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My Teaching Philosophy

My personal teaching philosophy based on four pillars :

1. Teaching is always a two way process. When I teach, I learn a lot.

2. The world is symmetric in nature, so if there is any problem there will always be a solution as counter-part.

3. Its my moral duty to treat all students with absolute equality regardless of age, gender, nationality, intellectual ability or personal attractiveness.

4. It is my business to try to understand the student's point of view, before attempting to give them my own. This means that when I do teach I can choose a conceptual path that leads from the students current understanding to a broader or more conventional one.

Teaching Plan : Now a days the teaching plan is based on course outcome(CO) and program outcomes(PO). My teaching plan for the year also follows the COs and POs of my subjects i.e. physics and material science.   But I prefer to be flexible and realize that lessons might not always go in the direction I plan because the students get interested or excited about something.

Teaching tools/methodology : Actually lecture on my subjects include *theoretical concepts*, *mathematical derivations*, *numerical problems* and *experimental demonstration*s. The general practice I use during my classes of physics and material science is to check the basic knowledge of students of any fresh topic/chapter/unit before starting. For which I give 3-4 very basic questions in the level of their previous classes and ask them to write whatever they know about, within 10-15 minuets with the friends of same bench. Then the topic is opened for discussion. Thus, my first lecture is devoted to create a pleasant environment to learn that chapter interestingly by giving the scientific and historical

background of the topic/chapter with suitable examples. This gives me complete attention of students and the level I have to reach to teach that topic to my students.

I never believe on spoon feeding to my students as well as giving simple oral talk only. I completely engage my students with me during the complete lecture taking the help of students in mathematical derivations. When my students do the mathematics I roam in class to check the correctness and help them if needed.   I never left the numerical problems for the end of the unit. During the coverage of any topic, I solve related numerical problems simultaneously. This help the students to understand the concept in deep. Similarly the experimental demonstrations (if needed and available in the lab) is performed during the completion of the topic concerned.

There are many teaching tools but I found the talk duster as a most effective tool in class room teaching. Sometimes I also use power point presentation on any specific topics.

Assessments : Through out the year I do both informal and formal assessment. During the units and for most of the lessons I use informal assessment. Roaming in the classroom during numerical problem solving and mathematical derivations is also my way of assessment. In my observations I write down notes (if needed) to remember things and use that information to help me plan for in the future. At the end of the units an sometimes for big lessons, I use formal assessments. While I take tests, that is not the only form of formal assessment I will use. I plan to have papers, projects, presentations, and other creative ways to fit my students' learning needs.

Blended learning : Today, our students are always on the go. Stick them in one place in front of one thing for too long and they get bored. They need entertainment, stimulation, and variety. This is a good time to mix your classroom up into a digital playground. Blended learning isn't just for students. It's a way for teachers to connect to both their learners and the digital world they inhabit. Pupil and instructor grow together, as it should be. The key to learning in any kind of setting is that the learning must be *useful*. Digital students are very perceptive, and also pragmatic. They are always going to be asking the question, "Why do I need to learn this?" I also use *blended learning* technique. I use simplest technique. There are many useful course contents are available in digital form as ebooks and video lectures. For any specific topic I instruct my students to view a short and purposeful video about the concerned topic and identify the problem. I give some time to make the report or presentations individually and /or in group and give an assignment to present in form of Ppt presentation, poster or model presentation.   Apart from this, some problem based learning is also in practice during lab hours.

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