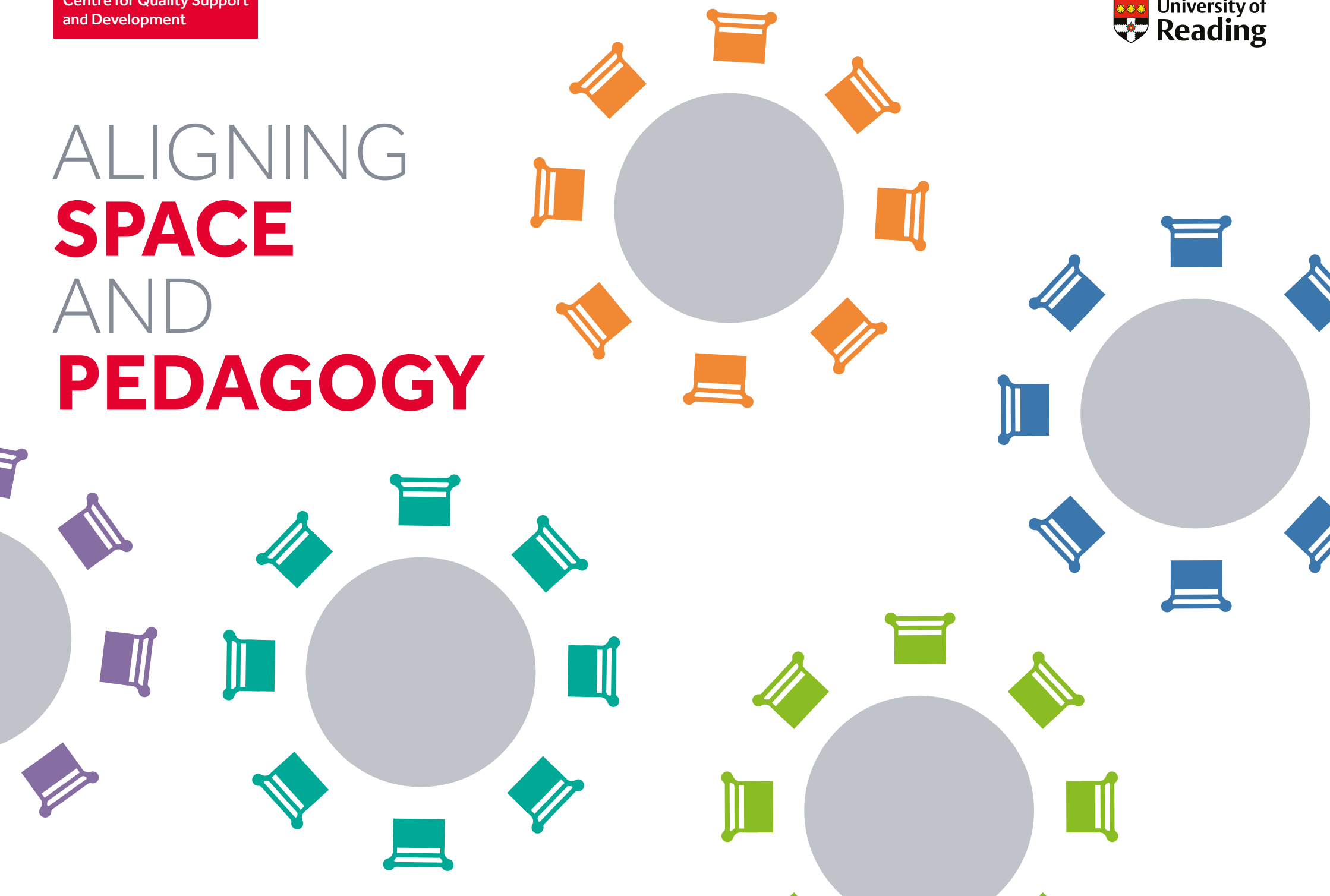


# ALIGNING **SPACE** AND **PEDAGOGY**



## HOW TO USE THIS GUIDE

Creating the right learning environment is essential in order to engage students actively in the learning process. This guide aims to support lecturers as they find themselves in any of the diverse teaching spaces across our campus, to help them align their preferred pedagogies with the learning space allocated and to overcome some of the challenges facing them. It includes a range of suggestions: from light-touch tips, activity ideas and useful tools to support learning, to reminders of alternative pedagogical approaches to draw upon - all of which can impact positively upon the classroom dynamic and the learning experience. We hope that you enjoy this guide to Aligning Space and Pedagogy.

Follow us on [@UniRdg\\_CQSD](#) and [@UniRdg\\_TEL](#)



**Professor Gavin Brooks,**  
**Pro-Vice-Chancellor**  
**(Teaching and Learning)**

Continually refreshing our view of how learning can be best achieved is essential to ensuring our increasingly diverse student body actively engage with their studies and attain the best possible academic outcomes. A key element of the University's T&L Strategy is providing the best possible learning environments for students and staff and we are currently focused on improving existing rooms on campus to support the active learning principles outlined in this guide. As our current portfolio of teaching spaces includes a broad range of facilities and space layouts, I welcome the introduction of this guide, helping staff to overcome challenges and align preferred pedagogies and best practice learning activities with the learning space they are allocated.



**Ed White**  
**RUSU Education Officer**

Engaging and active teaching is integral to ensuring students achieve their potential. Whilst the range of spaces we have within the university can often be viewed as a challenge they also provide exciting opportunities to teach in a variety of different methods which cater to the varying needs of our diverse student body.

This guide provides useful and practical ways to ensure that wherever you are teaching, you can do so in ways recognised as best practice. My personal thanks to the team who produced this guide for all their work which will help staff teach the best way they can in every learning environment.



**Angela Buckingham,**  
**Academic**  
**Developer CQSD**

Teaching and learning activities on campus occur in physical settings in which space drives behaviour. The traditional lecture theatre, supplemented by a basic seminar or tutor room, has been the dominant model in Higher Education for many hundreds of years, supporting a traditional, didactic teacher-centred mode of instruction: transmission of knowledge, through one-way delivery.

However, times are changing, and campuses are playing catch-up. Emerging pedagogies, in which more student-centred, active learning approaches are utilised, are coming to the fore. Conversational learning, in which collaborative groupwork takes centre stage, is one of the success stories in Higher Education. It is now clear there are many and diverse ways in which students learn; and likewise there are a broad range of evidence-based pedagogies, underpinned by the fact that people learn better when they work together, for the lecturer to draw upon.

Worldwide, university campuses and classroom spaces are transforming in order to integrate new technologies, to support a far more inclusive approach to teaching and learning, and to enable the incorporation of flexible approaches that are more in line with our increased knowledge around how students learn. If lecture theatres by their nature reinforce a content-oriented, teacher-centred model of instruction, what are the alternatives? What do we want our learning spaces and learning places of the future to look like?

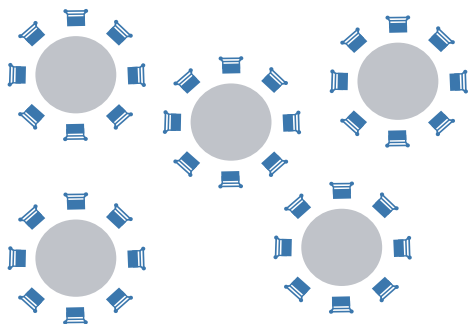
Being pragmatic, we also need to ask how we as teachers can move towards a model of active learning and meaningful teaching, if we are currently teaching in educational spaces that no longer easily support our new approaches. Are there particular room layouts which can promote a constructivist approach? How can we adapt our teaching to the current spaces, in order to encourage active, process-oriented and student-centred learning?

It is against this background that the Teaching Space Project at the University of Reading was initiated. In December 2016, a working group from the Sub-Committee for Teaching and Learning Facilities investigated how learning space is used across campus, reviewing which room layouts and configurations are preferred and revealing that space exerts an influence on how people interact and relate to each other.

This document is a result of both that investigation and the subsequent workshops that were held with academics, encouraging teaching staff to interrogate their ideas around workable learning spaces. In this guide, we invite you to consider new possibilities and pedagogies, rather than default to conventional teaching practices when faced with a traditional room layout. This guide has been developed to support teaching staff, to ensure that we are familiar with the types of spaces available, and to provide guidance on pedagogical approaches suited to the different room sizes and layouts.

As we continue to research the impact that the environment has on the learning process, we can develop a vision of what effective learning spaces within our different disciplines will look like in the future, to inform future classroom design around the campus: creating learning places which allow students, as well as new practices and pedagogies, to flourish.

# CABARET STYLE, 40–80 PEOPLE



Cabaret style rooms help to facilitate active learning, encouraging collaboration both among students and between students and the lecturer. Cabaret is an inclusive layout that supports all students to actively engage with the subject matter and share learning with their peers in pairs, small groups or with the whole class. This layout can also support interactive work and breakout activities, allowing students to work together on different elements of a project / problem or experiment with new concepts.

## Working in group/project teams Team-based/enquiry-based learning

It can be unnerving to hand over your role to the learners, and some lecturers worry that group work can take up more class time than a transmission model. However, allowing the learners to discover meaning for themselves (adopting a constructivist approach) ensures that retention is improved, which will save you teaching time in the long run.

- Invite or allocate roles within a group (e.g. 'spokesperson', 'note-taker') - this is a helpful way to ensure that all learners are involved in the task and can be an

effective way to control dominant learners and encourage shy/weaker learners to participate

- It is important to take time in class to explain the rationale for these types of activities: some learners may be unused to this type of learning and your/ their role within it
- Provide plenty of practice for this type of group learning, and if assessment is attached, use some 'low stakes' formative assessment as a trial run before incorporating this into your module. Be sure to vary group composition over the module/year, to develop effective team-work skills

**Support Available:** There are many open staff development sessions around implementing different approaches, on the T&L programme, which run throughout the year. Sign up for the sessions that interest you here: [reading.ac.uk/cqsd](http://reading.ac.uk/cqsd) ▶ [T and L programme](#) ▶ [T and L teaching approaches](#)

## Problem-solving activities Looking at case studies in small groups

- Don't forget to monitor student engagement. It is helpful to move around the room, engaging with the learners and asking good prompt questions
- Try to avoid getting 'stuck' at one table. Provide sufficient task support by displaying key questions or prompts for learners to refer back to. Provide language support by using glossaries, key terminology, vocabulary lists on individual tables (as handouts), around the room, or on mobile Blackboard apps

- Use of mobile devices can be an effective way to enable learners to contribute within their groups and to share with the whole class at the end of the session. Try out polling tools, social media and collaborative documents. Students without a smart device can pair up with someone who does have one

**Support Available:** Try implementing BYOD (bring your own device) into small group work. Find support from the TEL team (Technology Enhanced Learning) in CQSD: [reading.ac.uk/cqsd](http://reading.ac.uk/cqsd) ▶ [Technology Enhanced Learning](#)

## Peer teaching and learning

In order to use this type of learning effectively, you need to get to know your students well. Conduct a short Needs Analysis with your group, using a short questionnaire; invite contributions to a group wiki on your Blackboard course; or arrive to lectures a few minutes early, and chat to students during the breaks.

- Think about how to group them effectively and consider different types of pairings (strong/weak; friends; cultural background; level of expertise and prior knowledge, etc)
- Aim to vary these pairings over the module/year so that students experience working with others outside their usual social set
- Don't forget that a valuable resource can be previous cohorts: invite students from the previous year to 'buddy up' with students in the new group, to share their experiences and knowledge

**Support Available:** Take a look at some of the back issues of CQSD's T&L Reading newsletters. This one includes a useful overview of TBL (team-based learning), by Professor Rachel McCrindle (Department of Bio-Medical Engineering):

[reading.ac.uk/cqsd](http://reading.ac.uk/cqsd)

▶ [News and Communication](#)

▶ [T&L Reading newsletter issue 6](#)



## REMEMBER

Effective classroom management in this space is important to keep students engaged. Think about where you stand to give instructions (i.e. not in the glare of the projector's light, or hidden behind the podium). Attract learners' attention before you speak. Set a clear task. Use your voice and body language (a slow sweeping gaze is handy) to command attention.

# FLAT ROWS, 40–80 PEOPLE



Rooms set out in flat rows can help to focus student attention, facilitating greater consistency and clarity in delivery. This can be particularly helpful when explaining complex concepts or instructions to students. As the tables are often moveable, in comparison to more traditional lecture theatres, this layout can also support student collaboration through paired discussions or group work.

## Paired discussions Think-pair-share

Using think-pair-share is an effective way to break up delivery of a session and to re-engage your students. Think: set a clear task or problem (with an outcome and a time limit). Pair: invite neighbouring students to compare their ideas. Share: don't forget to get feedback from some students at the end, even if only briefly.

- In-class polling using mobile devices is a quick and easy way to get feedback after a think-pair-share; so is a class vote (hands up/down) or by using coloured cards or 'traffic lights'
- Consider using handouts. Keep students engaged by having them complete a graphic organiser or chart at different stages in the session (e.g. arguments for/against; a mind map; a storyboard; a fishbone chart (cause/effect), network trees etc)

- Or use skeletal handouts which give an overview of the lecture, with gaps for students to complete (definitions, key terminology, points to ponder, problems to solve) as they go through the session

**Support Available:** Use TEL: invite students to try electronic mind mapping apps on their devices and to share their results in your Blackboard course. See the Technology Enhanced Learning team's support information for ways to use your Blackboard course effectively:

[blogs.reading.ac.uk](https://blogs.reading.ac.uk)

► [Technology Enhanced Learning](#)

## Small group work Requires students to turn around

Even though the students are sitting in fixed rows, small group work can be easily facilitated by asking learners to form small groups with their neighbours. Encourage students to sit together as they come into the room. Put handouts on the front rows for students to look at as they enter the room to encourage a move towards the front.

- Consider group size. The size of the small group will depend upon local circumstances but anything beyond 5 or 6 students tends to encourage passenger behaviour
- Although it can be challenging to monitor learners and to get their attention/ bring the students back together at the end of the task, some element of learner training means that with repetition over time and increased use, learners become accustomed to this type of learning, working in groups independently for phases of the session, followed by feedback and plenary activities, led by you

- Your body language will signal to learners what is expected. Set a task; then retreat to the podium and take a moment to look at your session plan or notes. By withdrawing, you are signalling to the students that you are handing it over to them – it is their turn to work now

- Don't forget that you are in charge of your class – your learners will respond to this. When you need to bring the class back together, stand in the same place each time. Raise your hand if necessary. Smile. Wait for noise levels to drop, rather than shouting over them

- Take some time to watch experienced lecturers in your school and observe ways in which they manage the classroom dynamics

**Support Available:** Find a 'buddy' (it can be particularly interesting to watch teaching and learning in a completely different T&L context from your own) and do some peer observation. Notice how your colleague manages different phases of the lesson. Observe which teaching strategies you'd like to try out for yourself.

## In class quizzes and competitions

- In order to increase student engagement, at the planning stage build in interactive activities to encourage discussion, competition, cooperative learning and a questioning approach to learning
- Some groups of students can be motivated by quizzes and competition. There are apps which you could try out in class- start small, for example with a quick revision quiz in the middle of an and see how well it works with your students

- You may like to adopt elements of a flipped learning approach to make the best use of your class time, whereby student engage with reading and other materials prior to the session, and class time is used for active learning tasks such as projects, investigations and case study work

**Support Available:** Take a look at some of the GRASS project resources for ideas around how you might use screencasting with your learners:

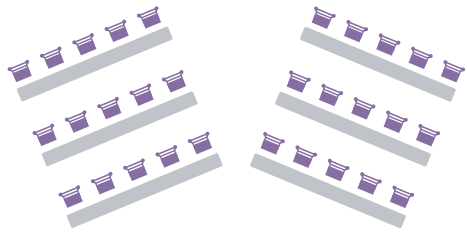
[blogs.reading.ac.uk/grass/](https://blogs.reading.ac.uk/grass/)

## REMEMBER

In this space with limited access to students, you will need to think beforehand about how you will help learners, deal with questions, monitor group work and get learners' attention to bring them back together.

Don't be afraid to wait for responses. It is good practice to use learners' names. To get everyone's attention at the end of a noisy task, try different approaches until you find one that works best for you: you could raise your hand / tap the table / dim the lights / stand still in a central position in the room / change to the next slide/ play music quietly in the background, which you then turn off at the end of the task time/ speak quietly: 'thank you everyone' and wait. (Shouting is usually much less effective.) Or display an online timer which can work well for short, timed activities. Plan your session so that you use attention-grabbing visuals or tasks to bring everyone back together.

## FLAT ROWS, 80–150 PEOPLE



High capacity rooms with flat row layouts offer good economies of scale, allowing large modules to be consistently delivered to students. Pedagogically, they can support active learning and increase student engagement- however, this may require forward planning in order to make the most of the flexibility of these large spaces (e.g. moveable desks).

### TEL based polls and quizzes

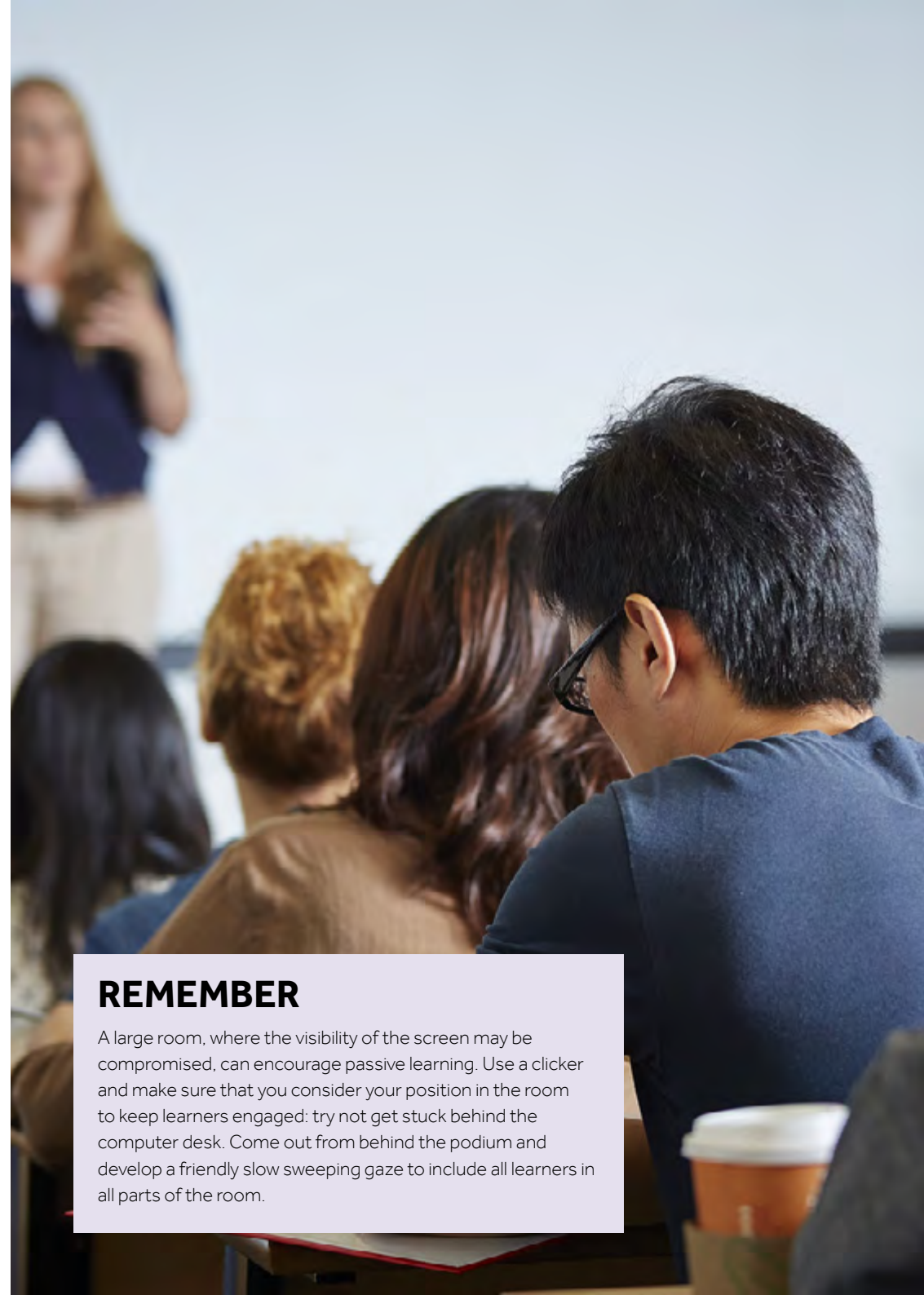
- It is essential to find ways to break up lecture-style transmission and to find new ways to engage your learners with active tasks. BYOD (bring your own device) tasks are familiar and fun for learners: these can be set up beforehand on your blackboard course
- Go to T&L showcases to find out which APPs and other tools could be used to make your teaching interactive. Online quizzes can be created and uploaded before the session as review, or to pique students' interest and get them ready to learn. Some element of competition / time-limit can be highly motivating for some learners. Consider using quizzes, prizes, and leader boards as a motivator

**Support Available:** There are events and personal consultations which are run by the TEL team in order to support your T&L needs. See what's available here:  
[reading.ac.uk/cqsd](http://reading.ac.uk/cqsd) ▶ [T and L programme](#)  
▶ [Technology enhanced learning](#)

### Pair-based work

- When using pair tasks in large groups, don't forget that with a room of this size, it will be noisy! Consider ways in which you will bring everyone back together and how you will gather feedback
- It can be effective to use 'just-in-time' peer instruction at points in the session when learners are struggling to understand key concepts. By handing over to the students, they can often clear up misunderstandings amongst themselves
- Two brains are better than one! Pose open questions and invite learners to note their own responses on a notepad. Set a time limit and invite them to compare their answers with a neighbour. Encourage debate and discussion: this is where you can see learning actually happening

**Support Available:** Watch this video in which Harvard professor Eric Mazur describes how he discovered Peer Instruction, which changed his whole approach to teaching physics:  
[youtube.com](http://youtube.com) ▶ [Eric Mazur](#)  
▶ [Peer instruction for active learning](#)



## REMEMBER

A large room, where the visibility of the screen may be compromised, can encourage passive learning. Use a clicker and make sure that you consider your position in the room to keep learners engaged: try not get stuck behind the computer desk. Come out from behind the podium and develop a friendly slow sweeping gaze to include all learners in all parts of the room.

## RAKED LECTURE THEATRE, 80–150 PEOPLE



Smaller raked lecture theaters provide good visibility for both students and lecturer, encouraging collaboration both among students and between students and the lecturer. The inclusive nature of this layout enables students to actively engage in their learning and share this easily with their peers in pairs or with the whole class. The 'U or V shaped' lecture theatre can support a wide variety of learning activities and active learning pedagogies, including demonstrations, workshops and whole class debates.

### Whole class discussion, debates

- An engaging way to involve all learners is to hold a debate: invite in two speakers who can engage the room and propose different perspectives to an issue or argument. Use online polling tools to gather opinions before and after the debate
- You can use technology to have a rolling screen (e.g. a live twitter stream) to invite questions or responses during the debate. While this can be a demanding activity to set up, it can be an exciting and effective way to start off a new lecture series or to lift a flagging module

**Support Available:** here is a short case study from Professor Julian Park in Agriculture around using debates as a learning tool: [reading.ac.uk/cqsd](https://reading.ac.uk/cqsd) ▶ [Good practice in teaching and learning](#) ▶ [Good teaching and learning practice across faculties](#) ▶ [The use of debates as a learning or assessment tool](#)

### Workshops and demonstrations

- With its good visibility, this layout is ideal for demonstrations to larger groups (compared to large groups in flat rows, for instance). Consider inviting in guest speakers or professionals from your field, to add a new perspective to your lectures
- In large room sizes, it is important at the planning stage to consider your visuals and audio- check the font size on your presentations by standing at the back of the room; think about colours of slides and other accessibility issues
- Think about your voice and delivery: ask the learners if they can hear you. Check the microphone in the room at the pedestal, or consider using a portable mic if there is one available

**Support Available:** It is important to consider the design of your learning materials and to check it for accessibility issues. Take a look at the Technology Enhanced Learning team's blog for support in creating accessible materials:

[blogs.reading.ac.uk](https://blogs.reading.ac.uk)

- ▶ [Technology enhanced learning](#)
- ▶ [Changing the focus: Accessibility in Blackboard](#)

## REMEMBER

Acoustics can be a challenge if you are considering whole class debate in this size room – you might want to locate a roaming mic from IT support to ensure that everyone can hear and participate fully. Repeat questions back so that the whole room can hear.



# RAKED LECTURE THEATRE, 150+ PEOPLE



Perhaps the most traditional layout, raked lecture theatres can support consistent delivery to large numbers of students. University academic staff expressed a preference for a 'Harvard style' layout, as the shallower rake and U/V seating can improve the proximity of students to the lecturer and encourage greater interaction between students. Good connectivity can help to increase student engagement, technologies such as audience response systems and online collaborative pin boards can enable lecturers to actively engage students in their learning.

## Interactivity in lectures using questions

- One of the easiest ways to break up the delivery of a lecture is to ask good questions. Plan these beforehand and invite learners to stop and... For example:

- 1 Stop and write an answer
- 2 Stop and think
- 3 Stop and create a definition
- 4 Stop and discuss with a partner
- 5 Stop and complete a chart/ mind map/ summary
- 6 Stop and vote etc.

- One way to improve the quality and length responses from your learners is to increase your wait time (the time between asking a question and obtaining an answer). It is important to allow sufficient time for responses: try to avoid asking and immediately answering your questions yourself
- Try to ask genuine meaningful questions and allow sufficient thinking time during the session, rather than only using 'display' questions to which everyone already knows the answer
- Develop your skills in asking a wide range of question types: open/closed; multiple choice; multi-layered etc. Be mindful to vary who gets to answer each time and invite answers from different parts of the room
- Collect questions from the students! Before a break, invite students to write their questions on a post-it and leave them at the front of the room. Answer common/ interesting/problem questions when they return; those you don't have time to get on to can be answered in Blackboard, or at the start of the next lesson
- Polling tools can be helpful in ensuring anonymity and allowing shy/quieter students to participate

**Support Available:** Read the second half of this web page from the University of Washington 'Why ask open questions?' which includes sample questions, decide which ones you could adapt to your T&L context: [teachingcenter.wustl.edu](http://teachingcenter.wustl.edu) ▶ [resources](#) ▶ [teaching methods](#) ▶ [participation](#)

## Lecture with active learning and multimedia

- Break up delivery of your lectures by designing them at the planning stage as 'lectorials'- for instance, ten to fifteen minutes of input, followed by ten to fifteen minutes of group work. Repeat
- Use multimedia meaningfully: if you include video or audio clips in your teaching, keep them short and always set a task before you play the clip. This way you give students a purpose or reason for watching/ listening, and change the emphasis to active learning, rather than recall and memorisation

**Support Available:** Familiarise yourself with Bob (Box of Broadcasts). This webpage shows you how to embed videos in PowerPoint and your Blackboard course, as well as introducing you to a huge archive of teaching materials you may wish to access: [reading.ac.uk/library](http://reading.ac.uk/library) ▶ [e-resources](#) ▶ [video, image and sound](#) ▶ [box of broadcasts](#)



## REMEMBER

Students can easily hide and disengage in large lecture theatres. Don't be afraid to keep them on their toes by implementing active learning. You might try leaving the stage area on occasion and walking up the aisles, to reduce the invisible barrier between lecturer and student.

At the start of a session, invite everyone to mute their phones and to commit to taking part fully in the session. Practice your delivery and timings beforehand so that you don't have 'death by PowerPoint'- cut unnecessary slides and don't speed up towards the end.

Tell participants how long they have until the next break, and keep to your timings: don't overrun.

Sometimes students will give poor or wrong answers. Think about how you can handle an incorrect response sensitively, in a way that allows the learner not to lose face in front of their peers, but instead in a way that this can become a valuable teaching/ learning moment for the whole group. Think-pair-share is a useful tool which allows students to confer and change their answers if they wish.

Aim to use private feedback (in pairs) before public feedback (in front of the whole group).

## USEFUL LINKS

We hope that you have found this guide to teaching and learning spaces at the University of Reading useful, and inspiring. Our increasing understanding around how people learn allows us to develop a more thoughtful approach to space planning and design. We would like to challenge staff and students to think about the learning activities that occur in our learning spaces, and to heighten our awareness of the pedagogical approaches we choose to implement– with a meaningful shift of emphasis from teaching towards learning.

### Useful links: keep up to date

CQSD Webpage  
[reading.ac.uk/cqsd](http://reading.ac.uk/cqsd)

Mailing List  
[lists.rdg.ac.uk/mailman/listinfo/cqsd-t&l](mailto:lists.rdg.ac.uk/mailman/listinfo/cqsd-t&l)

Teaching & Learning Programme  
[reading.ac.uk/cqsd/cqsd-ComingSoon.aspx](http://reading.ac.uk/cqsd/cqsd-ComingSoon.aspx)

T&L Reading Newsletter  
[reading.ac.uk/cqsd/cqsd-NewsandCommunication.aspx](http://reading.ac.uk/cqsd/cqsd-NewsandCommunication.aspx)

T&L Exchange  
[blogs.reading.ac.uk/t-and-l-exchange](http://blogs.reading.ac.uk/t-and-l-exchange)

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### Blogs

Engage in Teaching and Learning  
[blogs.reading.ac.uk/engage-in-teaching-and-learning](http://blogs.reading.ac.uk/engage-in-teaching-and-learning)

Technology Enhanced Learning  
[blogs.reading.ac.uk/tel](http://blogs.reading.ac.uk/tel)

### Useful reading

- Gibbs, G & Jenkins, A. (1992). *Teaching Large Classes in Higher Education: How to Maintain Quality with Reduced Resources*. London: Kogan Page.
- Saunders, F. (2015). *Reflections on large class teaching*. Higher Education Academy Blog. [Heacademy.ac.uk/reflections-large-class-teaching](http://Heacademy.ac.uk/reflections-large-class-teaching)
- Haynes and Haynes (2012). *53 Interesting things to do in your lectures* (based on an earlier version by Habeshaw Gibbs and Habeshaw). Professional and Higher Partnership Limited.
- Strohfeldt, K. and Pye, R. (2017). *Large Class Education Toolkit*. University of Reading. [reading.ac.uk/web/files/cqsd/V4\\_Interactive\\_Education\\_Toolkit.pdf](http://reading.ac.uk/web/files/cqsd/V4_Interactive_Education_Toolkit.pdf)



## ALIGNING SPACE AND PEDAGOGY TEACHING SPACES GUIDE

**i** For more information, please contact:

**Centre for Quality Support  
and Development**

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