Interactive Teaching Workshop – Ideas to take away

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- Encourage pupils
  - to think for themselves
  - to enjoy figuring things out
  - to criticise their own reasoning
- Turn students into teachers

Ideas to try

1 Discuss lessons with a teaching partner, before and after each class.

2 **Problem-based learning**. Plan your courses around projects chosen by the students. Their projects will then motivate them to learn relevant science and mathematics. (For example, if the project is 'make a solar water-heater', then the students will need to learn about *pressure, density, friction, radiation*; and if they try to optimize their design, they will discover a need for *calculus*. The project 'understand the AIDS epidemic' will motivate learning about *physiology, cells, viruses*; about mathematical functions such as *exponentials*; and about *probabilities*.) When a project is completed, offer a new range of projects that will motivate other topics from the science and mathematics curriculum.

3 Encourage students to **ask questions**. And when a student asks a question, *don't answer the question*! Say 'what do *you* think?' (Reason: students must be active.)

4 **Ask questions**. Plan each lesson around one or two questions. Help the students discover answers to the questions. (Reason: students must create the subject for themselves.)

5 When you have explained a new idea, **ask a question** to find out whether the idea has taken root in each student.

6 When asking the class questions, give *all* the students time to answer. And ask the class to **criticise their own answers**. For example, ask if they have an alternative answer that they think might be correct.

7 If students answer questions incorrectly, **ask another question** to direct their self-criticism.

8 **Peer teaching**. Have students explain things to each other.

9 Have **seniors teach juniors**. (This may be useless for the juniors, but it's great for the seniors!)

10 Give students **free time** to think and formulate questions.

11 Put students in small groups to discuss things. Have groups explain their thoughts to the whole class.

12 Have students evaluate their own presentations.

13 Have students evaluate each others' presentations.

14 When asking a group for opinions or feedback, go through the group from the most junior to the most senior.

15 Encourage students to **question authority**. 'Don't memorise – argue!'

16 Establish a group of teachers who meet for two days every 6 weeks to share teaching ideas.

Remember

Learning is maximized when:

(a) the **student participates completely in the learning process**, controlling its nature and direction,

(b) learning addresses practical, social, or personal **problems**, and

(c) **self-evaluation** is the principal method of assessing progress or success.