

Active learning spaces: tips & tricks



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Centre of Expertise for Higher Education (University of Antwerp)

'I want to activate my students, but the classroom I have to teach in is hardly suited for it.'

This is a frequently heard concern shared by many lecturers in higher education. We know that using **activating didactics** is important. Positive effects have repeatedly been demonstrated in recent years (e.g. Freeman et al., 2014). But what do you do when the infrastructure of the classroom makes activation difficult, or even impossible? In response to this question, higher education institutions have been experimenting with active learning spaces for several years now.

In this ECHO Teaching Tip, we will discuss **what active learning spaces are** and provide some **tips and aspects to be mindful of** when using such spaces.

What are active learning spaces?

An active learning space is a classroom aimed at and equipped for **enhancing and facilitating interactivity and collaboration** among students and between students and the teacher. It is a space where students can easily exchange views and work together comfortably. Teaching in active learning spaces supports the acquisition and development of '21st-century skills', such as collaboration and critical, creative and problem-solving thinking.

It all comes down to activating your students. The teacher assumes the role of activation facilitator and supporter. There are several requirements the infrastructure should meet, including:

- easily movable furniture, to allow for different seating arrangements, group sizes and teaching methods;
- a sufficiently large space, so that teachers can move easily between different groups of students, and so that students can easily move the furniture around;
- attention to physical comfort (e.g. an inviting space with adequate lighting, good acoustics, and ergonomically designed furniture);

- sufficient analogue tools (flipcharts, whiteboards, etc.) and digital tools (large screens students can use to share their laptop screens, etc.) enabling students to visualise ideas.

Several examples of active learning spaces can be found [here](#) and [here](#). In the 2019–2020 academic year, the first steps were taken in designing active learning spaces at UAntwerp. On Campus Drie Eiken, [classrooms Q.003 and Q.004](#) were transformed into learning spaces that support active and interactive learning (link accessible only to UAntwerp staff in Dutch, login required).

Tips and pitfalls

- Research on activation effects has shown that active learning spaces can also have a positive impact on student learning, engagement and motivation (Beichner et al., 2008; Brooks & Solheim, 2014; Byers et al., 2014; Talbert & Mor-Avi, 2018). The prerequisite for this, of course, is that the **active learning space is used for the right purpose**, i.e. activating students and stimulating collaboration. Dare to adapt your teaching behaviour to the different possibilities offered by the classroom. Or

better yet, find a classroom that supports the goals you are aiming for.

- Activating students is best done in an active learning space, with infrastructure geared specifically towards this, so you can obtain results quickly. It should be easy to alternate plenary instruction, interaction or reflection with collaboration sessions in groups of different sizes and compositions, and through various activating teaching methods. **Make sure not to focus overly on plenary instruction or information transfer.** Instruction should be limited to explaining an assignment to be carried out (or your expectations thereof), or short moments between group interactions during which you give information collectively – either to deepen or specify certain aspects, or to clear up any confusion reported by one or more groups.
- Adapting your teaching behaviour implies that in an active learning space, rather than assuming the role of expert, you assume a **coaching role** ([ECHO Tip, 2021](#)). This involves a number of skills that may be somewhat different from the teaching situation in a ‘standard’ lecture, which often focuses on information transfer. You need to involve your students, ask the right questions, deal with different answers, guide discussions and supervise group work. Check the ‘Want to know more?’ section below for additional information on this.
- Experiment with different seating arrangements that help **decentralise the teacher**. A classroom setting where the teacher is not the central focal point reinforces the coaching role of the teacher. A different spatial position is required, with the teacher no longer being at the front of the classroom, but moving around and checking in on groups of students. Sometimes this is underscored in the infrastructure by the absence of a desk in the front, in favour of a round desk in the middle or a small mobile standing desk, for instance.
- This physical decentralisation of the teacher does imply, however, that not every student will be visible at all times. Be sure to think through how you are going to make **optimal use of the space** and to make regular **eye contact** with the different groups of students.
- While the way active learning spaces are designed fosters interaction in small groups, **interaction with the whole group is sometimes lost**. So be sure to include plenary elements that provide added value, like a debriefing session.
- Coaching and activating students introduces more uncertainty in your teaching. You have less control over exactly what will happen in the lesson, what questions will be asked, etc., **so build up your activating moments gradually**. First include some relatively simple activation methods in your ‘traditional’ lectures, and then gradually switch to more extensive activation in an active learning space.
- Keep in mind that your students will also have to **get used to being taught in an active learning space** and you will need to support them in this. For them, too, gradual activation is important, as well as introducing a [culture of activation](#) (ECHO Tip, 2018).
- In an active learning space, there is also a social aspect to learning. Students learn through interaction with their peers. In addition, the usual social hierarchy between the lecturer and the students changes. The informal layout of the classroom and the teacher moving around freely help to lower the threshold for students to address the teacher. Yet even in an active learning space, it is advisable to pay explicit **attention to the social aspect and interpersonal relationships** in the learning environment. In a nutshell, it all comes down to creating a [positive classroom climate](#) (ECHO Tip, 2020). This can be done in several ways (Barr, 2016):
 - Aim for a safe learning environment, where students are not afraid to answer or make mistakes. See also [this ECHO Tip](#) (2018).
 - Get to know your students. Check the paragraph on pre-assessment in [this ECHO Tip](#) (2021).
 - Make sure that students actually have to *work together* and that they have a shared responsibility to learn. This can be done by focusing on group-worthy tasks (Lotan, 2003; [ECHO Tip, 2022](#)).
- In an active learning space, **students are more easily distracted**. There is more background noise, there are several laptops in use, the teacher cannot

see all students at once and is often talking to another group. Good infrastructure (e.g. mobile acoustic screens) can help to remedy this. In addition, good [classroom management](#) (ECHO theme page, in Dutch) is also important. In any case, be sure to check in regularly with every group and have a plan for when students get distracted and are going off-topic. Think about ways to draw everyone's attention (e.g. if you want to give a short extra plenary instruction) and ways to distribute learning materials efficiently (by placing them on the tables in advance, for instance).

- Don't be overwhelmed by **extensive technical equipment**. Its primary purpose is to support you. So only use technology if it is useful and adds value to your teaching; always be purpose-oriented, not tool-oriented. Introduce new technology into your classes gradually, and be sure to familiarise yourself with it beforehand.

Want to know more?

About the effects of activation and active learning spaces

Beichner, R., Saul, J., Abbott, D., Morse, J., Deardorff, D., Allain, R., Bonham, S., Dancy, M., & Risley, J. (2008). [Student-centered activities for large enrollment undergraduate programs \(SCALE-UP\)](#). *Research-Based Reform of University Physics*, 1(1), 2–39.

Byers, T., Imms, W., & Hartnell-Young, E. (2014). [Making the case for space: The effect of learning spaces on teaching and learning](#). *Curriculum and Teaching*, 29(1), 5–19.

Brooks, C. & Solheim, C. (2014). [Pedagogy Matters, Too: The Impact of Adapting Teaching Approaches to Formal Learning Environments on Student Learning](#). *New Directions for Teaching and Learning*, 137, 53–61.

Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). [Active learning increases student performance in science, engineering, and mathematics](#). *Proceedings of the National Academy of Sciences*, 111(23), 8410–8415.

Talbert, R., & Mor-Avi, A. (2018). A Space for Learning: A review of research on active learning spaces. <https://doi.org/10.31235/osf.io/vg2mx>

About the design and infrastructural requirements of active learning spaces

Finkelstein, A., Ferris, J., Westeon, C. & Winer, L. (2016). [Research-informed principles for \(re\)designing teaching and learning spaces](#). *Journal of Learning Spaces*, 5(1), 26–40.

[Learning space rating system](#)

About active learning spaces at UAntwerp

[Pintra page with info about active learning spaces at the University of Antwerp](#) (only accessible to UAntwerp staff, requires login. Only available in Dutch)

About coaching students and active teaching methods

ECHO Tip: [Dividing students for group work](#) (2018)

ECHO Tip: [Want to get the best out of your students? Let's coach!](#) (2021)

ECHO Tip: [What makes a group assignment successful?](#) (2022)

ECHO theme page: [Activating students](#)

ECHO screencasts: [Vragen stellen en omgaan met antwoorden](#) (in Dutch)

ECHO screencast: [Discussie](#) (in Dutch)

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BV Databank: [Groepswerk](#) (in Dutch)

Cashin, W.E. (2014). [Effective classroom discussion](#). IDEA Paper 49.

Hodges, L.C. (2017). [Ten research-based steps for effective group work](#). IDEA Paper 65.

About the social aspect of active learning spaces

ECHO Tip: [Culture of activation](#) (2018)

ECHO Tip: [Activate as many students as possible](#) (2018)

ECHO Tip: [Positive vibration, yeah! A positive classroom climate](#) (2020)

ECHO Tip: [Differentiated teaching in higher education](#) (2021)

ECHO theme page: [Klasmanagement](#) (in Dutch)

Baepler, P., & Walker, J. D. (2014). [Active learning classrooms and educational alliances: changing relationships to improve learning](#). *New Directions for Teaching and Learning*, 137, 27-40.

Barr, J. (2016). [Developing a positive classroom climate](#). IDEA Paper 61.

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Peer-reviewed, open access journal on the design of classrooms & learning spaces

[Journal of Learning Spaces](#)