



Designing learning for inclusion

Universal Design for Learning (UDL) and Neuro-Inclusion

Inclusiveness is leveraging differences to achieve better results and creating an environment where all people feel they belong and are valued. The experience of belonging can be achieved in higher education when intentional inclusion is baked into curriculum design. When neuro-distinct and neurotypical students feel like they belong, they are more motivated and engaged, perform better, and see increased physical and mental health and outcomes. Leveraging UDL guidelines while building lesson plans supports neuro-inclusion.

UDL is a framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn.¹ The framework supports the following learning factors:



The EY Neurodiversity model team compiled several UDL tips to promote neuro-inclusion and belonging in higher education.

¹ CAST: About Universal Design for Learning – cast.org/impact/universal-design-for-learning-udl

Definitions:

UDL	Neuro-inclusion	Neurodivergent (aka neuro-distinct)	Neurotypical (aka neuro-majority)
A framework to improve and optimize teaching and learning for all people based on scientific insights into how humans learn.	Inclusion of all cognitive functioning variations encompassing both neuro-distinct and neurotypical individuals.	Describes a variety of cognitive variations such as autism, dyslexia, dyscalculia, attention deficit hyperactivity disorder (ADHD) and obsessive-compulsive disorder (OCD).	Describes most people who do not have autism or other neurological variations.

UDL Framework Guideline Areas



The why – Engagement

Provide autonomy: Allow learners to participate in the design of classroom activities and academic tasks.²

Create a supportive learning community: Foster a positive and supportive learning community by encouraging collaboration, active listening and mutual respect. This attitude creates a safe and inclusive space for all students.³

Provide multiple means of participation: Engage students through activities catering to different interests and preferences. For example, use small groups and pair-share exercises to encourage participation from students who may be uncomfortable speaking in front of the whole class.⁴

Personalize learning: Talk one-on-one with students about the topic, or give instructions where every person must have a role to play in group assignments. These strategies can help facilitate deep learning and understanding in a more inclusive environment.⁵

Foster compassion: Cultivate compassion within the learning space to help neurodiverse individuals solve challenges that once were hinderances in their education.⁶

² CAST – udlguidelines.cast.org/engagement/recruiting-interest/choice-autonomy

³ CAST Collaboration and Community – udlguidelines.cast.org/engagement/effort-persistence/collaboration-community

⁴ Journal of special education apprenticeship – files.eric.ed.gov/fulltext/EJ1201588.pdf

⁵ Journal of Neurodiversity in Higher Education Issue – files.osf.io/v1/resources/awg9y/providers/osfstorage/632c45836c24010df75091f1

⁶ Compassionate pedagogy for neurodiversity in higher education: A conceptual analysis – ncbi.nlm.nih.gov/pmc/articles/PMC9978378/

The what – Representation

State things plainly: Use clear and concise language in all communication, including written materials and verbal instructions. Avoid jargon and technical language that may be confusing.⁷

Use inclusive language: Use language that is gender-neutral and avoids stereotypes or discriminatory language. This adjustment creates a welcoming and inclusive environment for all students.⁸

Incorporate closed captioning: Add captioning for videos and other multimedia materials to make them accessible to students.⁹

Provide multiple means of representation: Offer information in various formats to cater to different learning styles. For example, use visual aids (such as diagrams, graphs and charts), audio recordings and written materials (including closed-captioning options).¹⁰

Integrate accessibility into web design: Ensure that all digital materials, including course websites and online materials, are accessible to students with disabilities.¹¹

⁷ Plain Language Association International – plainlanguagenetwork.org/plain-language/what-is-plain-language/

⁸ The APA Publication Manual – apastyle.apa.org/products/publication-manual-7th-edition

⁹ CAST Support Decoding – udlguidelines.cast.org/representation/language-symbols/text-notation-symbols

¹⁰ National Center on Universal Design for Learning – Perception – udlguidelines.cast.org/representation/perception

¹¹ WCAG Standards and Guidelines – w3.org/WAI/standards-guidelines/wcag/



The how – Action and expression

Offer multiple means of action and expression: Allow students to demonstrate their learning in a variety of ways, such as through writing, speaking or creating multimedia projects.¹²

Incorporate assistive technology: Leverage screen readers, magnifiers and speech-to-text software for students who need them, ensuring all students have equal access to technology.¹³

Provide flexibility: Consider interim milestone deadlines, assignment options and grading criteria to accommodate different learning styles and preferences, helping all students succeed.¹⁴

Introduce peer learning: Employ peer learning opportunities because they can both deepen individuals' understanding and promote collaboration and community building.¹⁵

Use interactive technology: Incorporate polling software or online discussion boards to engage students and promote active learning.¹⁶

Consider tech tools for assessment: Consider other digital tools and apps educators can use to support formative assessments in the classroom.¹⁷

¹²Using Universal Design for Empowering Neurodiversity in the Classroom – sites.tufts.edu/teaching/2020/02/24/using-universal-design-for-empowering-neurodiversity-in-the-classroom/

¹³DO-IT [washington.edu – washington.edu/doi/resources/popular-resource-collections/assistive-technology](https://www.washington.edu/doi/resources/popular-resource-collections/assistive-technology)

¹⁴DO-IT [washington.edu – washington.edu/doi/accommodation-resources-writing-assignments](https://www.washington.edu/doi/accommodation-resources-writing-assignments)

¹⁵guidetoteaching.newschool.org/accessibility/

¹⁶insidehighered.com/digital-learning/article/2019/03/27/new-approaches-discussion-boards-aim-dynamic-online-learning

¹⁷nwea.org/blog/2021/75-digital-tools-apps-teachers-use-to-support-classroom-formative-assessment/

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The plus-one approach is an easy way for faculty to work towards building a course that integrates the principles of UDL. Rather than feeling overwhelmed by the prospect of overhauling your course to fit UDL, a plus-one approach simply asks faculty to look at all the ways students interact with the course, and add one additional option.

Source: Addressing Neurodiversity Through Universal Design – progressiveae.com/addressing-neurodiversity-through-universal-design/

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