Learning Design

The Open University

# Collaborative online activities:

## a guide to good practice

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# Introduction

Over the years, our students have consistently told us in surveys and interviews that they like studying independently and don't like studying collaboratively. Despite this, modules that have collaborative work 'designed-in' appear to do much better in terms of retaining students. In a recent 'big data' OU study it was found that the proportion of study time allocated to communication activities where students were required to discuss learning themes with at least one other person *'significantly and positively predicted academic retention'* (Rienties and Toetenel, 2016, p. 356).

This guide aims to help steer module teams through the complex task of designing and supporting effective online collaborative activities, which are well integrated with the study aims of a piece of curriculum, and are effectively structured to aid the collaborative process.

The advice draws upon a number of sources:

- A review of literature in the field of collaborative online activities, both internal and external to The Open University.
- Past work and experience from current Open University module team members.
- Learning analytics concerning the success or otherwise of specific Open University modules with collaborative online activities.

Included in this guide are case studies from modules where collaborative activities have been delivered as a core part of the pedagogy of the module. Each module scores strongly for collaborative activities in the end of module SEaM survey, in which students said that such activities helped their learning; each module has been up and running for at least two presentations – so at least two cohorts of students have studied them; and, in addition, the module team have had time to review and take on board student feedback to further refine them.

## Structure of the guide

The guide is split into two parts. The first is a brief outline of the benefits of collaborative activities and why they might form part of an effective pedagogy for learning. The second provides detailed guidance for each aspect of delivering effective collaborative online activities, in three key areas:

- designing the activities
- supporting the activities
- providing feedback to students.

# 1 What is collaboration and why do we want to do it?

## A definition

There are varying definitions of collaboration in the research literature, but all point to shared creation, shared ideas, and shared understanding between two or more people. This paper uses the definition of collaboration offered by Montiel-Overall:

> “Collaboration is a trusting, working relationship between two or more equal participants involved in shared thinking, shared planning and shared creation.”
>
> (Montiel-Overall, 2005).

For activity to be considered effective collaboration then, we need:

- two or more students
- a degree of trust
- opportunities for sharing of ideas
- mechanisms enabling shared planning and creation.

## Why ask students to do this?

As identified by Pallof and Pratt (1999), there are pedagogical benefits to students in undertaking collaborative activity, including:

- development of critical thinking skills
- co-creation of knowledge and meaning
- reflection
- transformative learning.

Other researchers have outlined similar benefits, including equipping students with “the ability to examine, assess, and synthesize multiple perspectives to resolve ill-structured problems (i.e., problems for which there is no clear-cut solution)” (Posey & Pintz, 2006).

Internally, the OU Designing for Student Retention project and SEFAR projects come to similar conclusions and identify meaningful student collaboration as a key aspect of OU modules that directly contributes to student success, with a correlation between amount of collaborative activity and student completion and pass (van Ameijde et al., 2016).

In addition, there are key components at each level of the OU levels framework which necessitate communication and collaboration between students. The framework is mapped to QAA subject benchmarks so is an externally applied requirement for OU qualifications. We also know from discussion with employers that being able to work effectively as part of a group and team is a key skill that they are looking for in prospective employees.

# 2 Delivering effective collaborative online activities

## Designing the activities

### Understanding the impact on our students

Before getting into the advice in this document, it's worth being aware why collaboration can be challenging for OU students. In fact, for many students, not just challenging but scary and emotional.

When designing, try to put yourself in the shoes of some typical students on your module, referring to student profiles from the Learning Design activities if you have them. A student could be studying for any manner of reasons – to qualify, for personal interest, to change career, to progress within their current role – whatever his or her reasons for study, the student will have pressures on them. Many of these will be situational (financial pressures, employment pressures, family commitments, study context and health). Others will be related to the disposition of the student (motivation, goals and intentions, self-confidence, study experience). These pressures are likely to be felt most keenly around assessment points, when learning particularly difficult concepts or when they are faced with ambiguity.

When students work independently, they can feel more in control of their study experience because they are reliant and responsible for themselves only. Collaborative activities can destabilise that feeling of being in control. The student must become reliant on others and equally, acknowledge that their input is required to help others progress. They may also need to work to a different timetable, forcing or slowing the pace of their own study. Students will also require additional time to acquaint themselves to this new way of working.

When designing collaborative activities, the challenge is to find ways to minimise the disruption and stress to students, while at the same time maximising opportunities for critical, meaningful and stimulating engagement with others. The case studies in the next section provide some real life examples of where this balancing act has been achieved successfully and, as you will see, some clear good practice themes emerge:

- Provide sufficient time for the students to familiarise themselves with the way of working at a time where they are not under particular pressure e.g. around assessment points.
- Support students both before and during the activities (covered in the Support for the students section of the guide).
- Ensure that instructions are crystal clear so that students understand what they have to do, when they have to do it, and why.
- Set expectations around the level of engagement required, and if cooperation is a suitable option for their engagement with the activity, or if they will need to fully collaborate to achieve the learning outcomes.

## Designing meaningful activities

As we've outlined already, collaborative activities can introduce an additional cognitive and, in some cases, emotional load on students. To make this feel worthwhile to the students, collaboration needs to have a pay-off of some kind to encourage them to participate.

The most immediate reward for students on a module is that they are able to understand key concepts better as a result of participating in the activity, and that they can demonstrate this to themselves and others. Ensure that the activity links into their assessment and will help them to gain marks towards their final module result is a prime way to provide some reward to the students for their effort.

Building on this, developing the activity in such a way that it offers useful practice of skills and exposure to ways of working that students will need for their future employment in the sector will further enhance the meaningfulness of the activity. Oliver et al. (2007, p. 5) outline this "real-world relevance" as one of ten characteristics of an "authentic activity". Having this series of characteristics in mind when designing the activity may help to ensure that it is a meaningful activity for students to engage in.

There may well be other links and rewards you can think of that would encourage students to participate fully in the activity but whatever the rewards are, make sure that you are explicit in outlining these, and continue to remind the students of them.

### *Real-world example*

T219 (Environmental management 1) and S288 (Practical science)

- T219 – uses a case study based around water issues and community engagement in Malta. There are four key "events" that the students work on as a group, with two students at a time leading on a given event. The activities have meaning within the context of the module as they use the tools and diagramming approaches learnt to date to address the issues. In addition, such activities have relevance to employment in the Environmental Management sector where people would work together across and within agencies and communities to tackle specific environmental challenges.
- S288 – students provide a specialist input from their own scientific area to contribute to an overall report relating to a given scenario. This again has relevance outside the module as it mimics the input a scientist could reasonably be expected to provide to a project as part of their role.

## Catering for the diverse needs of students

One of the complications of group working is the bringing together of people who can have very different approaches and preferences to working and study, and different personality types. This can be a challenge when working face to face in any organisation or university, and becomes a greater challenge when working remotely at distance.

In terms of designing collaborative activities, there are some ways you can support students with this:

- Bring them slowly up-to-speed with the skills by helping them to practice communicating with other students regularly before they come to any large-scale collaborative work. Getting students used to working together and to doing some preparatory cooperation prior to collaborating will help ease students up to the more advanced level of collaboration.
- Provide specific content and activities about different roles in group work, building on content from existing modules.

You could also look at different options for grouping students, perhaps enabling them to group themselves or making it an activity in itself as part of a face-to-face or online tutorial for students to start forming groups.

### *Real-world example*

U101 – Design thinking: creativity for the 21st century

- As a first-level module, U101 enables students to develop their skills by slowly building up the complexity of sharing and communication, starting from a very simple challenge to produce a model of a banana. This simple first step enables students to get into the habit of sharing by doing something very low stakes. As the students move through the module they build up a portfolio of work and become attuned to seeking feedback and input from other students on their work, including specific assessment tasks where they work together in groups to solve design problems.
  As with T219, this not only enables them to succeed within the module but provides an authentic experience of working in the field, in this case as a design practitioner.

## Tools for collaboration

The OU VLE contains a number of tools for student communication and collaboration. These include:

- Forums
- Wikis
- Online rooms
- OpenStudio
- The workshop tool.

From a review of a number of our existing modules, the feedback suggests that the tools used for collaborative activity should be as familiar as possible. Meaning that if the students haven't already been introduced to working with Online rooms or OpenStudio, then the start of the collaborative activity is not the time to introduce that new tool. Instead, enable students to work with something they've already used on the module. If for some reason this is unavoidable and the design necessitates the use of a new tool then it's essential to find a way to enable students to develop their skills with the tool prior to commencing their collaboration.

Some of our case-study modules have found that the forum tool has worked best despite its relatively limited functionality. It is visible to the group and to the tutor and is a well-known and reliable tool that enables effective asynchronous communication.

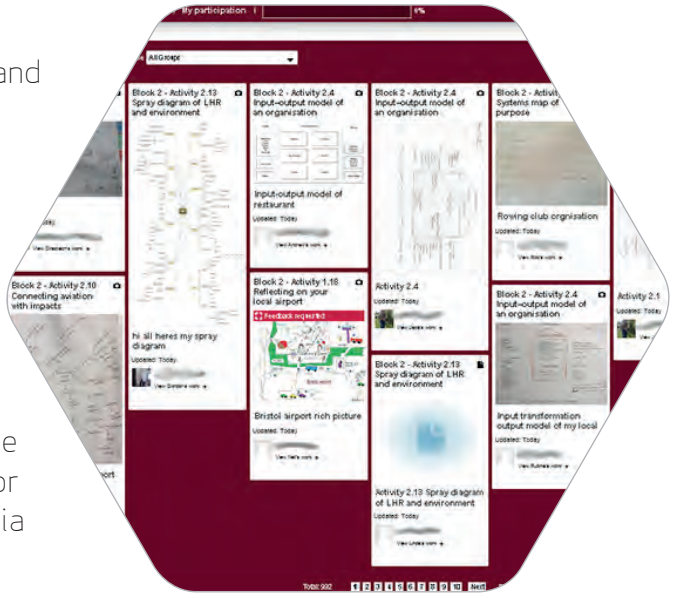
Some module teams may wish to allow students to use other OU VLE tools that they are already familiar with (e.g. the wiki, Online rooms), and evidence suggests that being flexible in allowing this works well, but keep the standard tool and expectation simple and let students take it further only if they wish to.

It is worth noting that if students use third party social media tools, the tutors may not have visibility of the work done by the students, so the group will need to consider how they evidence their group working. They will also be engaging in interactions where moderators won't be available so there is some risk attached to the students carrying out discussion in a social media space. If they need to evidence the group work as part of the assessment, you will need to make this explicit prior to the collaborative activities starting, so that students know they will need to save their conversation. An effective way to manage this is to encourage students to store any minutes from offline meetings, or notes from conversations in one of the VLE tools.

### *Real-world example*

T219 and T319 – Environmental management 1 and Environmental management 2

- Students are provided with forums and a scaffolded wiki as their primary communication tools, but also encouraged to collaborate using other tools if they wish to. Some use Skype or OU Online rooms, others use social media. The way the activity is structured enables the students to collaborate via each of these tools, using the forum as a touching point for bringing back minutes/findings discussed via any of these other tools.



## Supporting the activities

### Guiding students

Students undertaking collaborative online activities need to know what is expected of them, and when they will need to do it. The advice below provides a framework for structuring support. The stages of this framework are based around a study carried out by Zheng et al. (2015).

The support framework covers three stages:

1. Support needed **before** the activity.
2. Support needed **during** the activity.
3. Support needed **after** the activity.

For each of these stages, there are key areas to cover which will help the students in getting to grips with what is expected of them:

Before

- Explain the purpose and benefits to completing the activities.
- Manage student expectations and remind them that they need to be available for this work (and to flag to the group if there are periods when they won't be available).
- Provide some resources about group work.
- Provide some preparatory activities, to slowly build up their skills and experience with group working, and with the technology, ahead of doing the activities.
- Additionally, provide some examples of finished work from previous cohorts, or provide one or more example answers to refer students to. This can be effective in helping to steer and motivate students.

During

- Make sure that the sequence of steps has been thought through and tested in the design phase, and appropriate time given to each task. Collaborative activities often take much longer than originally expected.
- Make sure there is a mechanism for identifying and supporting students if they get stuck.
- Keep an eye on the mood of the students, and find ways to keep morale high if there are any issues. Perhaps point to any interesting findings coming out from other groups or even set up some element of competition or reward.

After

- Ensure there is time for students to reflect on their experience. Usually this is via assessment, but this could be done in other ways.
- Provide a bit of breathing space, this will have been an intense experience for some students. Don't launch them straight into another high-stakes activity.
- Consider providing a way for students to share their finished product with the rest of the cohort.
- Reiterate how this has helped with the learning outcomes, skills and with their PDP/ employability.
- Provide some opportunity for tutor/peer follow-up.

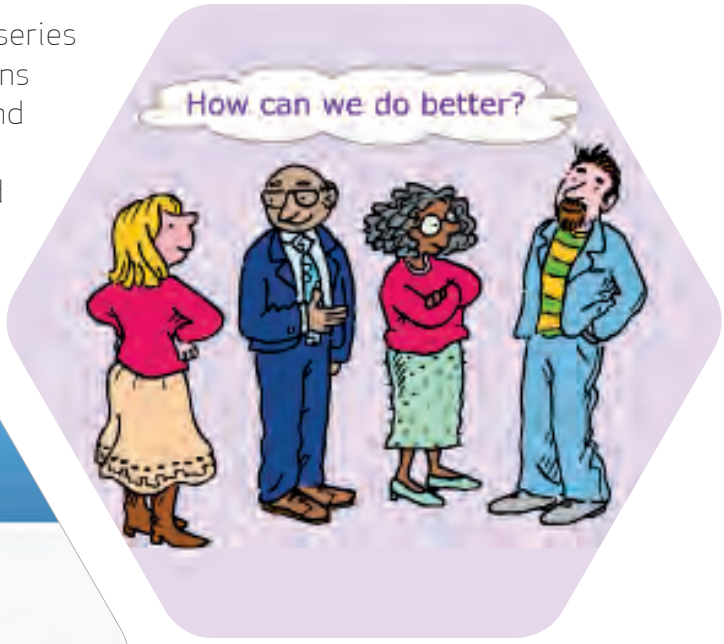
## *Real-world example*

T215 – Communication and information technologies

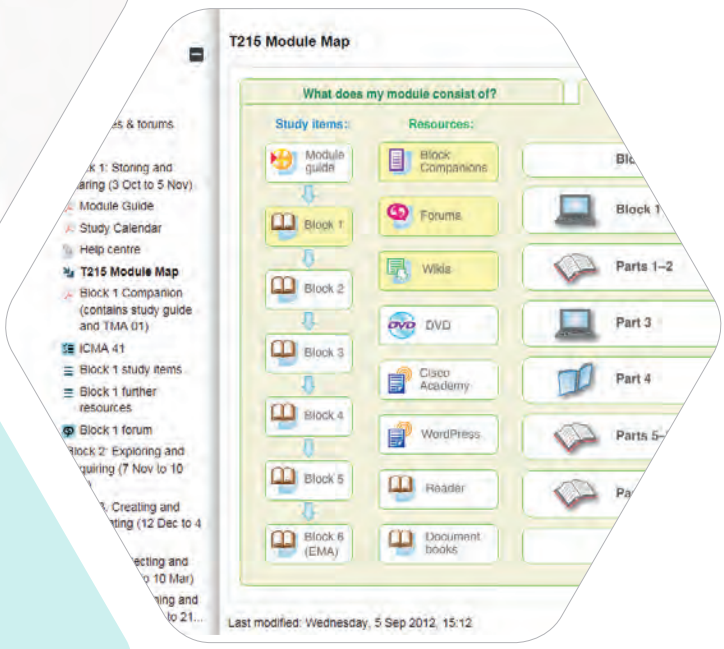
- Develops the students' skills over time by giving them a structured set of collaborative activities leading up to work to develop a website and wiki.
- Allows students an extra week for the assessment which involves collaboration.
- Following the collaborative work, the students need to complete their TMA, but then come back into a more standard teaching model immediately afterwards which enables them some space to continue with their study following the activity and TMA.

T319 – Environmental management 2

- Outlines the requirement and provides supporting resources around collaboration right from the outset of the module. This includes audio from previous T319 students and an employability perspective from the Head of the Chartered Institute of Water and Environmental Management. This provides a wealth of information and resources for students well before they start their collaborative work.
- Throughout the module, the chair ran a series of "Friday night live" Online room sessions which provided a support mechanism and community discussion opportunity for students on the module. This supported students at each stage of the Before, During and After support model.







## Tutor support

The support of the tutors is essential to success with collaborative activities. Working with some tutors or staff tutors in design will be a big help to success as they will be able to flag any particular challenges students may encounter, and identify strategies for monitoring progress and mood.

It's also important to develop the tutors to support the activities effectively, making sure that the tutors are familiar with the software, the activities and their aims, and with the expectations on them. So having a clear briefing and supporting documentation for tutors is critical.

If you carry out the above steps, then you will be a long way toward having a successful tutor guidance strategy for the collaborative activities. Once the module is live and students are coming up to their collaboration points, having well-briefed tutors who understand and buy in to the principle of the activities will be a big help in supporting students through the process and in ensuring that they understand why they are doing this.

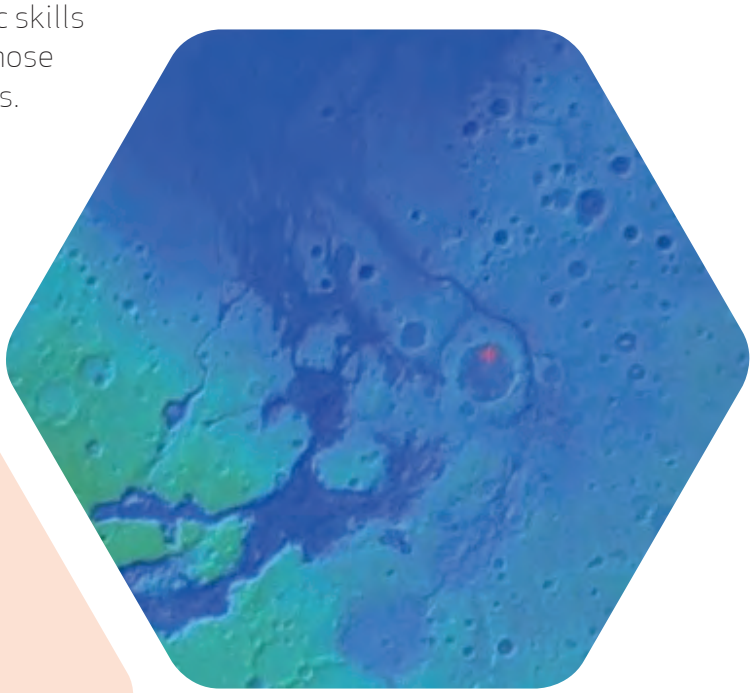
An additional consideration is to ensure that the tutor task of marking is as easy as possible. In a number of modules tutors find themselves having to dip into numerous resources to successfully mark the student. This may be the only way to achieve the goals, but do consider asking students to compile everything in one place or provide other solutions that may make this task less time-consuming for the tutor.

Once the presentation has finished, the tutors will be well placed to provide some feedback and suggestions on improvements that can be made to the activities for subsequent presentations both in terms of the workload for tutors, and about the collaborative process for the students.

### *Real-world example*

S288 – Practical science

- The module team for S288 built a plan for the tuition of the collaborative activities based around the tutor playing the role of a project consultant. The students would be creating a project document based around a scientific challenge (for example, preparing a mission to Mars) and would have the tutor on hand to answer questions in a consultancy role.
- The team selected tutors with specific skills in mind for this activity, particularly those with effective team management skills.



## Providing feedback to students

### Assessment

Typically, the assessment of a collaborative activity covers a number of areas, and the actual quality of the output from the activity itself is often not the most important part of the learning for the student. The areas typically assessed are discussed below:

1. **The product(s) of the activity**. So, the output of the process of collaboration. This could be a website, a report, a presentation or any other kind of product that students could collaborate on to produce. In some cases the collaboration will involve true collaborative authoring of parts of the product, in other cases students may produce discrete sections which are then brought together at the end of the collaboration, thereby working in more of a cooperative mode.
2. **The process**. In many cases experiencing and learning from the collaborative process may be more important than the product of collaboration. In these cases, students might be assessed on their reflections on the approach taken to management of the tasks and the group, and the areas to which they each contributed.
3. **Group collaboration and effectiveness**. Where students are assessed on the quality or effectiveness of the group work overall, so each group member would typically score the same for this aspect. Did the team work effectively or did the students struggle to effectively collaborate? If so, why? And were the problems to do with the task or with the group?
4. **The individual's input into the collaborative activity**. This provides the scope to award marks according to individuals' levels of contribution. The students who contribute fully will gain more marks than those who didn't. Care should be taken to provide additional support and advice for students with specific difficulties or disabilities that might prevent them collaborating fully. For example students who experience pain or fatigue, or difficulty forming relationships because of a mental health condition.

There's a balance to be struck here between awarding assessment marks for the output and awarding marks for the process and the collaborative work done by the group and the individual. There isn't a right answer to this balance and for any teams considering this, it's recommended to talk with teams who have already implemented collaborative activities to seek some advice.

Underpinning each of these sections is the student reflection on the activity. In building the assessment, it's likely that the students will need to reflect on the process, quality of the product, the group's effectiveness and their own input. This reflection is a critical opportunity for the student to illustrate their learning and to pick up marks. It's also an opportunity for the tutor to assess the student and to feed back on their engagement and learning from the activity. Students may need advice and guidance about how to reflect on their work, and practice.

#### *Real-world example*

T215 – Communication and information technologies

- The assessment on T215 provides marks for each of the aspects listed above, these are clearly outlined in the TMA questions so the students can see the proportion of marks they get individually for the collaboration and for the final product, and also the group marks they get for each of these aspects. Students have an opportunity to reflect on their own and the group's performance but also to show the quality of the final product with the tutors being able to access both the finished product and the discussion in the VLE forum.
- In structuring the assessment this way, students are able to succeed with their assessment even if the collaborative process has been challenging and if the final output is not of the quality they might like.

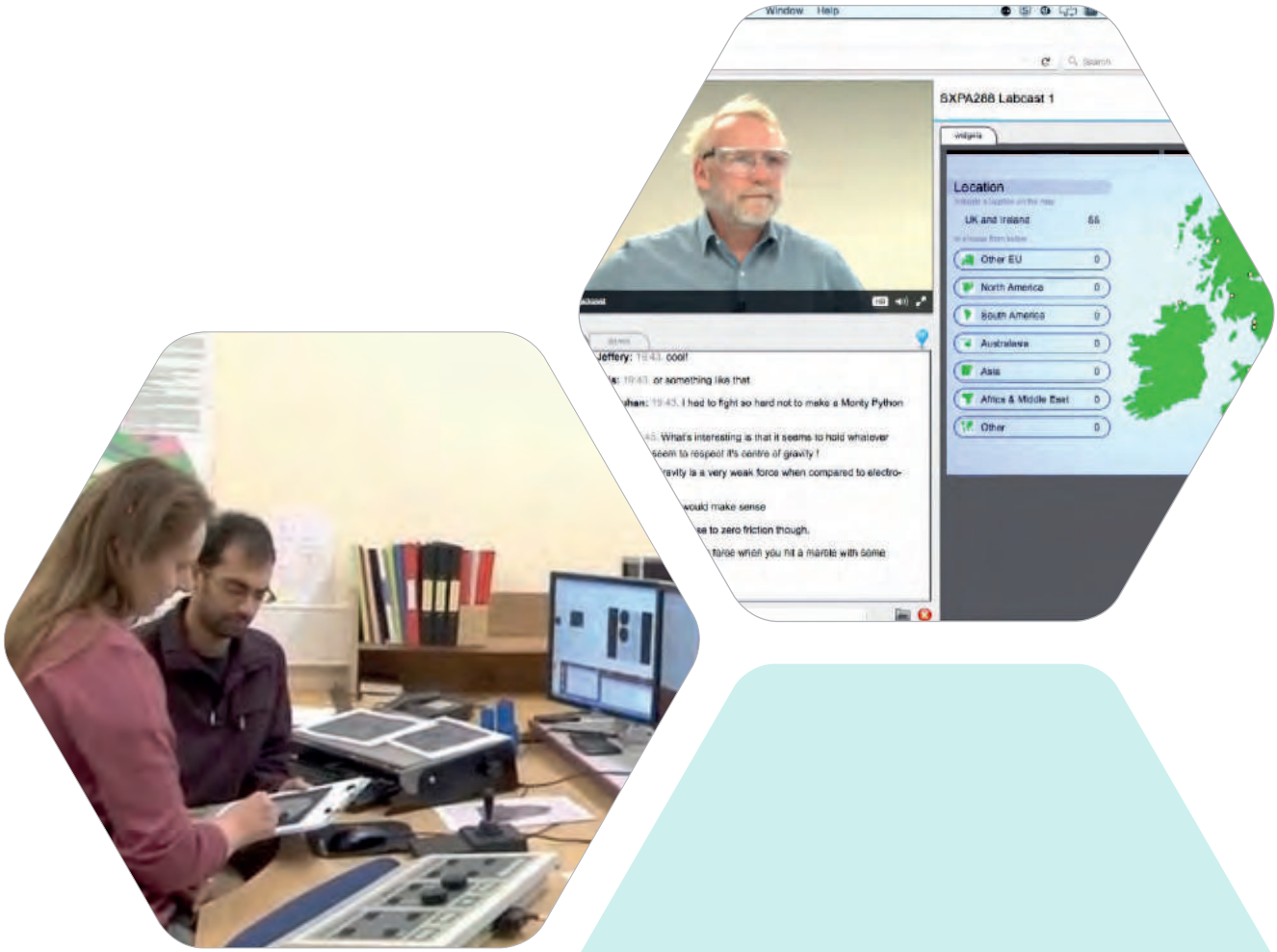
## Recognising the complexity

A final point to be made is to accept that this is a complex undertaking for all parties, whether the designers of the activity, the tutors, or the students.

To help with this, developmental testing of the activity prior to its first presentation can be an effective approach to refining it before it goes live to students. The Learning and Teaching Development team and the TEL Design team can both support module teams with this process.

Recognising the complexity of the task, and being willing and resourced to further develop the activity in-presentation or in time for subsequent presentations, is key to having a positive experience and a successful outcome. To help you do this in an evidenced way you should plan to collect the following information:

- Gathering feedback from students and tutors in-presentation using direct student feedback or real-time student feedback tools.
- Using available learning analytics in-presentation to understand how students have engaged and performed on the activity.
- Gathering feedback from students and tutors post-presentation.
- Using the student outcome data (satisfaction and pass) to evaluate the success of the activities.



# Conclusion

Within the University we have enough experience with collaborative activities and tools to offer well-tested advice to teams considering using them as part of their pedagogical approach on a module or qualification.

The above advice will hopefully provide a good starting point. This advice is maintained on the TEL in Practice website, and includes a list of contacts who can help with collaborative activities. These include the academics and module chairs who have developed the activities on modules, and some of the staff in LTS and IET who have either supported with developments on specific modules and/or have carried out research in this area. A number of the module chairs and academics have also carried out research based on their own experiences and so there's a wealth of material to refer to.

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