



Ajeenkya DY Patil School of Engineering

Internal Quality Assurance Cell (IQAC)

Institute Best Practices

Best Practice – I

1. Title: - Competency-Based Education and Assessment

2. Objectives of the Practice:

1. To incorporate experiential learning opportunities and participatory learning methods to create a student-centered environment.
2. To bridge the gap between theoretical knowledge and practical application
3. To enhance students' problem-solving and critical-thinking skills

3. The Context:

1. Passive learning approaches: Conventional teaching methods often rely on passive learning, focusing primarily on delivering content through lectures, limiting students' active engagement.
2. Limited practical application: The lack of practical application in education hinders Students' ability to apply their knowledge and skills to real-world situations, resulting in insufficient connection between theory and practice.
3. Varying student abilities and learning styles: Students have diverse abilities, learning styles, and prior knowledge, making it challenging to meet their individual needs and ensure equal opportunities for competency development.

4. The Practice:

The practice incorporates Experiential and Participative Learning methods to create an engaging and impactful learning experience. It includes activities such as prototype development, project-based learning, industrial visits, case studies, simulations, mentorship programs, group discussions, research projects, and the use of multimedia resources. These activities provide students with practical exposure, foster critical thinking, problem-solving, and collaboration, and facilitate the integration of industry perspectives into the learning process.

Constraints and limitations: -

1. Time constraints: Implementing experiential and participative learning activities requires additional time compared to traditional teaching methods. This poses challenges in covering the required curriculum within limited class hours.
2. Resource availability: Providing resources, such as materials for prototypes, software for simulations, or industry partnerships for visits, are limited.
3. Faculty training and expertise: Faculty members require support to effectively disseminate and implement experiential and participative learning approaches.
4. Assessment challenges: Assessing competencies acquired through experiential and participative learning is complex.
5. Resistance to change: Introducing a competency-based approach and shifting from traditional teaching methods to innovative is a significant challenge.

5. Evidence of Success:

The effectiveness of implementing experiential and participative learning methods has been evaluated through a Google Form survey, gathering feedback from students who actively participated in these activities. The results indicate that a significant portion of faculties have successfully incorporated key elements of experiential learning, such as discussing case studies (60.2%) and showcasing videos on the latest technologies and advancements (44.3%). In terms of participative learning, the practice of engaging students in open-ended questions received the highest focus (64.6%), closely followed by subject-specific group discussions.

Additionally, the survey highlights the implementation of various other activities to enhance student learning.

- A significant 69.3% of students reported a notable gain in their level of practical experience.
- 71.5% of students mentioned a significant improvement in their knowledge level.
- An impressive 71.4% of students reported a noticeable enhancement in their collaboration, teamwork, and communication skills.
- 70.1% of students reported an improvement in their understanding and memory retention.
- An encouraging 72.6% of students reported a significant increase in their level of confidence.
- 70.4% of students reported a notable improvement in their creative problem-solving skills.

Overall, the implementation of different activities involving experiential and participative methods has led to a significant improvement in various areas as reported by the students.

6. Problems Encountered and Resources Required:

1. Lack of awareness and understanding among faculty members and students.
2. Resistance to change from traditional teaching and assessment methods to adopt new approaches.
3. Lack of faculty training and development programs.

4. Limited availability of resources such as technology, infrastructure, learning materials, and assessment tools.

Addressing these problems and allocating the necessary resources can facilitate the successful implementation of Competency-Based Education and Assessment, enabling effective teaching and learning practices aligned with desired learning outcomes.

Best Practice – II

1. Title: - Bridging the Gap between Education and Employment through Industry Connect.

2. Objectives of the Practice:

1. Enhance students' employability by aligning their skills with industry requirements.
2. Foster collaboration and knowledge exchange between educational institutions and industries.
3. Provide students with real-world exposure and practical experience through internships, mentorship opportunities and collaborative projects with industry.
4. Update teaching methods to include the latest industry trends and topics.
5. Promote skill development, upskilling, and reskilling to address evolving industry needs.

3. The Context:

1. Outdated curriculum: Traditional educational systems often focus on theoretical knowledge, neglecting practical skills required by industries.
2. Skill Gaps: Graduates often struggle to find suitable employment due to a lack of relevant skills and practical experience needed by industries, resulting in limited job opportunity
3. Lack of industry exposure: Many students complete their education without having a clear understanding of the industrial requirements.

4. The Practice:

This comprehensive practice aims to bridge the gap between education and employment. Key elements include:

1. Industry partnerships: Formal agreements with industry for collaboration, resource exchange, and shared goals.
2. Address relevant industry topics: Incorporating latest trends, technologies, and case studies into the curriculum.
3. Product surveys: Students gather insights on consumer preferences and industry demands.

4. Industry visits: Physical or virtual visits to gain firsthand knowledge of operations and work environments.
5. Guest lectures: Industry experts deliver talks to share expertise and insights.
6. Mentorship programs: Engaging industry professionals as mentors for career guidance.
7. Sponsored projects: Collaborative projects with industry partners to tackle real-world challenges.
8. Internships: Providing practical experience through industry internships.
9. Research on industrial problems: Publishing conference papers focusing on industry issues.
10. Hands-on workshops: Practical sessions using industry-specific tools and technologies.
11. Skill development courses: Offering upskilling and reskilling programs to enhance employability. These activities aim to align academics with industry needs and provide practical exposure for better employability.

Constraints/Limitations:

Some constraints and limitations that are faced in implementing the above practices include:

1. Resistance to change: faculty members are resilient to modifying the existing teaching methods beyond the syllabus due to the University Syllabus.
2. Industry collaboration: Establishing and maintaining strong partnerships with industry partners is challenging.
3. Faculty training and readiness: Faculty members need to train and upskill in order to incorporate the latest industry topics and new teaching methodologies.
4. Resource constraints: Implementing industry connect initiatives requires additional funding, infrastructure, and industry-specific tools and equipment
5. Evidence of Success: To assess the level of success, student feedback was collected through a Google Form. The feedback reveals the following findings:
 1. In relation to this practice, faculties have engaged in various activities. The foremost is discussing advanced topics, trends, advancements, and technologies in the industry sector. The next focus was on industry issues, problems, and challenges. Next to it, faculties emphasized skill development courses available in the market related to the subject. And faculties organized guest lectures by industry professionals, among other activities.
 2. 95.8% of students (1801 out of 1879 respondents) believe that the practices will secure employment after completing their education.
 3. 95.4% of students (1793 out of 1879 respondents) reported gaining practical experience and skills through the implemented practices.
 4. 89% of students (1672 out of 1879 respondents) mentioned being exposed to industry practices through the initiatives.

5. 66.65% of students (32.1% extremely agree + 34.55% significantly agree) believe that the level of employability has increased through the implemented practices.

6. Problems Encountered and Resources Required:

Problems that are encountered during the implementation of this practice include less adaptability to change, limited industry participation, and resource constraints. Resources required to implement this practice effectively include:

1. Industry collaborations: Establishing and maintaining partnerships with industries across various sectors.
2. Faculty development and exchange: Providing training and workshops to faculty and faculty exchange initiatives with industry for bridging the gap between academia and industry.
3. Infrastructure: Upgrading labs, equipment, and facilities to support practical training.
4. Networking platforms: Creating platforms for students, faculty, and industry professionals
5. Monitoring and evaluation: Allocating resources for monitoring and evaluating the effectiveness of the practice and making necessary improvements
6. Training of non-teaching staff to support the execution of the practice.