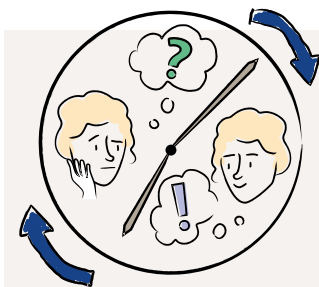


# 10 tips on how to run a practical exercise

Allowing course participants to manually use and apply specialized equipment and to practice new techniques is an extremely successful element of AO Courses. To meet expectations, practical exercises must be highly interactive learning activities, integrated with the course content.

To create an environment that encourages the learner to develop and practice their newly acquired skills, practical exercises should involve the following.

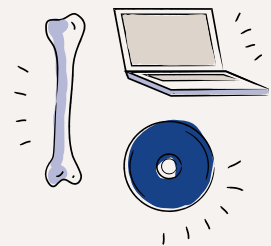


## 1 Learning objectives:

Explicitly state what the learner will be able to do at the end of the practical exercise (further reading on how to write learning objectives can be found [here](#)).

## 2 Equipment:

- Check that there are sufficient bone modules, instruments, and implants available or on order.
- Review all video material to check that it matches the teaching and learning requirements.
- Table instructors need to preview the video material so that they know what they will be demonstrating/supporting.
- A CCTV system needs to be utilized to project materials developed during the event (such as a flip chart for writing learning objectives or key steps through the practical).

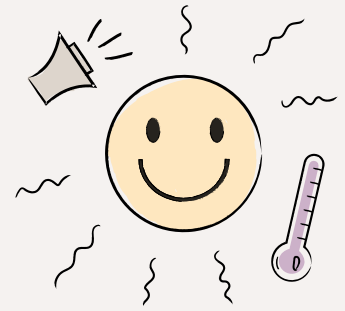


## 3 Learning activities:

- Are the learning objectives supported by the planned practical exercise?
- Are activities divided into manageable pieces (see next section)?
- Has enough time been allocated for each activity?
- Is there enough time included for supervised practice, feedback, and evaluation?

#### 4 Managing the learning environment:

Environmental factors (heat/cold, amount of oxygen, and noise) can interfere with acquisition and performance of psychomotor skills.



##### Set:

- Ensure a comfortable room/setting, appropriate temperature, and control outside noise.
- Does all the equipment work? Do you know how to use it?
- Technical requirements: CCTV camera operator, projector screens (adequate and visible), audible sound system.

##### Dialogue:

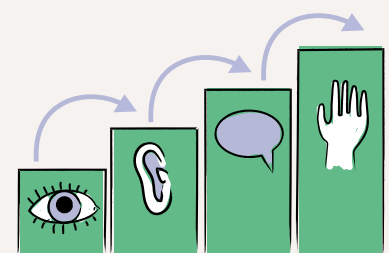
- Introduce the exercise.
- Outline the structure of the session.
- Adult learners need to know the application of what you want them to learn or do.
- Grab the attention of learners by stressing clinical relevance and how their surgical performance will be enhanced by the activities.
- Divide the content into short manageable sections.
- Engage the participants—discuss learning outcomes and your expectations.
- Ensure all participants are advised about health and safety issues.
- Apply the four-step approach to teaching a practical skill (please refer to the AO booklet on [how to run a practical exercise](#), page 8).
- Provide meaningful feedback using the four-step model (AO booklet on [how to run a practical exercise](#), page 9).
- Engage all learners to obtain and ensure you have their undivided attention.

##### Closure:

- Reflect on outcomes and key learning points.
- Respond to questions.
- Summarize main points.
- Deliver a final “take-home” message.

#### 5 Four-step approach:

Fifty percent of session time needs to be allocated to this step; repetition is key to learning psychomotor skills.



##### Step 1: Silent demonstration

- A faculty member models the skill in silence or with minimal dialogue. Learners focus purely on the physical movements of the task.

##### Step 2: Demonstration with explanation

- Task performed again by faculty, broken down into stages and with a clear and concise explanation of what needs to be done at each stage.
- Highlight key points and exaggerate movements/actions. Check that learners understand what they need to do at each stage.

##### Step 3: Learner talks through the task

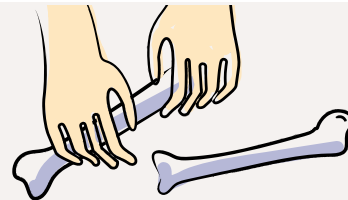
- Learner talks through the tasks' steps while faculty performs the task. Articulating the process is an excellent way for learners to assimilate key components of the correct technique.

##### Step 4: Learner performs task

- Learner performs the task and talks through what they are doing.
- Faculty observes, supports, and provides feedback.

## 6 The practical:

Allow learners to develop, practice, and improve their skills and change behavior. Reinforce complex theories and techniques with hands-on experience. Stimulate psychomotor skills (psychomotor skills are not reflex actions).

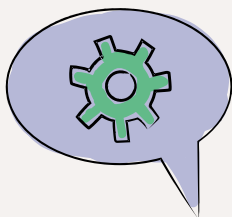


- Be aware of the time.
- Display all of the “parts”/implants, tools, and instruments that will be required; lay them out and name each piece to ensure learners know what each is called.
- Show the finished result/construct at the beginning.
- Each section should be short and related to a specific skill expressed as an objective.
- Emphasize the key steps in each section.
- Identify appropriate video clips to support the steps.
- Present the sections in a logical and sequential order.
- Make sure you have covered any prerequisite skills and/or knowledge.
- Structure each section using the four-step approach (AO booklet on [how to run a practical exercise](#), page 8).

## 7 Providing constructive feedback

(AO poster on [4 steps of giving feedback](#)):

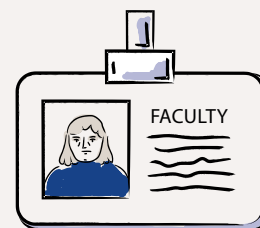
Feedback, motivation, and practice affect the acquisition of skills. The more specific the feedback received the faster the learner is able to develop a skill.

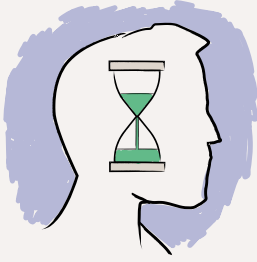


- Step 1: Ask the learner what went well.
- Step 2: Share with the learner what you thought went well.
- Step 3: Have the learner describe what they would do differently next time, but discourage them from using negative language or focusing on mistakes.
- Step 4: Summarize and confirm what you would like them to do differently next time.

## 8 Pitfalls:

- Lecturing at the workstation instead of performing the skill.
- Faculty performing the tasks instead of the participant.
- Disinterested faculty talking on the sidelines, leaving participants unsupervised.
- Conveying an “I-don’t-use-this implant” attitude.
- Unfamiliarity with the equipment or instruments.
- Telling learners that you have a better way of performing the skill than the demo video shows.
- Assign the groups: encourage learners to work with people from other regions/backgrounds.
- Expect language barriers: Deliver explanations at a slower pace and encourage those with a common language to assist.
- Beware of alternate agendas: Try to encourage these learners back on task by asking them a question and then providing them with a challenge or activity to complete.
- Direct disruptive or monopolizing learners: Acknowledge these learners and their point of view, then move on and invite questions/participation from others in the group.
- Silence the chatterboxes: Remind them of the ground rules, pause the video if necessary.
- Engage the silent learners: Try to engage them by asking for their help. Identify some common ground to relate to them. If they are anxious learners, they will also need lots of positive reassurance.





## 9 Allowing time for reflection.

### 10 Closing the session:

- Show the finished result to remind learners of what they have achieved.
- Summarize the key learning outcomes or have the learners summarize what they learned.
- Concentrate on positive aspects of the session.
- Invite questions.
- Provide clear explanation of any next steps.
- Finish with a strong, positive “take-home” message.



### Practical exercise overview:

#### Overall structure of a practical exercise

- Demonstration of a new skill or procedure.
- Explanation of the steps/skills that are required.
- Opportunity to talk through procedure and demonstrate understanding.
- Practicing new skills with supervision.
- Reflection on performance.
- Receiving feedback and support.

#### Practical director

- A practical director sets up and introduces the practical exercises.
- Follow teaching for learning principles as described in Module 1 of this primer.
- Focus on learning outcomes.
- Communicate high expectations to course participants.

#### Table instructors

- Faculty that assume the role of table instructor work with the director to ensure one-on-one instruction and support is given to all participants.
- Deliver consistent, constructive feedback.
- Work within their assigned group.
- Carefully observe and interact with all group members at their table.