

Preparing for teaching SCALE-UP style

SCALE-UP can offer excellent opportunities to energise and transform student learning, particularly for academics seeking a viable and interesting alternative to lecturing. In order to benefit from the SCALE-UP setting, many NTU tutors have undertaken a process of module re-design to promote active learning. While the rethinking of module content and re-design of activities and resources can require an initial investment of time, tutors have reported finding this developmental process hugely rewarding.

Key elements to consider are:

- 'Backward curriculum' design (constructive alignment)
- How are activities aligned to the module learning outcomes (LOs)?
- Activities replace lectures as the primary mode of learning, how will this work in practice
- How will students engage with materials both in and outside sessions?
- how will group activities support collaboration, build team working skills, and make good use of the SCALE-UP environment and equipment?

This resource suggests some key points for module teams to consider. Further detail and examples are provided in the 'Learning design' chapter of the SCALE-UP Handbook.

SCALE-UP activities

Typical activity types used by SCALE-UP tutors at NTU and beyond include:

- Activities to test/consolidate comprehension of preparatory work
- A substantial problem or investigation, divided into 10-15 minute tasks
- Group activities in smaller and larger groups (e.g. 3s and 9s) to summarise and present key ideas
- Online investigations into key topics
- 10 minute tutor mini-lectures to supplement group work, confirm key concepts, address misconceptions, etc.
- Public thinking: groups present work-in-progress to other groups or in plenary, with plenty of opportunity for questions and peer and tutor feedback
- Any activity requiring students to teach what they have learned to others.
- Group and individual reflection on learning and group effectiveness

Example SCALE-UP activities from physics include: short tasks where students make hands-on measurements or observations (*tangibles*); interesting questions or problems that may require estimating or looking up values (*ponderables*); and computer simulations or lab activities (*visibles*). All questions and problems should be challenging enough for students to appreciate having peer support.

Not all SCALE-UP learning activities need to be developed from scratch: see the *SCALE-UP Handbook* for suggestions on adapting existing activities, as well as tips from NTU tutors on ensuring a variety of tasks to keep students interested.

Principles of SCALE-UP collaborative learning

- Individual accountability
- Positive interdependence
- Face-to-face interaction
- Appropriate use of interpersonal skills
- Regular self-assessment of group and group roles

Practical considerations

- How much module re-designed is needed? (See SCALE-UP Handbook for suggestions on gradually introducing SCALE-UP)
- Session length—sessions longer than an hour work better for active learning
- Group composition and rotation strategies (see SCALE-UP Handbook)
- How will the SCALE-UP approach be framed to students?
- How does this SCALE-UP module fit in the context of the course as a whole?
- Class size and ratio of students to tutors
- Understanding of SCUP pedagogy for all tutors on module
- Equipment familiarisation for all tutors on module

For further SCALE-UP resources including the SCALE-UP Handbook see: [SCALE-UP resources](#)

For further information or to get involved in SCALE-UP, contact [NTU SCALE-UP](#)