

SNJB's KBJ COE, Chandwad
BEST PRACTICES

Best Practice 1

Title of the Practice: Formation of Autocrazy Club for the Students of mechanical engineering department to participate in the intercollegiate design completions like Baja SAE.

Goal: The Autocrazy Club is formed in the department by the students of Mechanical Engineering with the aim to participate in the intercollegiate design completions like Baja SAE, Efficycle.

The Context: The intercollegiatedesign competitions Baja, Efficycle organized by Society of Automotive Engineers every year to provide the platforms to the students from various universities to design and build a small off-road car that can withstand the harshest elements of rough terrain. The students of the Autocrazy club forms a team every year as per the specifications and guide lines provided by SAE and are continuously monitored by Staff Co-ordinator appointed by the department.

Practice:The Formation of the Team for participating in the competition is formed by the interview process as per the interest and application received by the students to the club. The Autocrazy Club students then thoroughly go through the guidelines specified by SAE for the upcoming competitions and various teams are formed by the Team Caption and Staff Co-ordinator. The Team participates in the competition every year and has won many prizes for the college.

Evidence of Success: The team formed by the Club participates every year and qualifies in the virtual Baja competitions. The team Crew won many prizes each year including, Best rookie Awards, Spirit of ESI Awards,Endurance awards and cash prize money every year. The Club also participated in Effi cycle 2018 competition last year and secured 18th Rank all over india, 3rd rank in maharashtra and Best New comer Award and cash prize.

Problem Encountered and Resources required:

The Autocrazy Club students thoroughly go through the guidelines specified by SAE for the upcoming competitions and various teams are formed by the Team Caption and Staff Co-ordinator. Every team is given and task as a challenge and the problems encountered are solved by brainstorming it with the faculty and the club students. Thus, every team comes with the feasible solutions and the best possible solution is incorporated by the students. The entire Design and Analysis of the Vehicle Design is done by the students in the College lab. The manufacturing of the vehicle is done by the students with the help of Workshop staff in the College Workshop itself. A Budget of Rs. 5,00,000/- is sanctioned and approved by the management every year for the Autocrazy Club. The club is thoroughly supported by the Faculties, Head of the Department, Principal and Management in every aspect.

Best Practice 2

Title of the Practice:Participation, filling patentsand Winning State and National Level Prizes for Final Year Projects in Various Project Competitions.

Goal:The Mechanical Engineering Department aims to select and undergo final year projects which have potential to participate in the competitions like Hackathon, Avishkar and other competitions and to be patented by the students.

The Context:Various National Level and State Level Competitions like Hackathon , Avishkar , are organized by the AICTE and other bodies to boost the innovative ideas and project and to convert it into product.

Practice:The Final Year Project selected by the department is scrutinized critically by the project review committee formed by the Project co-coordinator. The Potential project which has ability to solve the agricultural problems and ability to increase the productivity by using technology are given preference.The potential project ideas are patented every year and are motivated to participate and won the prizes in project competitions like Hackathon, Avishkar and other national and state level competitions.

Evidence of Success:The departmenthave filled 10 patents in the last three year.The Smart Onion Planter Project have won1st prize at Chatra Vishwakarma Award and Hackathon 2019 organized by the AICTE, also 1st prize at Avishkar Project Competition 2019.Many other project groups have won cash prizes in many project competitions organized in Nashik, Pune and Nagar regions.

Problem Encountered and Resources required:

Efforts are taken by the Project Co-ordinator, and all the project guides in the selection process and brainstorming is done in selecting the project. The project selected is continuously monitored and the work completed is reviewed by the internal review committee periodically.

Best Practice 3

Title of the Practice: Skill Based Education Activity started by the Department of Mechanical Engineering

Goal: The Mechanical Engineering Department aims to develop and improve the technical skill and knowledge of the students to make them industry ready.

The Context: With the view to bridge the gap between the industry expectations and the academics, the department of mechanical engineering started Skill Based Education activity to enhance the technical and practical knowledge among the students. This activity will help the students to build the level of confidence and will enhance their practical knowledge.

Practice: The department had distributed all the students in various groups like Thermal engineering, Metrology, Manufacturing ,etc based on their interest. The mentors of each group undergoes activity for their group like arranging some special lecture, introducing recent technology, solving assignment, Expert talk to enhance practical knowledge and developing their interest.

Problem Encountered and Resources required:

The Head of the department undergone the sessions for SE,TE and BE students to explain the importance of the Skill Based Education Activity and develop their interest to make them industry ready. The budget is prepared by each Activity Mentor and is sanctioned by head of the department.

Best Practice 4

Title of the Practice

Mission Practical Committee

Goal

This Committee is formed by the Institute to monitor conduction of Practical Sessions in all departments.

The Context

All the Activities related to Practical Session Conduction like Paperwork, Instruments Quality and utilization of time are strictly monitored and if any discrepancies are found action is taken.

The Practice

In this committee Coordinators are assigned one form each department. This Committee works under guidance of Principal and Reports to principal. Following are the different activities carried out by the team:

1. Various Pre Semester Documents monitoring
 - a. Lab Teaching Plan
 - b. Application based assignment List.
 - c. Virtual Lab Plan
 - d. Content beyond syllabus
2. Uniform format of Lab Manual.
3. Mid Term Submission monitoring
4. Student Feedback Process
5. Monitoring usage of Virtual Lab

Evidences

We have implemented this Practice in this semester for the first time so we haven't evaluated the outcomes as results are yet to come.

Problems encountered and Resources required.

We found Lack of awareness. This may happen as this first time we are conducting this activity.

Best Practice 5

Title of the Practice

Effective use of Google classroom

Goal

- To establish activities and assessments that promote student learning.
- To simplify creating, distributing, and grading assignments in a paperless way.
- To streamline the process of sharing files between teachers and students.
- To achieve productivity applications that allow collaboration between the teacher and the student

The Context

- Google Classroom combines Google Drive for assignment creation and distribution, Google Docs, Sheets and Slides for writing, Gmail for communication, and Google Calendar for scheduling.
- Students can be invited to join a class through a private code, or automatically imported from a school domain.
- Each class creates a separate folder in the respective user's Drive, where the student can submit work to be graded by a teacher.
- Mobile apps, available for iOS and Android devices, let users take photos and attach to assignments, share files from other apps, and access information offline.

The Practice

- Course teacher create Google classroom for their subject and students are invited to join a class through a private code which is available on subject teacher's blog.
- Teacher assign the assignments are stored and graded on Google's suite of productivity applications that allow collaboration between the teacher and the student.
- Teacher use many different grading schemes. Turned in assignments can be graded by the teacher and returned with comments to allow the student to revise the assignment and turn back in.
- Announcements can be posted by teachers to the class stream which can be commented on by students allowing for two-way communication between the teacher and students.
- Teacher and students both use mobile app; the apps let users take photos and attach them to their assignments, share files from other apps, and support offline access.
- Teachers create Google Forms quiz to any assignment. Post the quiz to one or more classes or students.

Evidence of Success

- **Exposure to an Online Learning Platform:** Many students have never had any experience with online education. Google Classroom is an easy way to help students in online education.
- **Easy Access to Materials:** Because Teacher is posted everything online, Google Classroom gives students access to materials no matter where they are. Students who are absent can easily access classroom materials from home if necessary–this can really help save both teacher and students a lot of stress in the long run.
- **Differentiation in different level students:** Google Classroom is a great tool for differentiation. If teacher working on a concept in class and have groups working at two different levels like slow learner and advance learner, teacher provide separate assignment for them.
- **Paperless leaching learning environment:** Google Classroom is a powerful and effective tool for teachers striving for a paperless classroom. Since they are usually working in Google Drive, everything saves automatically.
- **Engagement of students:** It's been proven that students are engaged by technology. Google Classroom can help students become and stay engaged in the learning process.

Problems Encountered and Resources Required

- **Lack of centralization and communication gap:** It creates one central place where you can post resources, assignments, and other class information. So we can solve this problem using Google classroom.
- **Feedback on announcements and assignments:** Student can comment on your posts and help each other understand if an assignment doesn't make sense.
- **Environment Problem:** Due to paperless educational work we can save paper indirectly nature because multiple people can be using the same source of information at one time so no paper is required.
- **Resource required:** for this practice we required just computer or smart phone mobile, Internet

Best Practice 6

Title of the Practice

Effective use of blog

Goal

- Sharing knowledge about a particular topic to a wide audience.
- To create online resource for students and others
- To maintain work record regarding department level responsibility.
- To achieve productivity applications that allow collaboration between the staffs

The Context

- Using Blog we can share our knowledge like notes, PPT's and other digital material to students, so that students can access these materials as they want.
- Teacher can maintain course file and other academic related material using security on blog.
- Academic and administrative data are shared in blog to particular users so that specific user can access that data only.
- Paperless record maintain for in digital format as well as staff can update that data year by year.

The Practice

- Course file is created in digital format and material is mapped with Google drive so that atomization will achieve by staff there is no need of repetition of data, one data is available for different purpose.
- Teacher can share digital notes like notes, PPT's video lectures and it's links
- College Student and other audience can access these materials as they want.
- Many staff member's blog visited by foreign students also.
- Teacher maintain there administrative record in blog, it is easy to find for senior staff as well as other staff.

Evidence of Success

- **Exposure to an Online Learning Platform:** Many students have never had any experience with online education. Blog is an easy way to help students in online education.
- **Easy Access to Materials:** Because Teacher is posted everything online, students access to materials no matter where they are.

- **Paperless leaching learning environment:** Blog is a powerful and effective tool for teachers and staff striving for a paperless administrative environment. Since they are usually working in Google Drive, everything saves automatically.

Problems Encountered and Resources Required

- **Difficult to maintain hardcopy of course file:** It was difficult to maintain course file in hardcopy because every year it needs to be update all the things. Due to online blog it is easy to maintain and update of this contain by reusability of resources.
- **Lack of centralization of data:** It creates one central place where we can share resources and information using blog
- **Need lot of papers:** It was need of numbers of papers required to maintain yearly record of students as well as student material, Due to blog we can achieve paperless work so that we can save papers and indirectly nature. Because multiple people can be using the same source of information at one time so no paper is required.
- **Resource required:** for this practice we required just computer or smart phone mobile, Internet

Best Practice 7

Best practice- Industrial training apart from syllabus

Goal- Increases the practical knowledge of students.

Apart from syllabus there are many practical things which are necessary to students in their future progress. This activity is useful to increase the practical knowledge of students ultimately which is useful to bridge the gap between curriculum and industry.

The context-

Such type of activity needs guides from industry and resources which are apart from curriculum but useful for industry. Challenging issues for such activity are resources which may be in the form of software's, construction site or guides.

The practice-

Apart from syllabus we organized workshop of STAAD Pro software which is one of the important software of civil engineering design. This workshop was organized for 8 to 15 days by highly experienced resource person.

Evidence of success –

Students gets the knowledge which is required in industry, so it's easy for students while performing in industry; also they are moving towards to become entrepreneur who is giving best solutions for engineering problems.

Problems encountered and resources required –

Resources required are various types of software's, training sites in nearby area, highly experienced guide.

Best Practice 8

Best practice- Constancy

Goal- To serve the society by giving best engineering solutions and also to give training to students.

The context-

Such type of activity needs growing industry in nearby area and well equipped labs.

The practice-

In consultancy we are giving the best engineering solutions to industry; also we are allowing student to participate in such activity because of which students getting knowledge and experience of such practice.

Evidence of success –

Consultancy increases in last some years and students getting interest and are capable to do projects based on testing and consultancy.

Problems encountered and resources required –

Lack of nearby growing industry is one of the main problems in consultancy.