



Online learning sessions

Times, spaces, groups

Online sessions can provide equivalent activities to lectures, seminars, tutorials, even labs and field work, with the benefit that these are familiar sessions of learning and everyone feels at home. But the best online experience is not always a like-for-like substitute for a time, space and group dynamic in the offline world. So it's worth considering how features of the online learning environment can be used to their best advantage. There are three ways of thinking about sessions for online learning.

Times: There are times online when learners and teachers will be responding to one another in *shared real time* and times when they will be working in *their own time* (though almost always within an agreed window of time, such as an hour, day or a week). These are termed synchronous and asynchronous respectively. In an online course, *shared time* is usually at a premium, and will be used for high-value sessions where interaction, student support and responsive teaching are the focus.

Spaces: Online environments are often experienced as *spaces* - break-out 'rooms', resource 'libraries', even 'cafes'. Spatial metaphors can be helpful when explaining online activities to students. One live session might involve several 'spaces': the 'main room', a chat window or break-out room, a private or back channel chat. And one 'space' can be used across different sessions - a shared design board, document or discussion area, for example. Most students enjoy using different spaces with different design features, but be consistent in *how* you use them and make sure there is a 'home space' they can always get back to (for example with course outline, materials, and session links).

Groups: Group size and type are the last factor determining what interactions take place online, and what attention students give and get. A large group needs more formal structure and that is typically provided by a lecturer setting the pace, though with clear instructions and a structured format, students can also lead large groups (e.g. presentations, branching discussions, goldfish bowl debates). Smaller groups can engage in more intensive exchanges such as unstructured discussion, peer review, collaborative writing/problem solving etc. Activities can be started in a shared plenary session and continued in small groups at a time and in a platform students choose.

Any online learning schedule should be planned on the basis of *how each session will support learning*. For example, if the main goal of a face-to-face lecture is to give information, a series of shorter videos or slidecasts may be an effective replacement, or off-line reading and annotation of notes. This can be followed by a quiz, a live surgery or shared writing session to check and review the content. If the face-to-face lecture would include polling, questioning, or pair-share discussions, there is value in running a live session and using the equivalent features of the online environment.

In a real-world classroom, interactions involve *many channels of information*, some of them subconscious. Online, rules and norms have to be established more explicitly - for example the language to use, how turn-taking will happen, how to communicate approval or a lack of understanding. If you have time, consider negotiating these issues with students. The lack of bodily cues make it hard for teachers to know what students are feeling and how they are responding, so again, more explicit approaches are needed. Ask for emoticons and chat responses, and prompt for feedback: *What was difficult/interesting? What questions do you have?* Finally - and very important during the pandemic - students may not feel the same sense of personal connection and care that they get from face to face classes. Expressions of care have to be explicit too.

Instead of looking for online equivalents to an off-line experience - which can only amplify the sense of something missing - we should ask *what works well* in each type of online interaction, with its own times and spaces, its tools and rules and norms, and its natural groups. One advantage is that students have several ways of contributing (make sure you encourage all of them). Another is that contributions to class are visible, shareable, and can be used for students in their assignments and revision.

Here are just some of the more common things teachers and learners do online. Others are being invented all the time, and you should allow your imagination to roam.

Session types

Session type	Detail	Typical platforms	Relations between teacher, learner(s) and content
Live synchronous (shared time) sessions			
Surgery	A live interactive session focused on checking student understanding or readiness for next activity	Webinar/live video platform such as zoom, skype, teams, hang-outs etc Optionally: Screen sharing (especially if students are learning a screen-based practice) Quiz or test to diagnose student misconceptions/difficulties Chat window to record questions, contributions, feedback	Teacher led Students ask questions, take low-stakes quizzes/ tests, explore conceptions, bring problems Teachers give responsive feedback, review, recap, demonstrate, prepare students for next activity Content will be referenced and new content may be introduced Works with groups of all sizes
Facilitated discussion	Open-ended exploration of a topic, or more structured format e.g. debate, role-play, group problem solving	Webinar/live video platform Optionally: Chat or whiteboard to record key points (Can also be run asynchronously or in near-real-time - see below)	Teacher as facilitator, may be student led Learners may be given access to prepared content or asked to research an issue in advance Teacher/facilitator establishes question, themes, etc. Content is co-produced. Medium sized groups work best - so consider break-out rooms if group is large
Feedback/ show and tell	Structured exchange with each student or group representative 'showing' what they have produced, followed by summary/ feedback/discussion	Webinar/live video platform Optionally: Screen sharing e.g. of slides, solutions Shared notes/whiteboard facility Upload of photograph or video (or just show items to the camera!)	Teacher as coordinator, work is student led Learners respond to content or a task Content is generated in the course of the activity - may be a digital or real-world artefact Teacher/coordinator draws out learning and summarises, gives feedback

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Check-in, group building	A live interactive session with no formal learning outcomes, focus on student wellbeing and connection	Webinar/live video platform Optionally: additional social media for back-channel support and buddying Third-party apps for group activities such as: shared play-list, flip grid videos, 'VR' lite apps	Teacher as facilitator, focus on relationship building Facilitator leads icebreaker activities, posts welcome messages, checks how students feel, gives positive feedback Students may also lead and suggest activities/themes Large groups may need to be split to ensure personal attention and feedback
Live lecture/presentation	Worth doing live if there are significant interactive elements (Can also be recorded for students to review or catch up if unable to attend live)	Webinar/live video platform including some of: chat window with prompts to elicit contributions polls and quizzes live contributions using audio/video	Teacher as presenter Another facilitator can support the session e.g. handling chat window, technical issues Students can also take on facilitator roles e.g. collating and feeding back questions Students take notes, respond to questions
Practical	Students plan and prepare for a practical, practice relevant skills, may carry out (live, virtual environment) or watch (video) an activity, and review their learning	Video or screen sharing for demonstration Optionally; virtual environment (lab, instrument, patient, system, world etc) to practice skills Safe, low-tech versions of some practicals may be carried out live	Teacher as demonstrator and coach Students may carry out some elements of the practical activity (or an online equivalent) Content refers to practical activity Teacher may refer to other content when preparing and giving feedback
Solo/group task (within live session)	May be for responsive teaching (to ascertain student needs), to build collective understanding, or for consolidation and practice	Polls to gain student feedback/response Short break-out group or individual tasks Short tasks in third party collaborative spaces e.g. pinboards, polling/quizzing apps, sorting task Mic, chat, shared screen to answer questions, report back	Teacher as tutor, work is student led Solo, pairs or small groups Students may self-select groups based on topic, activity, mode of participation etc Students tackle question/problem, agree and report outcomes and get feedback Other course content may be referenced

Session type	Detail	Typical platforms	Relations between teacher, learner(s) and content
Asynchronous ('own time') sessions: focus on content			
Recorded lecture/ presentation/video	Good alternative to live, allowing students to progress at own pace, review and revise	Recorded lecture (recorded live) or... Short video segments to explain key ideas (often a talking head, can include e.g. slides, animations, quiz questions) Slides with recorded voice-over Talking head video with or without screen cast	Teacher as presenter Students can be encouraged to annotate slides/ materials, reflect, answer questions, take notes
Interactive learning content	Open educational resources, bought-in content or content produced in-house	Quizzes and revision flash cards - relatively easy to make. A range of apps now allow tutorials to be built from sequences of simpler content Other media e.g. simulations, virtual worlds/patients, games, diagnostics etc are usually professionally designed - on subscription or OER	Teacher as content designer or provider Students might interact with each other within interactive platforms (simulations, game-like environments, shared revision apps etc) Students can be encouraged to study content in pairs/small groups and discuss
Static learning content		In accessible and re-usable formats whenever possible e.g. slides, notes, readings and reading lists, e-books, e-journals, data sets, infographics, diagrams, hand-outs. Videos and animations (other than presentations) e.g. showing fieldwork, lab work, context, illustrating and visualising dynamic concepts	Teacher as content designer or provider Students can be encouraged to find own learning resources (need clear criteria for choosing and/or strong evaluation skills) Students can be encouraged to study content in pairs/small groups and discuss Reflection, self-assessment cues, questions etc can be added to content to encourage interaction Students can be encouraged to annotate

Session type	Detail	Typical platforms	Relations between teacher, learner(s) and content
Asynchronous ('own time') sessions: focus on activity			
Group project (e.g. problem-based, case-based)	Usually longer time-scale with small, stable group Asynchronous or time window, e.g. <ul style="list-style-type: none"> • Gather and analyse data • Research and summarise a topic • Respond to a challenge, or situation • Create a media product 	Collaborative document(s), wiki, curation and/or sharing platform Design canvas/ workspace/ storyboard Shared pinboard, hang-out, project management app e.g. trello, basecamp With or without specialist (e.g.): <ul style="list-style-type: none"> • Simulation or gaming environment • Data analysis tools • Creative tools e.g. for video, animation, image, infographic, text, audio, coding • Presentation tools 	Teacher as guide/mentor Peer mentoring may also be adopted Students develop solutions, with guidance Students present outcomes and get feedback (may be from other students or teaching staff) Other course materials may be referred to as content or guidance Building the team and developing roles may be part of the learning
Solo activity (e.g. assignment, task)	Asynchronous or time window <ul style="list-style-type: none"> • Gather and analyse data • Research and summarise a topic • Define and/or solve a problem • Respond to a question, challenge, or situation • Create a media product • Practice a skill • ... 	Personal digital work space, tools and apps Facility to share outcomes, view other's outcomes and get feedback e.g. learning environment, annotation tool With or without specialist (e.g.): <ul style="list-style-type: none"> • Simulation or gaming environment • Data analysis tools • Creative tools e.g. for video, animation, image, text, audio editing, coding, content creation 	Teacher as tutor Students develop solutions, with the support of the facilitator(s) Students present and get feedback from tutor/peers Other course content will be referenced

Session type	Detail	Typical platforms	Relations between teacher, learner(s) and content
Revision/review	May be synchronous (within live session) or asynchronous Any group size	Quiz, poll, test, flash cards, revision app...	Teacher as tutor/coach Learners respond to question or task, or independently review and reflect on learning Feedback may be intrinsic, or provided by tutor, peer or self Students may design and share revision/review content e.g. learning objects, flash cards, reference lists Students refer back to course content and their own notes/learning outcomes
Near-real-time exchanges	Suitable for generating group support, challenge, co-construction (e.g. design sprint, collaborative problem solving) Small to medium size groups work best	Shared annotation, drawing, diagramming, planning and design platform Chat, messaging, social media (typically within a collaborative platform)	Student-led Learners generate their own content and respond to others in a compressed timeframe Learners should be familiar with the platform so they can focus on the task
Tutorial/one-to-one support	May be live and synchronous or in a time window (typically giving feedback on work)	A mix of: Live one-to-one audio/video (where this adds real value) Screen sharing e.g. to coach in a particular technique or give feedback Feedback on work in progress (may be in note form, audio or video annotations) Students' preferred communications (e.g. email, chat, shared document etc)	Teacher as tutor, including personal tutor Relationship between teacher and student is developed Responsive feedback is critical - clarity about expectations, availability and timeliness

Further notes: Educational advantages and disadvantages of different time frames

Shared (live) time or synchronous:

Advantages: responses can be immediate. Learners feel more connected and experience teaching staff as more supportive. Intensive learning can take place, e.g. of threshold concepts, thanks to the high level of teacher presence and responsiveness.

Disadvantages: Teacher/learner time has to be synchronised, which is a constraint, especially if participants are in different timezones. Demanding on both teachers and learners. Platforms may disadvantage learners with poor network connections (though lower bandwidth platforms can also be used, e.g. live tweet chats). Less confident learners may not participate actively.

Independent time or asynchronous:

Advantages: learners and facilitators have longer to absorb material and respond, favouring more thoughtful, less confident learners. Less likely to disadvantage learners with lower bandwidth. Easier for everyone to fit into their schedule. Students can be encouraged to buddy each other or form small learning groups to keep engagement high.

Disadvantages: motivation and engagement can be lower. Requires self-regulation and self-direction. Responses from tutors and others can be slow, leading to a sense of not being heard or attended to. Can be demanding on facilitators, who need to be responsive throughout the time 'window' (though less intensively than in a live session).

'Near real time':

Examples of this include a live edit or annotation session, twitter chat, shared design process, shared game or simulation, a period of rapid engagement in an online discussion forum. Typically over a tightly bound time period such as an hour or half hour. May be a long activity within a live session, or started during a live session and continued in a longer time window afterwards.

Advantages: energy and commitment as in a live session. Allows rapid learning of a new platform/skills. Focus on shared production as in (some) asynchronous sessions.

Disadvantages: most platforms require confidence to use in near real time - students may focus more on managing the platform than on the task

