

SciLifeLab Training Hub Facilitation Techniques Guide

This guide is for Life Sciences instructors who wish to facilitate engaging and collaborative learning experiences for the participants in their courses, workshops or other learning experiences. This guide is suitable for both online and in-person learning settings. For a broader introduction into teaching practices that foster engagement, see Module 3 of the [SciLifeLab Train the Trainer Course](#).

Facilitation and teaching

Facilitation is a part of teaching – particularly in advanced or expert groups such as people with advanced life science knowledge – but is distinct in that facilitation is not direct instruction to develop skills or abilities. Instead, facilitation shapes the experience of participants by encouraging them to take an active role in their learning. This can occur through providing structure or activities that foster collaboration, creativity and knowledge sharing; providing resources, information and support for participants to accomplish an objective; and/or stewarding an environment where learning is inviting and inclusive.

Setting the stage

As a facilitator, one important task is to intentionally create an environment that encourages participation from all members. One aspect of this is keeping participants on task and managing time, such as by presenting session information, tasks, and instructions as clearly as possible. Provide examples, and use a slide or material with the task as a visual aid to support discussions or working time.

Research spaces are known to have power imbalances, and groups of participants should ideally include people from diverse backgrounds and identities. As facilitator, it is your responsibility to be aware that power dynamics affect how people are included and are able to participate. There are studies available on inclusive practices in STEM (for selected examples see references^{1,2}), however most of these larger studies are not performed in postgraduate populations in the Swedish context. Therefore, best practice for facilitators is to learn from these studies prior to the course, and build in evaluation by asking participants if there is anything you can do to improve inclusivity and participation in the future.

Building rapport

Learning experiences feature a two-way relationship between participants and instructor, as well as relationships between participants. Facilitators should strive to create an environment where there is trust, respect, dialogue and openness between everyone involved. Participants should be encouraged to ask questions and speak up when they do not understand, so that the instructor or other participants can provide support. When the instructor models approachability, patience, respect, and empathy, participants are more likely to join in and use this supportive and dialogue-oriented approach.

Some methods for building rapport and for fostering connections amongst participants are:

- Low-pressure icebreakers, such as:
 - What are three things you have in common?
 - What is your most useless skill?
 - What is your favourite animal?
- Switching group composition regularly so that everyone experiences a variety of group dynamics.
- Building in moments for group and self-reflection, such as:
 - A Muddiest Point discussion, where participants describe what is still most unclear.

When these methods are built into learning experiences routinely, a culture of respect and good rapport becomes the norm, which helps maintain positive group dynamics.

Manage group dynamics

Resist unbalanced group dynamics by alternating structure or rotating roles so participants know how to engage with each other. When facilitating smaller groups, encourage silent or passive group members for their thoughts. When facilitating larger groups, questions such as “Are there other perspectives? Does anyone have a point that we haven’t heard yet?” can be helpful in generating a more nuanced discussion.

In larger groups, it can be helpful to have facilitation support for assisting with group dynamics. With limited time or limited support it can be useful to document group discussions or feedback using tools such as **Mentimeter** or shared **Google Drive** documents to include a wider range of voices.

Active listening

Active listening is the practice of focusing and deeply considering what is being said, observing the verbal and non-verbal cues projected, and responding in turn with questions, feedback or further dialogue.

*“Most people do not listen with the intent to understand;
they listen with the intent to reply.” – Stephen Covey*

Successful facilitation intentionally builds an atmosphere of knowledge sharing through active listening to group discussions and feedback. Offering encouragement, checking in with small groups and the group as a whole provides information on progress as well as any hindrances in understanding.

To know whether you or your participants are actively listening, consider:

- Is my mind wandering or am I able to focus on what is being said?
- What can I notice about non-verbal aspects of the discussion such as tone of voice, facial expressions and body language?
- Am I participating in the dialogue through thoughtful responses as well as questions such as “Am I understanding this correctly?” and “Could you explain further?”
- Do I feel attuned to the participants’ way of thinking?

Active listening can make use of wait time, or a pause for consideration. Pauses can give participants a chance to collect their thoughts, expand on what has been said, and to

respond more intentionally. This pause also allows facilitators to invite others to explain their thinking, and for conversation to flow between participants more readily.

Pauses can be used after an instructor asks an individual or the group a question and before an answer is given, or after an individual or group gives a reply or adds to the conversation and before the facilitator replies. Both are useful active listening and dialogue in learning experience, and help to build rapport and self-efficacy in participants as individuals and as a group.

Redirection and checking for understanding

Redirection is a teaching technique which supports participant-centred learning and encourages self-efficacy. When a participant asks for an answer or explanation directly, redirection slows and deepens the process of learning by encouraging them to try and put together an explanation themselves. Redirection in practice can be asking questions like “What do you think could be the answer?” or “Could you explain a bit more about your thinking?”, sharing resources that may be helpful, or encouraging the group to build an explanation together by directing the question to everyone. In this way, the instructor can actively listen, consider how widespread points of confusion are, and assess misunderstandings.

Redirection allows the facilitator to guide participants in a way that supports them taking greater responsibility and involvement in their learning, but care must be taken to build the rapport necessary for the participants not to feel singled out or put on the spot with this technique. Redirection is a form of formative assessment, which is a topic covered in more detail in Module 4 of the [SciLifeLab Train the Trainer Course](#).

Successful facilitation

A successful facilitator takes responsibility for the environment a course exercise, discussion, or workshop is held in, which involves working to build a culture of respect, sharing, and inclusivity. These techniques can assist in achieving that goal, but it's important to remember facilitation is a learned and practiced skill. Asking for feedback from participants, colleagues, or the Training Hub is invaluable in developing as a facilitator.

References

1. Johnson, A. (2020). An Intersectional Physics Identity Framework for Studying Physics Settings. In Physics Education and Gender Cultural Studies of Science Education., A. J. Gonsalves and A. T. Danielsson, eds. (Springer International Publishing), pp. 53–80. https://doi.org/10.1007/978-3-030-41933-2_4.
2. Johnson, A., and Elliott, S. (2020). Culturally Relevant Pedagogy: A Model To Guide Cultural Transformation in STEM Departments. J Microbiol Biol Educ. 21, 05. <https://doi.org/10.1128/jmbe.v21i1.2097>.

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