

# Teaching a Science or Discussion Lab:

How to distill what is important from lectures, design and run activities, and facilitate discussion

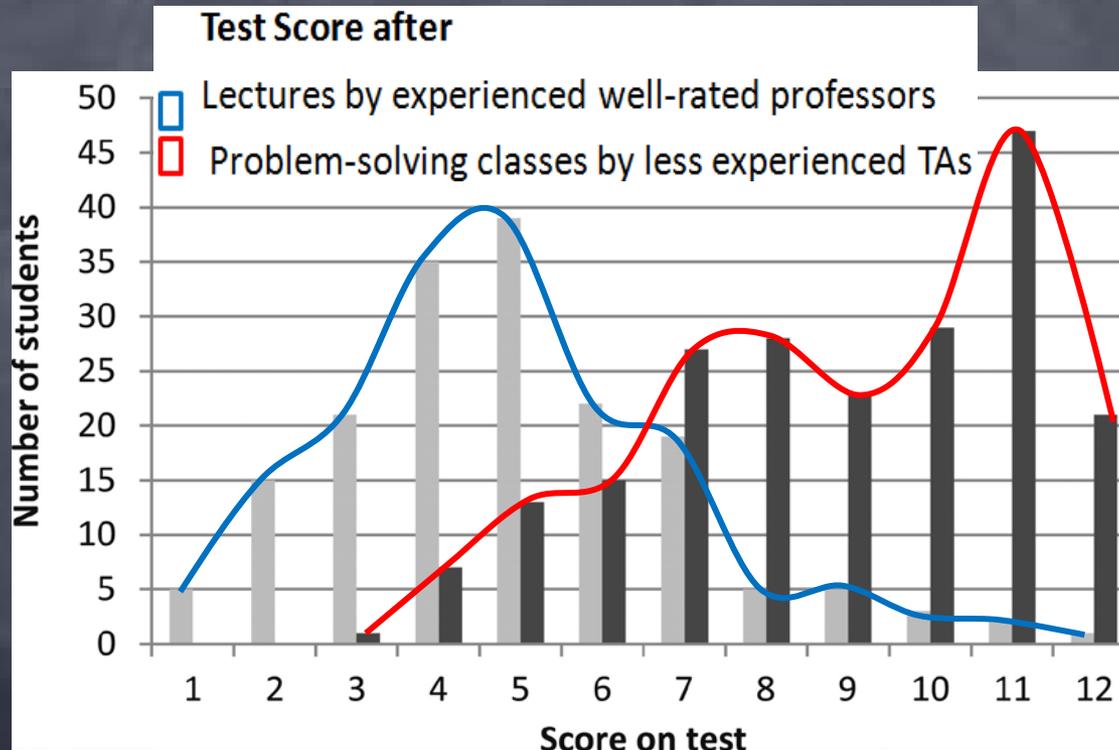
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# Can We (Tas) Teach as Good as Professors?

A recent study shows that students taught by TAs scored higher than students who attended traditional lectures by experienced and well-rated professors.



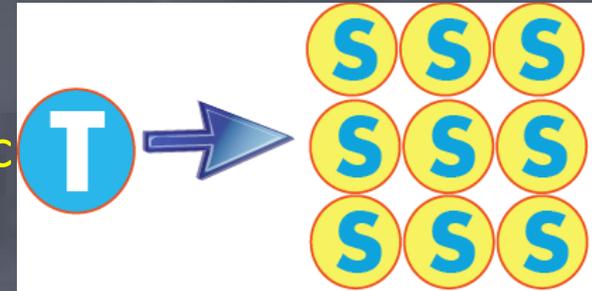
**YES WE CAN!** but what is the secret here?

Interactive, collaborative and application-oriented problem-solving approach

# How Labs are Different from Lectures?

## Lectures

Function as a conceptual source of information for students and expose students to a large, basic body of the science information

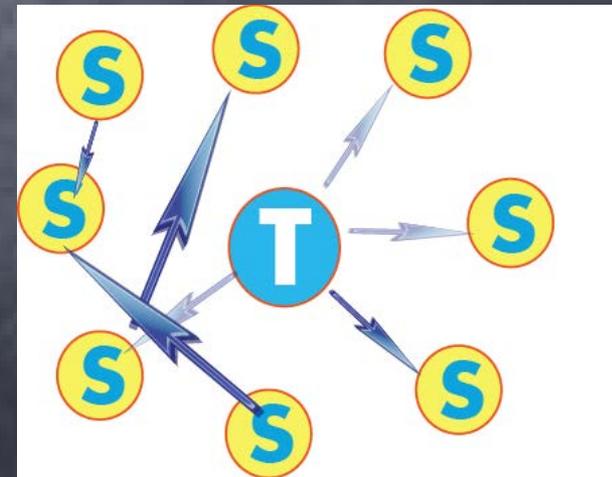


Teacher-centered

## Labs

Are usually in a smaller group settings and therefore provide

- An opportunity to perform application-oriented problem-solving tasks
- An interactive and collaborative environments
- In conclusion - more challenging but arguably a better learning environment.



Student-centered

# How to Conduct a Science Lab? - PIE

## Plan

- Get familiar with the material, methods, tools, safety rules and first aid kits
- Perform the experiment and related tasks
- Make sure all you need are ready – handouts, equipments, supplies

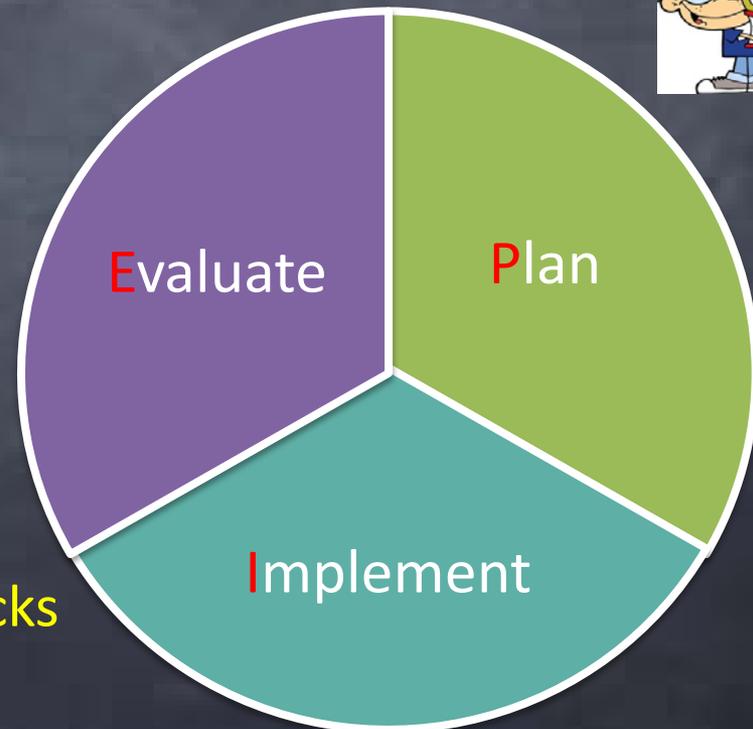


## Implement

- Run the lab
- Work with students

## Evaluate

- Student response and feedbacks (individual or group), surveys



# General Tips and my Experiences (1 of 3)

## Day 1

→ Introduction - Know your students

(a tip: ask something unique about them)

→ Overview of the labs

Describe work loads, nature of labs (eg. computer programming, field trips, group works), due dates, exams, grading etc.

→ Introduce the lab, necessary tools, and technology you are planning to use (Eg., Laulima)

→ Spell out the ground rules

Let students know what is acceptable and what is not

# General Tips and my Experiences (2 of 3)

## General Advice

- Prepare materials (photocopies, overheads, slides) in advance
- Solve exams and homeworks before you give it to students
- If you are TAing a lab and lecture is taught by a professor, make sure you know what is being covered in the lecture
- Be available when your students need help particularly during the exam time
- Know your students' special needs if there is any.
- Try to maintain your schedule and time
- If you are coming from other countries with your own experience – make sure your experience is relevant before you apply (eg., where I come from, food and drinks are not allowed in the classroom)

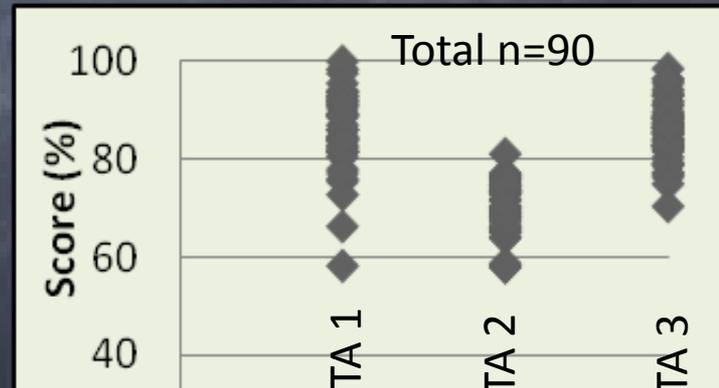
# General Tips and my Experiences (3 of 3)

## Grading

→ Grading is one of the most important job

Make sure you are being fair to everybody (a tip: use objective questions when possible)

→ If there are many lab sessions taught by different TAs, make sure grading is done consistently



→ Prepare for the conflicting situation

Enjoy TAÍNG!