

Conducting Laboratory Workshop

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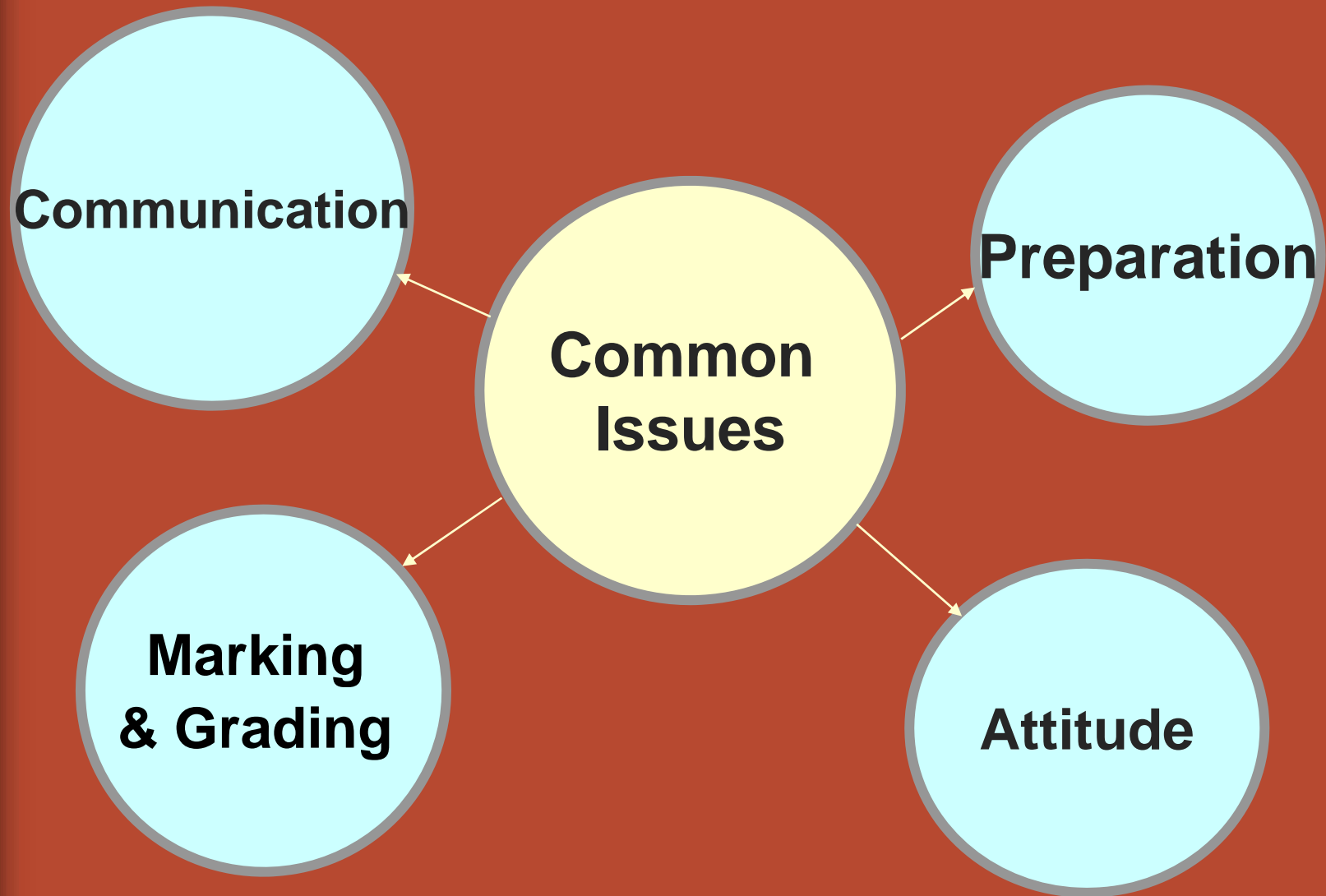
Objectives

By the end of this workshop, you should be able to describe:

1. **Common issues** in conducting Lab
2. **Three phases** in conducting Lab sessions:
Before, During and After conducting Lab
3. Specific issues in conducting lab -
Departmental Group Discussion

As a student...

- **What are some problems in lab you have experienced as a student?**
- **What suggestions do you have for those problems?**



Common Issues



1. Preparation

- Knowledge of Lab materials e.g. lack of understanding of the background theories, pre-lab reading
- Procedures of experiments e.g. just read like a student, unable to answer questions, superficial
- Lab safety e.g. wear lab coat, goggles

2. Attitude

- Punctuality in both pre-lab and lab sessions e.g. Late or Rush to leave
- Breakfast in the Lab
- Attitude deteriorates



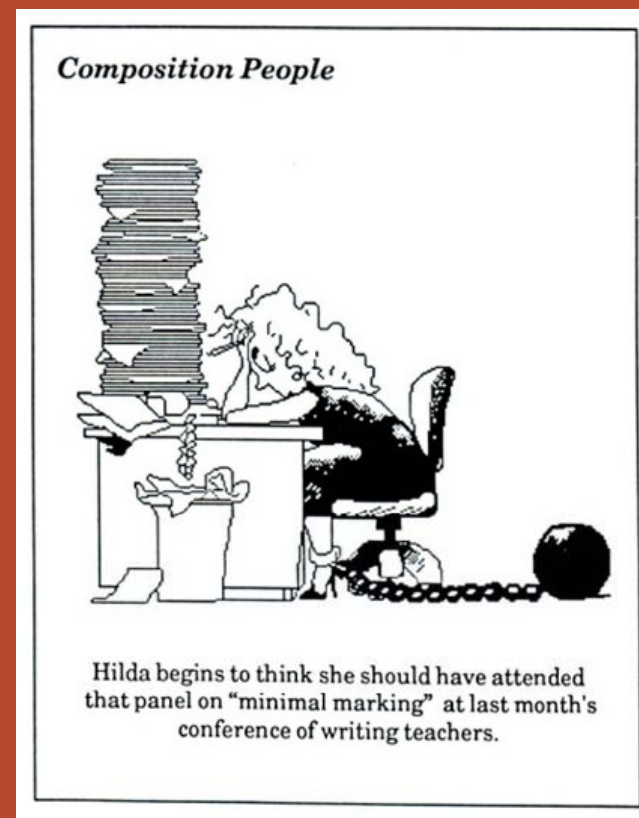
3. Communication

- Professionalism e.g. relationship with students, don't work on their projects
- Language e.g. use ppt slides, pictures



4. Marking & Grading Lab reports

- Too easy, Too tough
- Just based on model answers, lack of judgment





Three Phases of a Lab Session

Before, During, After

Quiz

1. Why do TAs have to pre-run the lab?
2. What should TA do during the laboratory?
3. When should you return the lab report?

BONUS:

4. Can you bring coffee or drinks to the labs?
Why or why not?
5. When is a good time to eat breakfast/lunch?

Quiz

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Before Lab



Before Lab – Pre-run

- Pre-run the lab and find out the **possible lab results** in order to assess students' work.
- Prepare **supplementary notes** to student if you think the lab manual is not clear enough.

**How can I link this lab
with the professor's lecture?**

Before Lab

- Contact and meet the course instructor to discuss the **learning objectives** of the lab work.
- Get familiar with all the **equipment and materials** to be used.
- Assist in calibration of the **instruments** before the lab takes place. (Arrive early - Be clear about the **lab dates and time**.)

Before Lab – Safety Precaution

- Find out the **potential danger** associated with the experiment. Be clear about:
 - The **procedures** for handling emergencies.
 - **Location** of the nearest first-aid kit, eye wash and hospital, etc.
 - Where the emergency exit and route is.
- Always remember the university emergency phone number - _____

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During Lab

During Lab

- Provide **clear and complete instructions** at the very beginning of the lab session.
- Try to break down the demonstration into several **meaningful steps**.
- Explain and emphasize the **main points**.
- Point out the **common mistakes** of the lab work.

During Lab

- **Supervise** the students throughout the entire lab period
 - Learn the names of your student.
 - Walk around
 - Watch out for accident.
- Have a good **time control** so that the students can finish the lab on time.



During Lab

- Never **lie**. You are not expected to know everything.
- **Encourage** your students to try new things
 - Learn from students
 - Reserve enough time
- **Assessing** students' performance in labs
 - Students' preparation
 - Ability to perform lab techniques
 - Understanding of the lab procedures
 - Students' observance of safety standards

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After Lab

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- **Grading Lab Reports**

- Check with faculty for overall depth and critical content
- Give back to student ASAP
- Provide feedbacks and comments

- **Post-lab consultation**

Write down notes for future improvement and share them with the course instructor, technicians and demonstrator.

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