

Technology enhanced learning

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Engaging learners at a distance

Numerous studies have shown evidence to support the benefits of 'active learning' in the classroom over the traditional 'chalk and talk' or 'passive learning' approach (Prince 2004; Michael 2006) and these benefits can be similarly valuable in remote delivery of training. Active learning in a traditional classroom involves encouraging students, either individually, in pairs or in groups to get involved in activities that promote skills at the higher level of Bloom's taxonomy (analysis, synthesis and evaluation). Examples of activities that facilitate active learning include:

- demonstrations
- role play
- discussions
- creating
- gathering information
- presenting information

These activities can be just as relevant in a remotely delivered training session, and in some ways are even more appropriate where the trainer or facilitator is not co-located with the learners as activities are more likely to encourage students to participate. Facilitating activities at a distance requires the same skills as facilitating in a face to face environment, however a number of refinements may be required due to the lack of cues from such things as body language.

In facilitating a remotely delivered training session it is important that for each activity there are:

- clear expectations (activity outcomes; roles, responsibilities)
- stated completion time
- opportunities to ask questions (particularly for clarification of understanding)

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- good quality sound for all participants
- agreed communication protocols (media dependent) - e.g. visual prompts when a task is completed, when to mute and unmute mics
- handouts provided in advance

For each joining location it may be helpful to appoint learners with supporting roles such as:

- time - keeper
- assistant in the room

Netiquette in blended and online learning

This guide aims to give some ideas and points for [netiquette in blended and online learning](#).



Image from [Pixabay](#).

There can be a tendency for remotely-delivered learning session to be very formal. For the facilitator, it is important to talk normally and to allow time to set the scene, allow participants to check that they can see and hear you, and to ask for feedback early in the session. Learners new to remote delivery may also require additional encouragement to participate. An ice-breaker activity can be really useful as a way of introducing the learners to each other and to the facilitator. In a video conference setting this provides an opportunity for learners to acclimatise to a new learning environment. It is also important

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to engage each learner as early in the session as possible. This may be through introductions or asking questions. It may be helpful for learners to say who they are when they make a contribution.

Group work can be very effective in a remotely delivered workshop as it provides an opportunity for learners to have a break from video conferencing. Group activities can be allocated for each joining location or if the functionality is available, learners can be allocated to meet in virtual rooms and then re-join the main group to feedback on the activity.

Engaging learners at a distance is very similar to engaging learners in a traditional classroom / face to face session. However, as the facilitator is not in the room and may not be able to pick up on cues available in a face to face session, clearer information and instruction may be required in a learning session delivered remotely. Such clarity is around, learning outcomes, activities, roles within activities and time allocated to activities.

Online collaboration

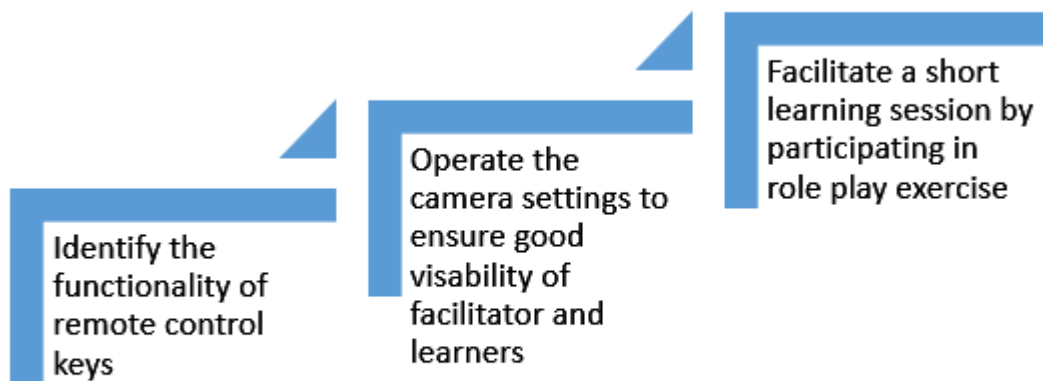
This guide aims to give some ideas and points for consideration when facilitating collaboration at a distance. It examines group tasks, setting up groups, the roles and responsibilities of the tutor, collaboration tools and assessment considerations. It also includes a [useful checklist](#) to help set up a collaboration session.

Active learning - example

This example illustrates how a remotely delivered learning session applied the principles of active learning with the session. The skills development session on using video conferencing to deliver learning to students used a 'staircase' of activities based on Bloom's revised taxonomy. The session was delivered remotely to eight lecturers in four locations. The learning outcomes were to:

- be able to use the various pieces of video conferencing equipment
- be able to prepare an effective learning activity
- be able to facilitate an effective learning activity through the medium of VC

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The key learning activities for the workshop session started with exploring the functionality of the remote control equipment, moved on to the operation of the camera equipment and then finished with learners, using the knowledge gained from these activities, facilitating a short learning session to the other learners. These activities involved learners learning through using and experimenting with the equipment. These activities were all facilitated remotely, with virtual rooms being used by pairs of learners to prepare for the role play exercise.

Video and web conferencing

What?

Videoconferencing (VC) provides real-time (synchronous) communication between separate locations – usually involving audio, video and in many cases presentations. The use of videoconferencing in higher education is now commonplace and familiar to many learners. In a dispersed campus it can be used to overcome geographical challenges and support the creation of a learning communities without the costs associated with travelling to a face to face learning session.

Similarly, web conferencing provides real time virtual audio/video communication via the internet however, rather than joining from a videoconferencing studio participants are more likely to join from their desktop computer or device using the web conferencing software.

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For learning

Videoconferencing provides a useful teaching tool by bringing learners together virtually and supports discussions; decision making; reflection and even practical activities. A document and/or desktop sharing function is often included which allows participants to share presentations; video clips; and to take turns in creating and editing shared documents.

You may already have an institutional videoconferencing platform which allows you to set up sessions or meetings for a number of participants by joining a meeting room with videoconferencing facilities.

Web conferencing sessions can be set up by linking individuals via a computer and sometimes via a mobile or tablet. Again your institution may have this facility but there is also a range of free online meeting software tools. In order to provide an equivalent experience all participants must have a webcam (or built-in camera), an internet connection and a computer or mobile device with a microphone and speakers - or attachable headset. The functionality within each tool will inform the choice of tool you use. A list of the currently available tools are included and reviewed on [Online Meeting Software Review](#).

Skype

[Skype](#) is a commonly used videoconferencing tool which allows up to 10 people to join a high definition group video call free of charge. Within the session participants can send messages and share information with others - wherever they are. Like many software tools Skype includes good online support and guidance on their website. Moreover, there is built in functionality to check audio and video settings prior to a meeting.

How?

Planning is particularly important for a videoconference session as there tends to be less flexibility to change plans on the day. For example, sessions tend to end at a fixed time and therefore timings for each part of a session are therefore more fixed.

The following steps can help in the planning process:

- Ensure that you communicate at the outset what you would like to achieve with your session.

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- Set clear objectives for your session (probably no more than three or four).
- Identify key activities within the session.
- Identify approximate timings for each of these activities (including set up and feedback).
- Allow adequate time for wrap up.

Pre-session checklist

The following checklist can be used to go through final arrangements.

- Confirm joining details and arrangements with participants.
- Confirm alternative contact details for participants.
- Clothes:
 - It's advisable not to wear bright colours, loud prints, plaids or stripes (which can become distorted and distracting on screen).
 - In the same way it's also advisable not to wear dangling or shiny jewellery as it can also be distracting and interfere with the sound quality.

On the day checklist

- Close any curtains or blinds if necessary as daylight can cause problems with room lighting.
- Check the technology and the room are set up appropriately.
- Check you will be free from interruption.
- Check that everyone can hear and see you and that you can hear and see everyone – adjusting the zoom settings accordingly.
- Explain any protocols you wish to use.
 - Recommended method of gaining your attention.
 - Identifying who they are.
 - Nominating a facilitator if there are groups of participants in various locations.
 - Check you are familiar with the:
 - audio settings;
 - video settings;

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- mute off / on controls.
- Look directly at the camera or as closely to it as you can.
- Allow for pauses and regularly check for feedback (this is longer than you would expect).
- Ensure you mute your microphone when you are not speaking.

Delivering using videoconferencing

Think about the most appropriate activities to support the objectives of the session and use these to provide interaction and action. A long presentation by videoconferencing can be very tiring for the facilitator and the learners. Whereas group activities with feedback can work particularly well in a videoconferencing setting, especially if you assign roles, such as observers, timers and action roles.

Presentations

If you are going to use a presentation remember to use an appropriate font size and text colour to ensure learners can view the content. Recommended PowerPoint presentation font sizes are 48 for title slides; 36 – 44 for sub-titles and no less than 30 for slide text.

Wikis

A wiki or Wiki is an online service that allows users to create, share and edit web based content through collaboration. The term wiki comes from the Hawaiian word “wikiwiki” meaning “fast” and the most well-known wiki on the internet is [Wikipedia](#).

To make content creation intuitive the majority of wiki interfaces use a simple WYSIWYG text editor similar to the one found in Microsoft Word. All the HTML formatting required to display the page online is undertaken by the service. The owner/administrator of a wiki can provide users different access to the content e.g. edit, read only.

Using Wikis

Wikis provide an excellent way to work on projects where a team are either dispersed geographically or work different time patterns (time zones) and need to contribute and have visibility of a piece of work. Another great benefit of wikis is their ability to track changes and rewind to an earlier version if something goes wrong. The ability to add

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comments, usually below the wiki, provides a means for feedback and questions to be added without affecting the piece of work itself.

Some uses for wikis are:

- Planning and managing projects
- Creating online manuals
- Planning events

Although a few years old now [this video](#) from CommonCraft provides an excellent overview of how a wiki works.

Free Wikis

Your organisation may host its own wiki service however if not, there are many function rich free-to-use wikis available online. Although offering a free service these wikis also offer a pay service for which you receive an enhanced provision e.g. more storage space, more features, more user accounts. Some examples and comparison are:

	PBWorks	ZOHO Wiki	Wikidot
Number of sites	5	1, 3 workspaces, unlimited pages	5
Storage	50MB	50MB	300MB per site

Wiki etiquette

As with using any communication medium or tool there is an element of etiquette that should be followed when using wikis. The general rule of 'treating others as you would expect to be treated' is as relevant here as in other walks of life. Some general rules include:

- Don't delete other people's work without good reason and/or consultation.
- Don't add content that is not yours without permission from the original owner.
- Give credit where it is due.
- Identify your contributions – agree a convention e.g. initials after your changes.
- Be polite and constructive, don't argue the person, argue the point.
- Be tolerant of other people's views.

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- Consider the audience - be careful with your use of language and images that might offend.
- Write clearly and avoid slang.

Remember: your wiki may be visible to the rest of the world.

Blogs

What?

A blog is an online diary that is published in reverse chronological order. The name is derived from a contraction of the word 'weblog'. People who write blogs are known as 'bloggers' and the information they publish is known as 'posts'. Blog posts can be any length in size and can contain images, links, video, documents, in fact almost anything. You may also be familiar with [Twitter](#). Twitter is known as a microblog due to the restricted post length of 140 characters. Blog posts/contributions can contain associated [tags or keywords](#). In a particularly long or busy blog tags and keywords allow the writer to quickly filter the posts.

Blogs in Plain English

This [short video](#) from CommonCraft provides an easy to understand overview of blogs.

Why and when?

Blogs are typically personal and used for keeping a personal diary or for sharing your thoughts and findings with a select audience, however, a blog may also belong to a group, institution or organisation and can cover any range of subjects and uses. In business, blogs can be used as a marketing tool or as a communications tool to keep customers updated. [Microsoft](#) can serve as an example of a business using blogging for communicating with customers.

Blogs can also be configured for various audiences. Private blogs are only visible to the writer, public blogs are viewable by anyone on the internet and there is a range of options in-between where the audience can be limited based on criteria set by the author such as affiliation to a group, email membership or invitation. In addition, blogs normally have the ability to allow comments from viewers and this can also be controlled by the blog owner.

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Your organisation may have an internal blog service, however if not there are plenty of free sites on the Internet. Some examples of these are:

- [Wordpress](#)
- [Blog.com](#)
- [Blogger \(from Google\)](#)

Uses

Some of the best uses of blogs are:

- For keeping a diary of a project or task – personal or group blog
- As a reflective journal for personal development – personal blog
- Research blog for keeping track of your work - – personal or group blog
- Public blog for sharing ideas and thoughts on any subject – personal or group blog
- Using a blog to share thoughts and experiences following a face to face meeting or workshop can bring participants together to build up shared feedback or to follow up on actions.

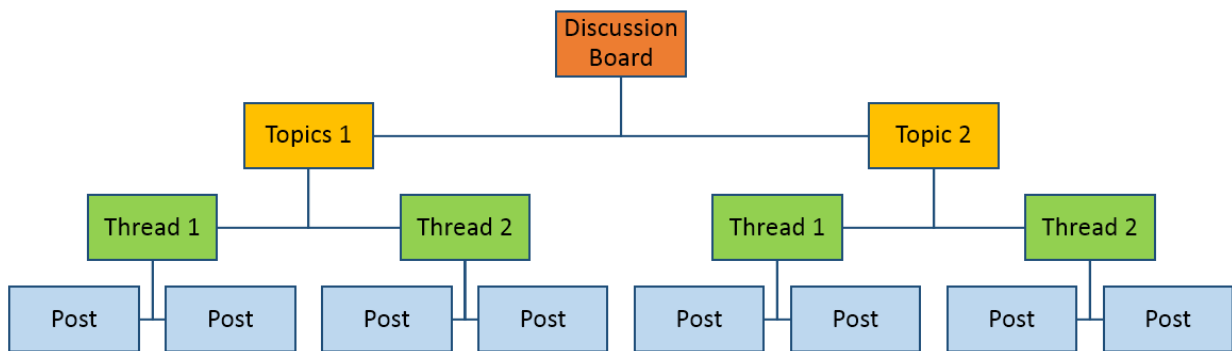
Remember: Check the provenance of blog content before repeating or believing it. Many blogs are not checked for accuracy and are based on personal opinion.

Discussion boards

What?

Discussion board is just one of many names used to describe online 'bulletin boards'. Other names you may be familiar with include discussion forum, discussion group and message board. Discussion boards are an asynchronous communication technology where users can share thoughts, exchange views and debate. The discussion board is normally hierarchical in structure, consisting of topics within which are threads containing posts.

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Generally, you are required to log in to access a discussion board and this may require you to create an account. Each member of the discussion board is allocated a role which governs the actions that user can take within the discussion. As an example an owner can do anything in the discussion board, a moderator will be able to delete, add and edit discussions and a contributor will only be able to add and reply. Some discussion boards allow contributions from non-logged in members but these are normally restricted to 'comment only'.

- [Online Discussion Forums](#)

Why?

Many organisations have discussion boards to support their users and customers e.g. [Microsoft](#). Groups of people with a common interest also use discussion boards e.g. this [group on computational fluid dynamics](#). As an educational tool, discussion boards provide a platform for learners to work together irrespective of time zone or location. Much educational research points to benefits such as increased sense of community, a higher degree of trust and heightened levels of communication (Rovai and Lucking, 2000).

Discussion boards provide an excellent platform for increasing and sustaining active and collaborative learning by providing a space where students can create, share and reflect. This, in turn, provides an opportunity to build peer support networks, freeing up instructor time to address key points or misunderstandings. The sense of empowerment gained by students who are actively engaged with course content has been shown to lead to more engaged and motivated students (Kassop, 2003) who are more likely to create well-structured responses that integrate course material and relevant research. Another advantage of discussion boards is that they lessen the impact bias based on physical characteristics such as race or gender. The same principle applies to participants of

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workshops and training sessions - a discussion board can provide a platform for participants to build a support network.

When and how?

Keeping a discussion board alive and current is crucial to its success. Discussion boards require an element of skill on the part of the instructor, however, there are various techniques you can use to ensure that your discussion board remains active. The document [‘Mastering Online discussion Board Facilitation’](#) on the Edutopia website provides excellent guidance on best practice, strategies for engagement and managing discussion boards. In addition, the web page on [‘Improving the use of Discussion Boards’](#) from the Worcester Polytechnic Institute in Massachusetts provides some excellent guidance on moderation, expectation and rubrics.

Getting started / Free to use tools

There are many free online services where you can set up your own discussion boards:

- [Proboards](#)
- [Boardhost](#)

Many online learning environments contain a discussion board as an integral part of the service. There are also many free discussion boards available online, however, prior to using one you should check that your organisation is not hosting their own discussion board, either as a standalone service or as an integral part of another service such as a virtual or online learning environment e.g. Blackboard, Moodle or Canvas.

If you need to use a free service, then you should be aware of the implications. Before using online tools, you should always consider the implications of data privacy, data security, data backup and organisational policy that may affect your use of such tools. Many servers are located overseas and may offer different terms and conditions than those of services hosted within your organisation or country. You may find that some organisations retain the right to retain or reuse your data. The ‘safe harbour’ agreement between the EU and the US was set up to protect EU citizens’ data in the event that it was transferred to the US, however the European Court of Justice has recently ruled that the agreement is invalid generating uncertainty about the future security of EU citizens’ data (The Guardian, 2015).

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Instant messaging

What?

Instant Messaging (IM) as a service has been around since the 1990s. Instant messaging should not be confused with text messaging, 'text messaging' or 'texting' utilises SMS (Simple Messaging Service) technology to send messages between mobile devices whereby 'instant messaging' uses the internet as the transmission medium (Kasesniemi and Rautiainen, 2002: 170). Originally offering only real-time one-to-one transmission of text, IM has now moved beyond this to include many-to-many (group) transmission of images, files, audio and video. Nowadays IM services are available on almost every device and every platform imaginable. This extension of IM has blurred the lines between IM and online chat.

Online chat is a service that is hosted on servers running chatrooms; users are required to login in order to chat and share with other users. The popularity of dedicated online chat services has declined in recent years due to the rise of Facebook and other social networking sites that provide the same functionality. Online chat services such as [e-chat](#) are still available but are generally used by specialist groups. Many organisations also offer a range of services for professional communication. Microsoft Skype for Business (formerly known as Lync) is one such service.

Why and where?

The reasons for the rise in popularity of IM are mainly due to the following:

- The ability to use the technology on almost any device – e.g. you can use Facebook Chat on almost any device including mobile.
- The reducing cost of data tariffs – mobile operators are offering more and more data for less cost enabling users to be 'always on'.
- The ability to use IM on wireless networks whilst overseas – reduces the cost of communication when overseas.
- The ability to see who is online in real-time – most IM services have a status indicator.
- The ability to send richer content such as video and audio.
- The ability to remain anonymous.

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The always-on nature of instant messaging, the immediacy of response and the ubiquitous nature of the services make them ideal for communicating with learners. Motiwalla (2007: 584) suggests that the pervasiveness of mobile technologies would make it "foolish to ignore them in any learning environment". However, it is the always-on nature of instant messaging that can also lead to divided attention, creating a distraction from the current task and a negative impact on learning (Junco and Cotton, 2011). The use of instant messaging in education therefore requires an element of caution.

One of the major advantages of instant messaging is in the creation of social networks, relationships and communities of learning, especially in a dispersed student group. The ability to establish these connections has been shown to encourage greater student engagement with learning material outside the classroom and improve communications (Kadirire, 2007). This connectedness has also been linked to increased student persistence and provides a strong predictor of retention (Lange, 2014; Pascarella and Ternzinin, 2005). These benefits can also be harnessed in the context of workshop participants who could use instant messaging to support each other following a training session.

How?

Most instant messaging services are available on almost all devices and platforms. To use an IM service, the users normally have to be on the same service i.e. WhatsApp, Facebook Chat, BlackBerry Messenger or Apply i-Message. Many of the services can be run from a standard web browser, however for a more reliable and enjoyable experience it is advisable to download and install the client software on your device. Wikipedia provides a comprehensive comparison of [IM systems](#). When choosing the system, you wish to use make sure it is available on all the devices you expect to use, that it has the required functionality and that the license meets your requirements e.g. is it free?

Once you have decided what technology you are going to use it is important to ensure that everyone understands the protocols to be used. This is generally referred to as etiquette and setting out the ground rules early on is key to success. If using IM to hold text conversations the following rules should be observed:

- Use real names as this will add a sense of community.

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- Don't assume that because someone is logged in that they are available, ask them, they may have forgotten to change their status
- Introduce yourself if you don't already know each other.
- Use emoticons to transmit feeling as the visual and audible cues are not present, but don't overdo it.
- Use clear language and adjust your style to match the other person.
- Be considerate of other people's points of view, it is easy to misunderstand in a text-only environment.
- Be careful of jokes – they don't always translate well.
- Keep it short but be careful with abbreviations and shortcuts such as np (no problem) or u (you).
- If your message is slightly long use line breaks to break it up.
- If your message is important then consider using email as the recipient may want to keep a copy for reference.
- Be polite, avoid barging in.
- Close the interaction with a 'goodbye' or 'thank you'.

Tools

- [Backchannel \(online chat\)](#)
- [E-Chat \(online chat\)](#)
- [Free chat room \(online chat\)](#)

When?

An excellent use of instant messaging is in the creation of small real-time discussion groups. The groups can be set a topic for discussion then return to the main body to round up or debate.

Many modern IM clients offer the facility to record the text chat, audio, video or entire interaction. This can be useful as a teaching when a learner has missed the interaction as a copy can be retained for later viewing. There has also been research that has supported the use of IM for student to instructor communication. Much of this research has been in the area of student support, however consider the implications of this carefully before

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embarking on such a strategy as student expectations may not be met unless you clearly define them at the outset.

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