

Adapting SCALE-UP for fully online learning: ideas

This document is designed to provide ideas to support delivery of SCALE-UP in 2020/21. The ideas in this document are not requirements but have been collated based on examples of practice from across the university

SCALE-UP in an online learning context

There are two options for facilitating your SCALE-UP module;

1. Fully online; or
2. Blended (i.e. using a combination of online and face-to-face).

The ideas in this document are designed to support experienced SCALE-UP practitioners to adapt existing SCALE-UP modules to a fully online context. A document on adapting SCALE-UP for blended learning is available from the [ADQ Flexible Learning 'Ideas and Tips'](#) page.

Whilst this paper has focused on solutions for existing SCALE-UP modules, some of the ideas provided can be used on other modules to make them more engaging for students. For example, chunking of content and the use of mini lectures could be an effective way of adapting lectures or seminars for online delivery.

Background and context

SCALE-UP is an active collaborative approach which brings together a number of pre-existing pedagogical strategies: for example, enquiry-based learning, constructive alignment, peer feedback and use of group roles. Fuller guidance on SCALE-UP can be found on the [SCALE-UP website](#). Appendix 1 provides a brief summary of the six core components.

The following sections take the six core components of SCALE-UP and make practical, solution-focused recommendations for how you can redevelop these for fully online delivery, in a pedagogically sound way. At all times, clear and detailed instructions for students are key to the success of online learning.

The recommended approach is based on the following assumptions;

- Students have access to a suitable device and an internet connection.
- That the student is a full time undergraduate and will be able to engage in scheduled 'timetabled' virtual learning synchronous with others, as well as time for asynchronous learning independently or as part of a group.
- Activities and materials from existing SCALE-UP teaching are being re-purposed.
- MS Teams and NOW to be the key mechanisms for online delivery of SCALE-UP.

In addition, while NTU will be working to support those students caught in the digital divide, it cannot be assumed that all students will have their own laptop or that it will be automatically compatible with NTU systems. You should advise students of the technology they might need before the seminar, and also be prepared for this to be accessed by a range of devices, such as smartphones, and tablets. As MS Teams provides an app and can work through browsers for the most common operating systems, you should prioritise the use of MS Teams to support widest possible compatibility.

Group formation and roles

The same principles for group formation and role allocation should apply as when facilitating on-campus SCALE-UP. Guidance on group formation and roles can be found in the [SCALE-UP Handbook](#).

Currently, NOW does not support automated group allocation however, it is possible for tutors to allocate students to online groups manually. Group formation can be achieved online, via the following two scenarios and processes;

If students are not grouped from a previous session:

- Decide on a strategy for group formation, and size.
- Consider using tools such as NOW assessment tools, Microsoft Forms or other interactive response tools to conduct a diagnostic test which aligns to understanding students' skills, or knowledge and understanding against module learning outcomes.
- Assign groups in a Word document and publish to the NOW module learning room.
- The document should list all students and assign their initial role (scribe, manager, questioner).
- Emphasise the role of the scribe in administering the collaborative area e.g. adding relevant documents to the group channel in Teams (and that the manager should ensure this happens).
- Be clear with students in advance if group rotation is intended and when this will happen, e.g. after 3-4 weeks. The strategy used to do this (you would not normally share the strategy with students just the information that the groups will be rotated and when) should be determined in advance, e.g. repeat diagnostic testing, or monitoring student performance during the module and strategically group based on these.
- Consider the needs of students who find it difficult speaking with groups of new people, such as incorporating an ice breaker to help the introductions, and ensuring the students are engaged with each other and aware of their group, when 'dropping in' on group work.

If students are grouped from previous sessions, consider the steps above, but ensure clarity for students as minimum by:

- publishing group details on the NOW module learning room.
- listing all students and assigning roles (scribe, manager, questioner).
- emphasising the role of the scribe in setting up the collaborative area (and that the manager should ensure this happens).

Learning activity design

To adapt existing SCALE-UP modules to a fully online setting, tutors should deploy learning activities as originally planned. These activities should already focus on problem-solving and enquiry-based learning, following a framework the tutor has already planned. The [SCALE-UP Handbook](#) and the [Active Collaborative Learning \(with SCALE-UP\)](#) NOW Learning Room, provide further details of how to approach and refine this.

If you are planning synchronous fully online sessions, you will need to consider how activities can be adapted to an online setting, for example, how your [tangibles](#), [ponderables and visibles](#) will work through NOW and Teams. This may mean also re-evaluating what activities are undertaken within the synchronous online class, and which are conducted asynchronously outside class time.

Steps that could be followed for a fully online learning activity include:

- Detail the activity with clear step by step instructions in a Word document published to the NOW module learning room and the Module Teams space General Files area. If necessary, you can reiterate these instructions in the session class and/or within the chat.
- The scribe adds the instructions and any relevant files to their respective Teams group channel.
- In their Teams group channel students upload and share files, chat and make calls, arrange meetings, use other available functionality to collaborate on the task.
- The activity should follow the usual SCALE-UP format, including some problem solving or enquiry-based work.
- Conclude with learners producing a brief summary (100-200 words) which they can post to a shared document you have set up or they can post it in their group channel for you and/or student peers to view and provide any comments.

The key challenge tutors will face is ensuring that their instructions are clear enough for students to follow and understand without the tutor to 'fill in gaps' across all groups as they may do in physical teaching spaces. It is therefore recommended that:

- activities are peer reviewed prior to deployment, ideally someone with no prior knowledge of the activity to ensure that the communication is clear and can be understood by a wide audience.
- the formatting and presentation of activities is cross referenced against an accessibility checklist, [such as this one](#) to ensure that adaptive software, and people with special educational needs can engage in the task equitably and fulfil their team role.

It is recommended that you produce written guidance on the tasks and work set in class, supported by clear step-by-step instructions, which are published on NOW and in Teams in advance. This will help ensure students who are unable to attend the synchronous online session can keep up to date with the work set and provide asynchronous remote contributions where appropriate.

'Chunked' content, public thinking, and feedback

In order to facilitate SCALE-UP compatible online provision it is recommended that 'Chunked' content be asynchronous. Public Thinking and Feedback are best undertaken as synchronous, scheduled activities.

SCALE-UP is an activity-based approach, meaning that lectures are replaced by enquiry and problem-solving activity. Knowledge is acquired collectively through activity, discussion and reflection. Short content chunks may be used to supplement this activity and can be short videos, audio recordings, or short texts.

Students can engage in public thinking through engagement with the content chunks, as well as through the flipped learning elements. Public thinking activities may take the form of students sharing smaller and larger tasks that they are currently working on for questions and feedback from peers.

These components should be undertaken in the following pattern, for optimum effectiveness, after group allocation. The flipped task (1) is asynchronous, 2-6 are all synchronous (within the allocated online class time);

1. Flipped Task (asynchronous)
2. Activity
3. Discussion
4. Mini Lecture
5. Repeat 2-4 above throughout the session
6. Class Plenary

1. **Flipped Task** - will likely take place in NOW through tutors posting the flipped activity (a reading, video clip etc.) and students perhaps interacting through quizzes, knowledge checks and/or the NOW module discussion forum.

2. **Class activity** – takes place in the module Teams space (which can be accessed via the module learning room in NOW). Starting with a class plenary to set the scene, students undertake the activity in their groups of 3 within their group channels on Teams, collaborating through video call facility, shared documents and the channel chat. Tutors can move in and out of the different group channels to 'drop in', observe discussion and provide feedback (as they might move around tables and groups in a campus SCALE-UP room).

3. **Discussion** - can take place between groups of students or in plenary with the whole class. Discussion between groups of students can take place within the Teams channels, e.g. Groups 1, 2 and 3 may all meet in the Group 1 channel (communicating via 'meet now' video calling and the channel chat) to discuss what they have discovered in their activity. Whole class plenary can take place using video call in the General area of Teams with the tutor facilitating and the chat used for public thinking, questions and comments.

4. **Mini lectures** - like the class plenary, this can take place through video meeting and presentation-sharing in the General area of Teams.

6. **Class Plenary** – the 'wrap-up' pulling together the learning achieved through the activities, answering any questions and setting the scene for the next SCALE-UP session (see 'Formative support' below).

This short [video](#) demonstrates how steps 2-6 can be facilitated through Teams for a synchronous class experience.

Formative support

Formative support should follow the principles of how this would be facilitated in face to face teaching however, the following points should be considered in an online environment:

- Use online tools such as NOW assessment tools to take stock and consolidate student's comprehension and skill development outside of class time, e.g. as part of flipped learning. The results of which can be used by tutors to inform and shape feedback messages given to individual students, groups or the whole cohort. There is a Guide and examples in [The Difference Engine](#) Learning Room in NOW.
- During group discussions, tutors should try and 'drop-in' on each group to guide, shape and feedback in real time. This is the optimal scenario and software options to facilitate this need to be determined.
- Staff should ensure they give full consideration to how they end synchronous activities, so that sufficient opportunity 'wrap up' a teaching session. This should cover;
 - The role and purpose of the asynchronous learning done pre-session and make clear how this fitted into the session.
 - A recap of the work done during the session, what has been achieved and how progress through the module is being made.
 - Clear sign posting to what comes next, either more asynchronous learning (optimum), or what will be covered in the next synchronous session.

Students should not leave a session unclear of what comes next or what they need to do. Tutors could stay in the Teams space for 10-15 minutes after a session if possible for students to ask individual questions. This could also be done more privately via

individual instant message on Teams. Tutors could also consider employing virtual drop-in office hours for specific modules.

Assessment design

SCALE-UP assessment methods generally favour more collaborative course work and activity assessment options, which can be completed or submitted online. If further advice is needed on adapting an assessment contact flexiblelearning@ntu.ac.uk

Further guidance

The [SCALE-UP Handbook](#) provides comprehensive details on SCALE-UP, and should be referred to for further information on the approach.

A document with ideas for SCALE-UP in a blended learning context on the Flexible Learning [Ideas and Tips](#) page.

The [Active Collaborative Learning \(with SCALE-UP\)](#) learning room on NOW including [SCALE-UP at distance](#); [Using knowledge check quizzes in online lectures](#); [Creating activities for remote collaboration](#).

The [Teaching Remotely](#) webpage contains several guides on aspects of online teaching.

The '[Office Central](#)' NOW learning room has guidance on using MS Teams, Forms and Stream.

[NOW Central](#) contains guidance on various aspects of using NOW including how to use NOW assessments tools e.g. for formative knowledge checks.

The [Technology Central Learning Room](#) on NOW contains numerous resources to support online teaching.

Contact flexiblelearning@ntu.ac.uk for additional support and to request an educational developer to work with and advise you on specific adaptations to your SCALE-UP module.

Appendix 1: contextual information on SCALE-UP

The [SCALE-UP Handbook](#) provides a more detailed discussion of SCALE-UP approaches, but identifies 6 key components described as essential, which are summarised in the table below.

<p>Group formation and roles</p> <ul style="list-style-type: none"> • Students work in groups of 3 (or 4) • Tutor assigned, (mixed ability) groups, with planned rotation • Defined roles for each student, with periodic rotation and reflection 	<p>Learning activity design</p> <ul style="list-style-type: none"> • Enquiry and problem-based activities replace lectures • Activities such as tangibles (hands on), ponderables (intriguing questions) and visibles (artefacts/images/simulations) are used to address real-world problems • Activities foster accountability and positive interdependence
<p>'Chunked' content</p> <ul style="list-style-type: none"> • Content 'chunks' such as short videos/ readings are interspersed with activities • Flipped learning: students engage with tasks before, during and after the session • Mini-lectures may supplement in-session learning 	<p>Public thinking & feedback</p> <ul style="list-style-type: none"> • Students share initial ideas, give & receive peer feedback • Students interact as individuals, small and large groups, and with whole class • Tutor observes learning and provides responsive feedback
<p>Formative support</p> <ul style="list-style-type: none"> • Scaffolding: activities progressively build on learning outcomes, and conceptual understanding • Students supported to 'teach' each other through tasks • Tutors use incisive questioning to foster a positive mind-set and develop deeper learning 	<p>Assessment Design</p> <ul style="list-style-type: none"> • Start with the learning outcomes (constructive alignment/ backwards curriculum) to design and measure attainment • Form of assessment reflects the SCALE-UP experience and is aligned to the learning outcomes • Activities are clearly linked to assessment

Table 1: Essential SCALE-UP Components—A Quick Guide (McNeil et al, 2018)