate modern and advanced equipment
- Less expertise in advanced areas.
- Better coordination among the departments is needed which leads to develop interdisciplinary models.

Resources Required

- Modern tools and equipment are to be procured.
- Training for both faculty and students by experts from industry.
- Additional financial support in the form of seed money.
- Encouragement / Incentives to both supporting faculty and student prize winners
- Creating awareness to students by inviting experts from relevant fields.
- Departmental Faculty mentors to guide encourage and help the students.
- College Cell Coordinator updates the information of competitions through Notice boards/Website

7. Notes (optional)

Best Practice-3

1. **Title of the Practice :Student Counselling -Proctor system**

The Proctor System has been introduced for providing supportive care and counselling students in their academic and personal problems, from time to time, if any. This system helps the students complete their studies comfortably and successfully. It manages student personal information, academic performance, participation in Curricular and Co-curricular activities and employment information. 20-25 students are attached to a faculty for effective counselling and mentoring. This system is adopted to improve the rapport between the faculty and students as a friendly vigilance for good teacher- student relationship. Parents of the students are timely informed wherever the necessity arises such as lack of attendance, poor academic performance and psycho-social problems.

2. **Objectives of the Practice**
   - To provide the counsellor concerned the opportunity to know his/her students better, with their strengths, weaknesses, career aspirations and family background
   - To identify the academically weak students to assess and resolve the reasons for their poor performance. These weaknesses should be studied and proper remedial action is taken to address these problems
   - To maintain critical information about student.
   - To consolidate the data of the student about academic and attendance management.
   - To ensure a collective effort towards the all-round development of the students
   - To provide the parents a platform to closely involve in the academic and campus life of the students to track their performances/deviations.

- To continuously and regularly monitor the academic progress of the students and to rectify their problems
- To motivate the student at every step for their successful academic career by making him aware of all possible resources at the institute and, guides him for effective utilization of opportunities provided.
- To encourage students to discuss their ideas, try new techniques and expand their skills.

Best Practice-4

1. **Title of the Practice: Academic audit**

Academic audit is a procedure of finding the lapses and confirming the performance of academic practices and procedures against planned/standard procedures. Importance of academic audit is to improve the Academic standards of institution. Academic Audit committee is formed with a senior faculty member from our college and external member from reputed institutions appointed by the principal. The Audit report is given to the HOD and IQAC coordinator for the improvement of the department. The lapses found in the Academic audit are discussed among the faculty in the department and necessary initiatives are taken to overcome them. The proforma of the Academic audit was designed considering the criteria of all quality certifying agencies.

The parameters for Academic audit
1. PEO's, PO's and Curriculum
2. Faculty information and their contribution
3. Teaching-Learning Process and Evaluation
4. Research, Consultancy and Extension
5. Infrastructure and Learning Resources
6. Student information, Support and Progression
7. Governance, Leadership and Management.

2. Objectives of the Practice:

- To find the lapses in academic activities and strengthen the department by fulfilling them
- To take steps for the improvement of the teaching-learning and research activities of all departments/faculties and institutes
- To set quality benchmarks for all units and evolve mechanisms for monitoring and ensuring performance in accordance with them.
- To evolve and implement strategies for self-evaluation to sensitize all functionaries to be accountable for student and stakeholder satisfaction.
- To streamline academic functions and standardize practices
- To ensure every faculty members perform his/her best in teaching and research.
- To provide feedback to faculty members on areas which need improvement.
- To build up a system for conscious and regular action to improve the academic and administrative performance of the institution.
- To help the faculty in clarifying their roles and responsibilities and thus avoids conflicts.

Best Practice-5

1. Title of the Practice: Practicing MOODLE in Teaching learning Process

Nowadays, with the use of technology and the Internet, education is undergoing significant changes, contemplating new ways of teaching and learning. MOODLE (Modular Object-Oriented Dynamic Learning Environment) is a platform designed to provide faculty and students, administrators and learners with a single robust, secure and integrated system to create personalized learning environments. It is a free, online Learning Management system enabling faculty and students to create their own private website filled with courses which can be organized dynamically that extend learning, anytime, anywhere.

2. Objectives of the Practice

- To promote student centric learning.
- To extend the classroom teaching onto the web.
- Utilise the facilities provided by Moodle to help organise their work during their study with the college.
- To practice Asynchronous teaching.
- To have one standard point of communication across the board.
- To enhance Student technical skills.
- To centralize the recourses.
- To appreciate the Activity modules.
- Engage and take responsibilities in their own learning by independently exploring the tools and functions available to produce their coursework.
- Obtain help from everyone who participate in Moodle, this includes tutors, peers or classmates.

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