UDL Guidelines for Instruction

Adapted from Disability Innovation Institute UNSW's *Universal Design for Learning Framework* (2019).

Universal Design for Learning (UDL) provides flexibility in the ways that information is presented, students are engaged, and students respond or demonstrate knowledge and skills. It reduces barriers in instruction, provides appropriate accommodations, supports, and challenges, and maintains high achievement expectations for all students, including students with disabilities and students who have limited English proficiency (Burgstahler, 2013).

According to CAST (2018), The three principles of UDL are:
- **multiple methods of representation** that give learners a variety of ways to acquire information and build knowledge;
- **multiple means of student action and expression** that provide learners alternatives for demonstrating what they have learned; and
- **multiple modes of student engagement** that tap into learners' interests, challenge them appropriately, and motivate them to learn.

These guidelines will help you reflect on ways in which you are or may want to apply the UDL guidelines to your course.

Reflecting on the needs of your students:

Nelson (2014) suggests a process that starts and ends with **reflecting on the needs and desired outcomes of your students**. Ask yourself the following questions:
- Reflect on students' needs. "What are my students struggling with?"
- Identify something to meet that need. "How might I use this to meet the needs of my learners?"
- Investigate and create new methods or strategies. "What brings this principle or to life?"
- Teach a lesson using the new method or strategy. "What does this principle look like in my teaching environment?"
- Assess the new method or strategy. "How did my students demonstrate knowledge or skills?"
- Reflect on how the new method or strategy worked. "How did the principle enhance students' outcomes?"
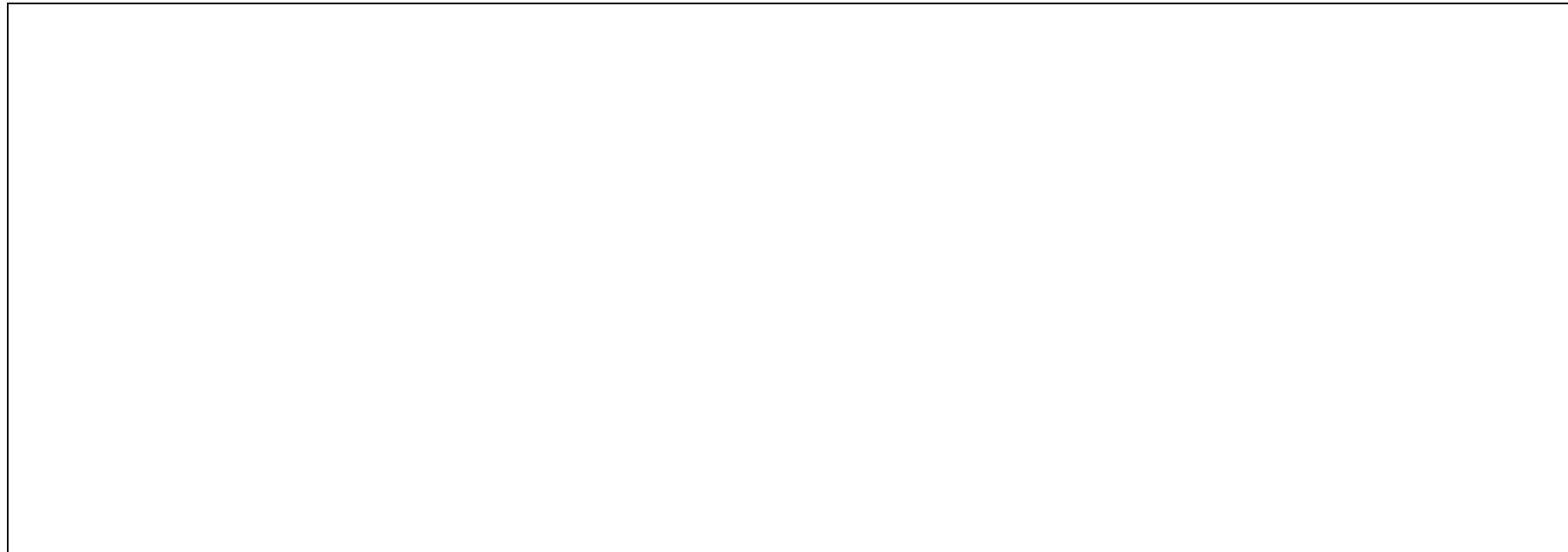
The UDL principles in action: Planning and delivering instruction

Four critical elements are intended to serve as a foundation for UDL implementation (UDL-IRN, 2011). Educators using UDL as a foundation for course design and delivery must include each of these four critical elements: Clear Goals, Intentional Planning for Learner Variability, Flexible Methods and Materials, Timely Progress Monitoring.

- **Clear outcomes:** lesson learning is clearly defined, aligned to the learning outcomes, allowing for multiple options for achievement, address the needs of every learner, are communicated in ways that are understandable to each learner, and can be expressed by them.
- **Intentional planning for learner variability:** proactive planning that recognises learner diversity and meets the needs of all learners- from challenged to most advanced. Learner strengths and weaknesses are addressed, considering variables such as perceptual ability, language ability, background knowledge, cognitive strategies, and motivation, and anticipates the need for options, methods, materials, and other resources to provide adequate support and scaffolding. Planning maintains the rigour of the lesson by embedding supports and reducing barriers.
- **Flexible methods and materials:** Educators use a variety of media and methods to present information and content, and a variety of methods to engage learners (e.g., provide choice, address student interest) and promote their ability to monitor

2

their own learning (e.g., goal setting, self-assessment, and reflection). Learners use a variety of media and methods to demonstrate their knowledge.

- **Timely progress monitoring:** Formative assessments are frequent and timely enough to plan/redirect instruction and support intended outcomes. A variety of formative and summative assessments (e.g., projects, oral tests, written tests) are used by the learner to demonstrate knowledge and skill.

I. Provide multiple means of representation (the 'what' of learning)		
1. Provide options for perception	**Examples**	**What you are doing? What you would like to do?**
1.1 Vary ways to display information	Visual information: size, contrast, color, layout, spacing Auditory information: volume, speed, timing, cueing	
1.2 Alternatives for auditory information	Text provided for spoken language, voice recognition-to-text, visual symbols for emphasis, sound alerts	
1.3 Alternatives for visual information	Text or spoken equivalents for graphics/video/animation, tactile supports for visuals Use of physical objects or spatial models	
2. Provide options for language and symbols	**Examples**	**What you are doing? What you would like to do?**
2.1 Clarify vocabulary and symbols	Pre-teach vocabulary and symbols, highlight components of complex words, embed vocabulary supports in text – hyperlinks, footnotes, definitions.	
2.2 Clarify syntax and structure	Make rules and relationships explicit, clarify links between concepts, use less complex vocabulary or language structures.	
2.3 Support decoding of text, mathematical notation, and symbols	Text-to-speech programs for digital text, use digital math notations (Math ML) with voicing, use text alternatives (mp3s, digital text) with human voicing.	
2.4 Promote understanding across languages	Provide students with translation options (apps/websites) to support the presentation of key information in dominant and second languages.	

2.5 Illustrate through multimedia	Present complementary representations (e.g., text with animation/graphics), link illustrations and verbal enhancements, make text-to-chart or diagram links explicit	
3. Provide options for comprehension	**Examples**	**What you are doing? What you would like to do?**
3.1 Activate or supply background knowledge	Activate prior knowledge with imagery and concepts, use organizers (concept maps), pre-teach concepts, "bridge" ideas with analogies & metaphors	
3.2 Highlight patterns, critical features, big ideas, relationships	Emphasize key elements, use organizer, prompts and cues to identify and connect key elements, use multiple examples and non-examples, mask or reduce extraneous elements	
3.3 Guide information processing and	Use interactive models, explicit prompts and scaffolds, develop multiple points-of entry and pathways for content, chunk information, release information progressively	
II. Provide multiple means of action and expression (the 'how' of learning)		
4. Provide options for physical action	**Examples**	**What you are doing? What you would like to do?**
4.1 Vary the methods for response and navigation	Alternatives in rate, timing, volume, range of-motion, materials, manipulatives, and technologies, allow response alternatives from standard means (e.g., computer response vs paper and pencil)	
4.2 Optimise access to tools and assistive technology	Use multiple means of navigating materials (e.g., by hand, by voice, by switch, by keyboard)	
5. Expression and communication	**Examples**	**What you are doing? What you would like to do?**
5.1 Use multiple forms of media for communication	Determine appropriate technologies (physical, sensory, cognitive, communication) needed to access instruction, integrate training to support & enhance learning and goal achievement	
5.2 Use multiple tools for construction and composition	Choices may include spell checks, grammar checks, word prediction, speech-to-text software, dictation, recording, sentence starters, story	

	webs, concept webs, outlining tools, calculators, graphing calculators, software for problem solving skills, Computer-Aided Design (CAD)	
5.3 Build fluencies with graduated levels of support for practice and performance	Differentiated approaches, strategies, skills to achieve same outcomes, use diverse mentors to guide differentiation processes, gradual release of supports to increase independence	
6. Provide options for executive functions	**Examples**	**What you are doing? What you would like to do?**
6.1 Guide appropriate goal-setting	Use a variety of tools (e.g., prompts, scaffolds, models, guides, checklists) to support process of individualised and appropriate goal-setting	
6.2 Support planning and strategy development	Use "stop & think" prompts, use checklists and templates to prioritise & sequence, model "think-aloud" process, guide transition from long-term goals to short-term objectives	
6.3 Facilitate managing information and resources	Keep information organised and accessible with graphic organisers, templates, embedded prompts, checklists, note-taking guides, software tools	
6.4 Enhance capacity for monitoring progress	Develop self-monitoring through guided questions, frequent representations of progress, self-reflection templates, differentiated self-assessment strategies	
III. Provide multiple means of engagement (the 'why' of learning)		
7. Recruiting interest	**Examples**	**What you are doing? What you would like to do?**
7.1 Optimise individual choice and autonomy	Challenge levels, types of recognition used, vary content or context for learning, choice of information tools, design of products, timing and sequence of tasks	
7.2 Optimise relevance, value, and authenticity	Activities personalised to students' lives, socially relevant, age and ability appropriate, culturally and racially appropriate, active participation, authentic and purposeful outcomes, use of self-reflection	
7.3 Minimise threats and distractions	Vary novelty and risk-taking in activities and transitions (predictability, scheduling, routines,	

	Examples	What you are doing? What you would like to do?
	novel events), vary sensory stimulation levels (background noise, # of items), vary pace and length of work sessions, vary social demands required for activities	
8. Provide options for sustaining effort and persistence	**Examples**	**What you are doing? What you would like to do?**
8.1 Strengthen connections between goals and objectives	Develop explicit goals, restate goals for clarity, clearly display goals, develop short-term objectives for long-term goals, use prompts to visualize and clarify outcomes	
8.2 Vary demands and resources to optimise challenge	Vary difficulty in core activities, use tools and scaffolds to provide alternatives, use collaboration, vary ranges for acceptable work, emphasise process, effort and improvement	
8.3 Foster collaboration and community	Cooperative learning groups, clarify roles and responsibilities, positive behavioral supports, differentiated supports, peer tutoring and support systems, connect to virtual communities	
8.4 Increase mastery-oriented feedback	Encourage perseverance, self-awareness and self-efficacy, emphasize effort and improvement, give frequent, on-going, and substantive feedback, model evaluation strategies	
9. Provide options for self-regulation	**Examples**	**What you are doing? What you would like to do?**
9.1 Promote expectations and beliefs that optimise motivation	Model goal-setting process, coach or mentor students in goal-setting, use prompts, rubrics, & checklists to support self-regulatory goals, on-task behaviors, and self-reinforcements	
9.2 Facilitate personal coping skills and strategies	Use differentiated models and feedback to develop skills e.g., managing frustration, seeking emotional support, and developing internal control	
9.3 Develop self-assessment and reflection	Use tools and models to collect and determine own behaviors (e.g., charts, recording devices, peers), build student self- awareness (and reduce scaffolds) over time	

UNIVERSITY OF TORONTO

CENTRE FOR TEACHING SUPPORT & INNOVATION