How Do I Apply UDL Principles?

Universal Design for Learning (UDL)

The UDL framework is an accessible, flexible, and purposeful approach to teaching and learning based on scientific research of the brain. **UDL's main principles include designing for multiple means of representation, action and expression, and engagement**. UDL makes equitable opportunities where the greatest number of individuals can succeed without compromising academic rigor nor integrity. Applying UDL does not replace the need for student support services, including documented accommodations, but it often reduces the demand on these services. Furthermore, UDL is not targeted to benefit a subset of the student population but, instead, its application benefits everyone.

Applying UDL Principles Online

When considering your online learning environment (course design and facilitation), reflect on the following questions:

- Is the environment accessible to and usable by all learners?
    - The easiest place to begin applying UDL in the virtual, or online, classroom is by creating accessible digital materials and interactions. Build and use content that is aligned with the universally adopted Web Content Accessibility Guidelines.
- Is the environment flexible in its approach?
    - Allow learners to be strategic in their interactions, including expressing themselves in a manner that suits them best. This may mean allowing asynchronous video or text-based discussions, such as VoiceThread allows. You can also consider both in-person *and* virtual office hours, allowing options for students who are in different time zones. And record all your class meetings; don't halt learning for someone whose technology isn't reliable.
- Is the environment purposeful in its design?
    - Think about how learners will interact with your course site and the impact of the tools you select for activities. Provide consistent navigation and page layouts in CoursePlus to reduce cognitive load. And when you integrate a new technology, consider its value, function, equitable use (including potential restrictions like paywalls), and technical support.

Plan all learning activities and assessments with UDL in mind. Learn more about designing and facilitating with UDL on our Toolkit's page: Best Practices in UDL.

UDL's Relation to Digital Accessibility

The guidelines of web content accessibility—those characteristics that make something perceivable, operable, understandable, and robust (see WebAIM's article: Constructing a POUR Website, Putting People at the Center of a Process) are embraced in the UDL framework.

Accessible Content

When bringing digital resources into your class, try to find materials that are already accessible. When creating or editing your original content, follow the Expectations of JHU Faculty. You can start by implementing the following:

- Use the document's structured elements—such as bullets and numbering, headings (styles), and placeholders—to control the look and reading order of the content.
- Keep inserted images in-line with text to maintain reading order.
- Avoid relying on color alone to distinguish an element, be it emphasized text or a line on a graph.
- Spell out acronyms the first time they are used.
- Use a built-in equation editor whenever possible.
- Provide descriptions, or alternative text, for all images and non-text content.
- Provide captions and other alternatives, such as text transcripts and accessible PDFs, for all multimedia.
- Ensure appropriate color-contrast ratios between any text (or other object) and its background or objects nearby.
- Avoid fancy fonts or other hard-to-distinguish visual elements.
- Provide captions for complex elements, such as heat maps or data-heavy tables.

For assistance with any of these, refer to your editing software's user or help guides. The Microsoft Office 365 Suite combined with Adobe Acrobat is recommended.

Learner Activities and Assessments

Specific to online activities and assessments:

- Request that students create accessible content, particularly when the students are sharing their work.
- Ensure websites or applications are accessible if students are asked to use any third-party tools that are not already licensed by the university.

Course Site

- Use the built-in, accessible CoursePlus tools as much as possible, such as the Syllabus and Schedule Builder.
- Avoid extraneous cognitive load. Students should not have to search for information.
  - Provide consistent and purposeful design of your course site, including its schedule and its lecture and activity pages.
  - Use consistent naming conventions (quiz, test, lecture, reading, etc.).
  - Use a consistent page layout.
  - Ensure assignment dates are easily located and there are no conflicts.
  - Create module overviews to set clear expectations and aid in students' focus.

- Validate all hyperlinks, especially to external resources.

Synchronous Interactions

- Clarify your expectations about the interactions: ground rules of engagement and methods of participation.
- Reach out to Student Disability Services (SDS) in advance if you have a student with a documented accommodation.
- Share objectives and slides in advance of the session whenever possible.
- Consider using a raised-hand or equivalent feature for providing equal opportunity in participation.
- Provide visually accessible elements, including slides.
- Describe any annotations or animations.
- Direct students where to focus on a visual element, as appropriate.
- Record all synchronous activities and share the video and related media alternatives (e.g., text transcript or captions) to the course site.

Learn More about UDL

AEM (Accessible Educational Materials) Takeaways, National Center on Accessible Educational Materials for Learning, CAST

Applying Universal Design for Learning in Online Courses: Pedagogical and Practical Considerations, *Journal of Educators Online*

Introduction to Universal Design for Learning, BSPH Center for Teaching and Learning

Keeping up with UDL: It's about Learner Agency, BSPH Center for Teaching and Learning

The UDL Guidelines, CAST

UDL On Campus: Universal Design for Learning in Higher Education, CAST