

THE UNIVERSITY APPROVED BENCHMARKING FOR MODERN TEACHING-PEDAGOGIES AND QUALITY STANDARDS

Considering the report of the Committee for Benchmarking of Modern Teaching-Pedagogies/Practices, the IQAC recommends the following:

Modern teaching practices and pedagogy: The eagerness to continually improve the educational experience of students has been growing steadily around the world. Classroom teaching practices are at the core of a teacher's work. We are now more aware of how teaching practices help shape the student learning experience and advance motivation and achievement. Research on institution effectiveness suggests that practices based on theoretical ideas are insufficient to foster student learning. Rather, a combination of clear, well-structured classroom management, supportive, student-oriented classroom climate, and cognitive activation (*e.g.* challenging content that promotes deep reflection in the student) has been shown to be effective. Three dimensions of classroom teaching practices are identified in TALIS 2008: structuring, student orientation and enhanced activities

“Education is the manifestation of perfection already in man” –
(Swami Vivekananda)

Classroom teaching practices: High-quality instruction is often defined as the use of a variety of classroom teaching practices, allowing for both teacher-directed and self-regulated learning. For educational policy and teacher education, the results support calls for a good balance among the three dimensions of classroom teaching practices: (a) enhanced activities including challenging tasks and content, (b) student oriented, supportive practices and (c) teacher-directed practices that provide structure and clarity.

Improving Existing Teaching Methods by adopting a mix of new techniques

1. **Lecture Method** –The most widely accepted and traditional method of teaching as it creates new ideas, good for large class, teacher can explain all points and subject and can answer all questions raised by students, Students can ask if they need any clarification. Yet by employing following techniques it's effectiveness can further be enhanced:-
 - a) **Interactive techniques-** By employing interactive techniques teaching can be turned into “fun”, and are frequently more effective than lectures at enabling student learning.
 - b) **Instructor Storytelling** – Instructor illustrates a concept, idea, or principle with a real life application, model, or case-study “**Real-World**” – Have students discuss in class how a topic or concept relates to a real world application or product
 - c) **Everyday Ethical Dilemmas** – Present an abbreviated case study with an ethical dilemma related to the discipline being studied **Movie Application** – In groups, students discuss examples of movies that made use of a concept or event discussed in class, trying to identify at least one way the movie-makers got it right, and one way they got it wrong.
 - d) **TV Commercial** – In groups, students create a 30-second TV commercial for the subject currently being discussed in class. Variation: ask them to act out their commercials.
2. **Simulation** – Place the class into a long-term simulation (like as a business) to enable Problem-Based Learning (PBL).

3. **Group Discussion:** More participation of students, students listens to other's opinion & expresses their opinion, Discuss with teachers the points that were missed during discussion. It can further be improved and added to by:-
 - a) **Picture Prompt** – Show students an image with no explanation, and ask them to identify/explain it, and justify their answers. Or ask students to write about it using terms from lecture, or to name the processes and concepts shown. Also works well as group activity.
 - b) **Individual presentation:** A presentation involves motivating listeners to accept a new idea, alter an existing opinion, or act on a given premise. Students first thoroughly understand the topic before giving presentation i.e. mastery on topic.
 - c) **Tournament** – Divide the class into at least two groups and announces a competition for most points on a practice test. Let them study a topic together and then give that quiz, tallying points.
 - d) **Role Plays** - Students assume one of the characters in a simulated situation in order to experience different points of view or positions
4. **Assignment-presentation:** It enhances the ability of research on any topic as the students search topic from different books, websites etc. it should be the regular practice in both UG and PG courses in the university.
5. **Workshops/ Conferences / Competitions** Give Chance to meet other people of same stream or even across the stream networking with other institutions and professionals
6. **Brain storming, role play and case study**
7. **Learning by doing (Experimental learning)**
 Learning-by-doing is generally considered the most effective way to learn. The internet and a variety of emerging communication, visualization, and simulation technologies now make it possible to offer students authentic learning experiences ranging from experimentation to real-world problem solving.

Modern Pedagogy techniques: Teaching Pedagogies need continues improvement/upgradation by way enriching it with empirical research (by adding relevant research papers in references), case studies and current trends. Use of new technology and other media can add to effective dissemination of knowledge. The following techniques can be used:-

1. **Movies** -Using movies or television clips or whole shows to engage students during lectures or to fuel discussions of course content by pointing out either fallacies or realities depicted there. Examples include using science fiction movies to discuss physics concepts or CSI shows to discuss biology or forensics.
2. **Podcasting**-Enhanced: Combining images, such as PowerPoint, and audio, such as instructor voice over, which are compressed and viewable on a computer or photo/video iPod. Video: Digital video, such as classroom lectures or interviews with experts, which are compressed and viewable on a computer or video iPod.
3. **Simulation** Computer-based - Interactive: Computerized model or scenario.
4. **Web-based Instruction** - Using Web resources to support learning. blogs, building a Website, discussion boards, online testing and quizzes, research, virtual tours, web-streaming, web conferencing, online discussion board, online interaction (Online Chat, Online Evaluation, E-Mail Feedback). You tube-Video Demonstrations, Movie Clips, Student Videos, Wikies, blogs, games.
5. **Interactive whiteboards** - An interactive whiteboard is a touch-sensitive screen that works in conjunction with a computer and a projector. Interactive whiteboards are an effective way to interact with digital content and multimedia in a multi-person learning environment. Interactive white boards allow teachers and students to interact with content projected from a computer screen onto a white board surface. Virtually anything that can be done on a computer can be done on an interactive white board, with the advantage that interaction involves fingers and pens and so is more kinesthetic, drawing, marking and highlighting of any computer-based output is supported, a whole class can follow interactions, and lessons can be saved and replayed

Suggestion for improvement in University based on above points

1. Class rooms must be equipped with minimum facilities like LCD/DLP (roof mounted), Computers with fast Internet. Some rooms to begin with, in each department must have Interactive Boards which can do away with need of LCD etc.
2. Every Lab must be provided with equipments those are necessary for safe environment like fume hoods, eye-washers, safety showers etc.
3. Safety, security, health and environment (SSHE, University –Industry collaborated) as executed in Department of Chemistry, need to be executed in all Labs of University.
4. Web-Casting of important Lectures of University teachers on our website for future reference and onwards dissemination of knowledge to other stakeholders.
5. Induction/orientation programs for new students in beginning of new session must be conducted to apprise students about the Departments, teachers, University, common facilities and overall future and values of the university. These programs may be conducted department wise or at university level. The departmental level should be conducted by the Chairperson concerned and the University Level should be conducted by the Dean, Academic Affairs.
6. Documentaries on presentation and communication skills etc must be shown to students department wise and also at level of University.
7. Each department/School must revise syllabi, at least, in every block of three years.

Note: *The IQAC resolved that the modern teaching pedagogies should be deliberated at the level of departmental level and more and more assignment-presentation should be given to the students to keep them busy in innovative and constructive learning.*