# Report of the *ad ho*c TLC Committee on Learning Spaces Pedagogy

July 1, 2025

# Background

The TLC *ad hoc* Committee on Learning Space Pedagogy (LSP) was formed in late summer 2024 to address and offer a pedagogical perspective on an identified priority in the UCLA 2023-2028 Strategic Plan: "Modernize learning spaces to enrich student success and keep pace with innovative teaching practices." (Creating the future: UCLA Strategic Plan 2023-2028; see Goal 4: Elevate How We Teach.)

The Committee was charged to develop and disseminate recommendations focused on:

- Principles to guide design and use of UCLA classroom spaces in support of learning-centered, engaged, and equitable teaching in response to the needs and pedagogical priorities of UCLA instructors;
- Programming to advance teaching excellence and innovation in ways that leverage institutional investments in improved classroom infrastructure.

The <u>LSP committee members</u> met once a month between September and December 2024:

- September 20, 2024 (in person)
- October 16, 2024 (Zoom)
- November 12, 2024 (Zoom)
- December 11, 2024 (in person)

Committee members shared and discussed their own experiences in UCLA classrooms at the monthly meetings as well as addressed the specific charge of the committee. One representative surveyed a subset of their departmental colleagues about their experiences in UCLA classrooms, and everyone on the committee contributed to a collaborative document about their "wish list" for UCLA classrooms, and principles to underlie these.

"Learning spaces in higher education include formal and informal spaces, such as buildings, open spaces on and off campus, online spaces, and other spaces in which teaching, learning, and engagement happens (ACSN Learning Spaces Working Group, 2020)." This committee's understanding of "learning spaces" was broad, and we tended to discuss learning spaces at UCLA according to these types:

- Large Classrooms and Tiered Lecture Halls: >100 students;
- Mid-size Flat Classrooms: 40-100 students;
- Small Seminar rooms: <40
- Special designated, specially designed Active Learning Classrooms.

# LSP Committee Members:

Kim DeBacco, Lead Instructional Designer for Learning Spaces Pedagogy, Teaching & Learning Center (Co-chair)
Adaline Tatum, Digital Technology Services, AVIT Training Coordinator, Digital Spaces Services (Co-Chair)
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Claire McCluskey, Deputy Registrar & Director of Curriculum and Scheduling, Registrar's Office
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# Section 1: Pedagogical Principles for Learning Space Re/Design

# Introduction

The principles on which the LSP committee's recommendations are based derive from the proposition that excellent teaching **is learner-centered and responsive, engages students**, **is equitable**, and entails **striving to improve**. These four conditions represent the four key dimensions of the <u>Holistic Evaluation of Teaching (HET) Framework</u>, an evidence-based, research and teaching development project that has been incubating and expanding gradually at UCLA since 2021. Another framing influence for learning space design at UCLA is the 2022 UCLA Academic Senate Report - <u>Principles for the Future of Instruction at UCLA</u>. Relevant principles from that set of twelve are referenced throughout this learning spaces pedagogy committee report to anchor and assert learning space re/design needs.

A further influence on the principles and pedagogical recommendations in this report is Universal Design for Learning (UDL):

UDL is a framework to guide the design of learning environments that are accessible, inclusive, equitable, and challenging for every learner. [....] UDL aims to change the design of the environment rather than to situate the problem as a perceived deficit within the learner. When environments are intentionally designed to reduce barriers, every learner can engage in rigorous, meaningful learning (<u>CAST</u>, 2024).

The four dimensions of the HET Framework, supported by the 2022 Senate Report and the UDL Framework, offer an organizing foundation for the learning space re/design principles set out in

the following section. With these principles and recommendations, the committee seeks to ensure that all learning environments at UCLA are designed or remodeled so that a variety of best practice pedagogies and activities that encourage student engagement, learner equity and access, and learner-centered, responsive interaction can be conducted.

# Principle 1: Excellent Teaching in UCLA Learning Spaces is Learning-centered and Responsive

The aim of teaching is simple: it is to make student learning possible. (Ramsden, 2003, p. 7).

Learning-centered teaching and learning at UCLA was publicly endorsed by the 2022 UCLA Academic Senate Report, <u>Principles for the Future of Instruction at UCLA</u>, most obviously in three principles:

Principle A: Foster student learning and well-being through pedagogical excellence

Principle D: Ensure student access to transformative engagement with the knowledge production intrinsic to a research university.

Principle K: Apply classical and innovative **pedagogical philosophies**, **approaches**, **methods**, **and techniques**, and maintain the **resources**, **sites**, **facilities**, and **tools** to facilitate their effectiveness.

These three principles set the tone for expectations surrounding teaching and learning at UCLA. However, the *ad hoc* TLC Learning spaces Pedagogy committee agreed that there is a lot to do to improve the in-class student experience. While acknowledging the primacy of learner-centredness and responsiveness in instruction, the group seeks to draw attention to some practical, environmental matters that are essential for in-class instruction, irrespective of instructional methods. Attention to these baseline requirements will convey an implicit message that learner comfort and well-being are paramount in UCLA learning spaces.

The following recommendations will not only ensure the comfort and well-being of everyone who teaches and learns in UCLA learning spaces, but they represent baseline expectations for a modernized classroom on campus.

- On-going maintenance: Clean dust-free podiums, tables, desks, and other surfaces and litter-free floors.
- Good lighting that is preferably natural, and emanating from well-placed windows;
- Good visibility, clear sightlines, working visible clocks; UDL Guidelines for Perception (CAST 2020; <u>Guideline 1, Design Options for Perception</u>) argue that "it is important to ensure that key information is equally perceptible to all learners";
- Legible display monitors with good contrast, and blackboards/whiteboards positioned on at least two walls, not covered up by projector screens;

- Clear audio that allows everyone in the room to hear each other, including students listening to students. Depending on room layout and design, classrooms for 40+ students should be provisioned with one or more moving microphones (handheld mics, Lavalier speakers, <u>Catchbox</u>/es) and/or integrated ceiling microphone/speaker system;
- Temperature and ventilation: Air conditioning in all UCLA learning spaces needs to be adjusted and checked frequently to ensure a physical comfort level that allows for focus and attention. Good ventilation and air circulation are essential, and, if classes must be scheduled in windowless rooms and basement spaces, air purifier units are recommended (Writing Programs departmental survey).
- Clean, comfortable furniture is a necessity, including wide chairs for varying body shapes, and desks for students who use wheelchairs;
- A locked storage area in each classroom for equipment and materials that are natural to the space, e.g. microphones, adapters, instructional materials.

Best practice pedagogies, including some active learning activities involving pairwork, can be conducted in any classroom, including the largest auditoriums, that meet these basic requirements. Clean learning spaces with good lighting, audibility, visibility and legibility, adjustable temperature, good ventilation and clean furniture tells UCLA students: we value your learning.

With these environmental basics attended to, instructors can interact with and respond more easily to their students. Students can interact more easily with each other during whole class activities. As noted in the Strategic Plan (Goal 4, p. 23), "[t]he modernization of learning spaces is necessary to enrich student success and keep pace with innovative teaching practices." The stage is set.

The next two pedagogical principles center on student engagement and equity, offering recommendations that refer to more spacious classroom layouts, movable furniture, and updated audiovisual equipment, to enable best practice pedagogies in UCLA classrooms.

### Principle 2: Excellent teaching in UCLA Learning Spaces engages students

Active learning is generally defined as any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing. (Prince, 2004)

Engaged students are attentive, interested, and motivated to participate and interact with ideas and concepts, learning materials, and with each other. Modern pedagogies, in particular those methods of instruction that rely on active learning, require that students concentrate, focus their attention, and interact with their peers - and so engage.

A UCLA instructor interviewed about UCLA learning spaces and active learning shared their own understanding of active learning:

But when I hear something like active learning, I think about some goals I have for my big class [290 students] which is to be able to take ideas that you're learning sometimes passively in a lecture. And do something with them. So take a concept in social theory and think of something in your life or that you've seen and apply it and be able to do that, where you're actively doing something with a concept or an example or a translational work, where you're activating the idea or even just putting it in your own words. (CJ, 2024)

The modern college and university classroom space can support faculty like UCLA Professor CJ with enhancing active learning and student engagement when the environmental design, furniture, and audio-visual equipment have these conditions. Such spaces enable instructors to make pedagogical choices that align best both with their course content delivery preferences and with evidence-based teaching methodologies.

#### Movable furniture encourages group work and student interaction:

There is seating for student engagement; the ability to move and turn allows students to check in and discuss topics or prompts, to undertake Think-Pair-Share activities, or to discuss group projects, for example. In large tiered lecture theaters, fixed rotating seats will allow students to turn 90 degrees each other, or to turn 180 degrees such that small groups can form. In specially designed and designated active learning rooms, roller chairs are not always necessary. In learning spaces with specially designed rolling chairs (See <u>Steelcase chairs</u>, for example), lockable wheels are preferred.

#### Room to move:

Learning spaces should be furnished with fewer desks and chairs, not only so that students can rearrange themselves, but so that tables and chairs can be moved flexibly into different configurations for pairwork and groupwork. Moreover, outdated equipment (overhead projectors, standing podia) needs to be removed from UCLA classrooms. Note that the provision of extra space in UCLA classrooms will have an added benefit for mobility impaired students.

# Adequate surface space to place and arrange instructional materials (for both instructors and students):

Active learning practices often require the instructor to bring samples and materials (e.g., oversized post-it pads and pens, poster paper) for experiential and group-based learning. In groups, students need to be able to move such materials and their electronic devices around, to share and show what they are working on.

# Principle 3: Excellent teaching in UCLA Learning Spaces is equitable

It is important to design materials and physical environments that support and value the interaction needs and preferences of every learner (CAST, 2024).

UCLA aims to be successful in recognizing and affirming equity as an embedded value in teaching practice in all disciplines and at all levels of instruction campuswide (UCLA Strategic Plan, 2023-2028, p. 20). The UCLA Senate Report on the Future of Instruction in 2022 draws attention to this in Principle F - a call to "promote and protect diverse, equitable and inclusive teaching and learning, including but not only through increasing teaching and learning accessibility".

Being equity-minded and inclusive of all becomes no less important when it comes to learning spaces. Equity from both instructor teaching and student learning perspectives can mean physical access to locations or areas in the room, access to suitable furniture, the necessary equipment, and technological affordances that are critical for equitable course content delivery and learner participation.

Accessibility is a concern and responsibility for all who work and study in the university. The US Centers for Disease Control points out that "Disability Impacts All of Us (<u>CDC, 2024</u>)" and indeed nearly 29% of the US population - one in four people - has a disability. As the UDL CAST research team notes:

...the physical design of the learning space can also be restrictive (e.g., narrow aisles, inflexible seating and table arrangements, inflexible height of a whiteboard, etc.). Navigation and interaction in those limited ways will raise barriers for some learners—for example, learners with physical disabilities, blindness, dysgraphia, or those who need various executive functioning supports. (CAST, 2024.)

Neurodiversity plays into these statistics, too (University of Waterloo, 2024). There are positive and practical implications for classroom design, in terms of desirable features that will benefit all students, above and beyond those who might have, for example: attention deficit hyperactivity disorder (ADHD), obsessive-compulsive disorder (OCD), autism spectrum disorder, dyslexia and more (Toke, 2023).

The modernized college and university classroom can promote inclusive excellence and equity by means of environmental design features, furniture, and audio-visual equipment including:

**The availability of live lecture recording (BruinCast)**, allowing students to rewatch and review lectures, is a recognized equitable and inclusive practice (Wang, 2023). The requirement to record should remain optional for instructors, but technically available.

**Wifi access** is a must for all students, and not just those who can afford private cellular access. The case for quality wifi in *all* learning spaces, particularly recognizing the shift to sourcing all readings, textbooks and other content electronically. Beyond this, while in class, students may also need to access Bruin Learn (UCLA's Learning Management System) and other UCLA Library and disciplinary-based online/internet materials.

Audio-Visual and IT (AV/IT) requirements of all learning spaces suggested as follows:

• provision of updated cables (from vga to hdmi) for projection;

- a complete AV/IT overhaul of high-use learning spaces is needed;
- provision of TV screens instead of projectors and/or projectors that project on the white board

**Electrical outlets** are now essential for equitable student engagement and participation. "All students bring their laptops or tablets. Oftentimes, many cannot use their devices because the battery is dead, so more outlets would be great...(Writing Programs departmental survey)."

**Screen display capability for all**. Instructors and students need to be able to quickly/effortlessly display their screen. There needs to be a mechanism to lock the display so that random screen sharing is obviated; alternatively, the instructor should be able to select what students share.

The *ad hoc* TLC Learning Spaces Pedagogy committee meetings also discussed classroom needs for neurodivergent students (<u>University of Waterloo, Canada</u>). Some of the specific elements from that summary that support classroom equity and access and that the committee would like to highlight include:

- Sensory considerations: soft lighting, designated quiet areas with calming colors and textures, noise-canceling headphones, fidget toys, sensory tools like stress balls or weighted blankets;
- Flexible seating: standing desks, wobble chairs, bean bags, yoga balls, options to sit, stand, or move around as needed;
- Visual supports: clear visual schedules, graphic organizers, timers, visual cues for transitions;
- Accommodations for different learning styles: hands-on activities, multi-sensory learning approaches, choice of learning activities.

These sensory supports and accommodations invite reflection on how learning in classrooms can become a more comfortable, engaging and equitable experience for all students at UCLA.

In sum, when it comes to designing or remodeling learning spaces at UCLA and making decisions about what to buy and whether/where to install furniture, AV/IT components, and other classroom features, the committee recommends that

- Modularity and mobility should be prioritized, enabling instructors to plan engaging activities that involve movement around the room. This will require the university to explore the viability of reducing room capacities to free up space. This will require adding capacity elsewhere on campus; UCLA will need additional classroom spaces to schedule classes).
- 2. Planners, architects, builders, maintenance workers, and all those who support classroom spaces at UCLA, must consider whether, how, and to what extent, the planned building, space or modification will support inclusion, and the tenets of excellent teaching. In other words, will the proposed design or enhancement enable instruction that is learner-centered and responsive, engaging, and equitable?

# Section 2: Programming to advance teaching excellence and innovation in UCLA learning spaces

Committee discussion about programming for active learning in UCLA learning spaces brought to light some key considerations for designing future programming. The *ad hoc* committee advises that

- 1. the UCLA TLC and DTS collaborate to design and facilitate an ongoing program of activities designed to encourage best pedagogical practices in learning spaces at UCLA;
- 2. include department-level collaborative programming;
- 3. buy-in be sought through department chairs, and departmental teaching/curriculum academic leadership.

The committee further recommends that planned programming comprise both online/virtual and in-person sessions and resources. An online database of short videos of instructors conducting particular techniques in particular rooms on campus may be helpful for faculty who teach in different rooms each quarter. Orientation sessions in particular rooms should be offered. These should be timed close to when faculty will use the rooms (e.g., before the term starts). Programming should also embrace discipline-specific applications rather than generic training.

Programming for teaching excellence in UCLA learning spaces could be faculty-led, and should center on showcasing successful teaching examples from master teachers. "Super users" should be identified and leveraged as peer mentors. A number of the planned activities will create deliberate opportunities for cross-disciplinary faculty interactions.

Programming will model and promote inclusive pedagogical practices and account for varying levels of technical confidence and expertise. The intention is to organize programming around four types of learning spaces at UCLA:

- Large Classrooms and Tiered Lecture Halls: >100 students
- Mid-size Flat Classrooms: 40-100 students
- Small Seminar rooms: <40
- Special designed and designated Active Learning Classrooms

Strategies for active learning in different room types should be explicitly addressed in the planned materials and activities. The committee noted it will be critical to address the technical challenges of rooms with historically "layered technology" installation, where upgrades have occurred over older systems still in use.

The following list of sessions, resources and activities is intended to reflect and address the considerations previously stated in this section.

### Recommended Active Learning Spaces (ALS) program

**Learning Space videos** (*Get to Know Your Classroom*): the room layout (linking directly to the room info page on the DTS website (as well as in BruinLearn and MyUCLA), room features, and the technical set-up. See this example, of a room layout link for Moore 100: <u>https://ucla.box.com/s/814s5iru5avifd1gx8k7lgt0rfiw2wzt</u>

**Walk-thru style photo/video montage** (like real estate videos) filmed in empty classrooms. These would allow prospective instructors to click through and around the space. The first series of these would be filmed in a room typical of the four types noted above, and the number of room videos could be expanded to others of the same room type over time. This initial starter series could expand to become a library of shared, short, on-demand training videos on the basic technology setup. These would be referenceable, easily searchable, and accessible. These should be hosted on the DTS digital spaces websites with links and communication about resources shared broadly by TLC.

**Learning Space In-person Orientations** (*Get to Know Your Classroom*) for instructors teaching in the renovated learning spaces; co-facilitated by the TLC and DTS personnel; instructors who come to these will be invited to sign up to receive invitations to community of practice events; boxed refreshments or lunch could be offered.

**Instructor videos** (*How I Do It*). These videos would be short 3-5 minute "head to camera" videos in which the instructor describes how they teach in a certain space type, with cut-aways to video of them teaching an active learning activity in their own class. These videos could be filmed in the TLC media production studios, in the instructors' offices, or in the actual space where they teach. These would be organized according to the four learning space types (above), and would demonstrate, for example, how lecture style classrooms with clustered seating can allow group learning in a large class environment. These videos would be accessed via the TLC and DTS websites.

Provision of online **Teaching Guides on Active Learning**, organized by the four learning space types.

A corner of the **quarterly TLC email newsletters** could be devoted to resources for active learning and news and activity in the community.

The design and development of a **TLC website page** devoted to active learning at UCLA, listing and linking to the video sets and libraries, the teaching guides, CoP up-dates and information

A TLC-led **Active Learning Community of Practice** could grow out of these programming sessions. A hallmark activity could be *Tales from the Classroom*, an on-going gathering for faculty each academic quarter for share and reflection on stories of challenges and successes. Faculty-led, these would be an opportunity for active learning adepts to showcase their teaching practices; cross disciplinary interaction; some/all of these sessions could be conducted in particular classroom types on campus.

The Active Learning Community of Practice could also come together around four short instructor-led sessions each quarter - in the four learning spaces types (see above), and the community could invite an annual external guest speaker, a recognized national expert on active learning to come to campus and lead a practical session and a later seminar to share their philosophy, approach, and advice.

Active Learning Specialist Recognition program: for engagement with (completion of) a prescribed number of elements in the above programming, an award could be made that offers priority access to preferred rooms in conjunction with the Scheduling Office. The TLC in conjunction with the Active Learning Community of Practice could identify and support opportunities for scholarly SoTL collaborations.

Programming for active learning assumes that improving teaching is a continual process of implementation, reflection and adaptation. The planned activities should be designed to support instructors over time, who will return to their instructor peers and the TLC in order to reflect and adapt their practices. Programming will focus on longer term broader culture change, always guided by the call for striving to improve teaching excellence at UCLA.

# Section 3: Implementing Active Learning in Learning Spaces at UCLA - Perceived Barriers and Possible Solutions

The following table of Perceived Barriers and Solutions & Comments is a synthesis of deep discussions at *ad hoc* Learning Spaces Pedagogy Committee meetings along with notes from shared documents that the committee contributed to between meetings. A separate mini-report is being prepared by the TLC Assessment of Student & Instructor Experience unit that summarizes insights gathered from a set of interviews conducted with a subset of individual UCLA faculty and employees who are engaged in teaching classes (faculty) or supporting colleagues with their teaching (eg. Associate Dean, IT support staff). There are a lot of perceived barriers to modernizing learning spaces and to introducing active learning practices in the spaces we have and will have. Considering these barriers and proposing invites a reimagining of how we can work towards teaching and learning excellence at UCLA.

Perceived Barrier	Solutions & Comments
Space and capacity constraints	Smaller enrollments assume three things: 1- we can't hire more
Converting existing rooms to active	instructors to teach more sections, 2- we have optimized
learning spaces often reduces seating	classroom utilization according to our campus dashboard where a
capacity significantly (by half or more).	second location to support an additional section (for example)
More space & less furniture in	cannot be found, and/or 3- we are unable to build new classrooms
classrooms = smaller enrollments	and increase our overall total capacity.

Perceived Barrier	Solutions & Comments
	There may be cost savings (or equivalency) in hiring two instructors to teach two smaller sections vs one instructor plus one TA for a larger section in a traditional classroom.
	Increasing overall classroom capacity on campus, including evaluating underutilized spaces that could be converted to classrooms.
	Think about offering a variety of pedagogical models - new formats. This will take time.
	Temporarily offer the impacted course online; faculty need to feel supported in building that curriculum.
Scheduling challenges	See Space and Conscitu Postrainte above
Rooms for final (proctored) exams -	See Space and Capacity Restraints above.
	spaces).
Where to move classes when furniture and AV/IT need to be upgraded?	Leverage event spaces on campus during renovation periods.
<b>Testing</b> Instructors need to be able access A/V equipment for exams on weekends and evenings	Set up a Testing Center. See <u>LSU</u> for an example.
Room Organization and Cleanliness	
Restoring rooms after class including moving furniture, removing trash, cleaning boards	Student worker teams could be assigned to the classrooms in each building. Responsibilities: reset furniture and equipment to default settings, and attend to room cleanliness (but not custodial).
Difficulty maintaining the intended	Signage reminding instructors and students to restore the room.
oversight.	Laminated or digital signage by the main classroom exit visually
Active learning spaces require more hands-on dedicated support than traditional lecture halls.	furniture arrangement.
Technology Maintenance & Upgrades	
There is no infrastructure for consistent, local technical and logistical support in general assignment classrooms.	Technology maintenance and upgrade for UCLA classrooms is an ongoing scheduling and infrastructure challenge.

Perceived Barrier	Solutions & Comments
Current support model doesn't allow for proactive maintenance during the day due to constant room use. Active learning rooms have more complex AV setups that require regular maintenance and troubleshooting.	Can more work be undertaken over the summer or in intersession periods?
	There is a clear need for "surge spaces", that is extra classrooms for 1. classes that need to be rescheduled due to room upgrades and equipment maintenance 2. Spaces that could also be used for some of the described Programming in Section 2 of this report.
Support staff need nearby office space, which isn't always available in existing buildings.	One suggestion that emerged was to consider using campus athletic facilities, gyms and non-teaching (event) spaces as "surge spaces". TLC consultants would work with the instructor before and during that term to plan pedagogical strategy for what would be a temporary classroom space.
<b>Departmental Space Agreements</b> Departments have holds on rooms; and other historical attachments to specific rooms.	The committee noted that there are unused classrooms on campus being used as storage. This may be something to be explored by University leadership in communication with Department chairs and responsible parties in each department. Space use could be described as a percentage of utilization similar to what we see in the <u>accessibility map</u> .
Faculty Laptop or IPad Check-out HelpDesk	During exam week, faculty could provide students with a choice between paper and digital exams, supporting sustainability initiatives by reducing the need to print 200–400 paper exams per class.
Faculty Up-take & Engagement in Active Learning Program activities.	The committee wants to acknowledge faculty autonomy in making pedagogical choices either aligned with their teaching preferences or evidence-based practice; faculty should still be free to make those decisions.
	Incentives for faculty engagement with evidence-based practices such as active learning should be possible through the UCLA TLC; participants should be encouraged to document their participation for tenure review and promotion.
	The University Teaching Awards categories and/or application criteria could be expanded to include recognition of, and an award for, Active Learning Excellence at UCLA.

# References

ACSN. (2020, December 1). *Accelerating Systemic Change Network: Learning Spaces Working Group*. Available from: <u>https://ascnhighered.org/ASCN/learning\_spaces.html</u>

CAST. (2024, November 26). *The Goal of UDL: Learner Agency*. Available from: <u>https://udlguidelines.cast.org/more/udl-goal/</u>

Centers for Disease Control and Disability and Health. *Disability Impacts All of Us.* [2024, December 2]. Available from: https://www.cdc.gov/ncbddd/disabilityandhealth/infographic-disability-impacts-all.html

Logan E. Gin, Frank A. Guerrero, Katelyn M. Cooper, and Sara E. Brownell. (2020). Is Active Learning Accessible? Exploring the Process of Providing Accommodations to Students with Disabilities. CBE—*Life Sciences Education,* Vol. 19, No. 4. 1 Oct. doi: <u>2020https://doi.org/10.1187/cbe.20-03-0049</u>

Toke, N. (2023). *Types of Neurodiversity and Neurodivergence*. Available from: <u>https://diversity.social/neurodiversity-neurodivergence/</u>

University of Waterloo, Office of Equity, Diversity, Inclusion and Anti-racism. (2024, December 1). *How to Build a Neurodivergent Friendly Classroom*. <u>https://uwaterloo.ca/equity-diversity-inclusion-anti-racism/how-take-action/how-build-neurodivergent-friendly-classroom</u>

Wang, Y. (2023). 'It is the easiest thing to do': university students' perspectives on the role of lecture recording in promoting inclusive education in the UK. Teaching in Higher Education, 29(8), 1974–1991. https://doi.org/10.1080/13562517.2022.2162814

#### Selective List of Active Learning Websites & Resources

ACSN: Learning Spaces Working Group. https://ascnhighered.org/ASCN/learning\_spaces.html

BU Active Learning definition.

https://www.bu.edu/ctl/ctl\_resource/active-learning-teaching-guide/#:~:text=Active%20learning% 20helps%20students%20reflect.instructors%20to%20gauge%20student%20learning.

4 Essentials for Learning Space Redesign.

https://campustechnology.com/Articles/2019/05/08/4-Essentials-for-Learning-Space-Redesign.a spx?Page=2

Active Learning at CATE, University of Illinois, Chicago https://teaching.uic.edu/cate-teaching-guides/engaged-teaching-strategies/active-learning/

6 principles to inform a supportive and neurodiverse campus. <u>https://www.ucalgary.ca/news/6-principles-inform-supportive-and-neurodiverse-campus</u> Room Detailing and Design for Neurodivergent Students (and Instructors). https://docs.google.com/document/d/1M-u5be01rrDIEhQo0\_JUC1oVIhqk9-mDxRngSbmszzY/e dit?tab=t.0#heading=h.8g6wgs95faj3

Example of room layout for Moore 100. https://ucla.box.com/s/814s5iru5avifd1gx8k7lgt0rfiw2wzt

UCLA Library: Writing Instruction + Research Education (WI+RE) tutorials and handouts. <u>https://uclalibrary.github.io/research-tips/</u>

Classroom Photos:

- https://blogs.city.ac.uk/learningatcity/2014/10/28/rethinking-the-lecture-theatre/
- <u>https://classrooms.uiowa.edu/classroom-types-utilization-use-only</u>