

chapter 12

Disability Studies in Inclusive Education

Universal Design for Learning: UDL in practice

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Chapter learning outcomes

After completing this chapter, you will be able to:

- ✓ Identify ways in which Universal Design for Learning (UDL) can make a significant difference in the look, feel and actions of learning construction.
- ✓ Understand the tools available to help with UDL planning and application in practice and how to locate and use them.
- ✓ Explain how UDL can combine with reasonable accommodations to provide targeted support for learners with disabilities.

Preparatory activities



READ: Universal design for learning guidelines version 2.2
[graphic organizer]

Author: CAST
Year: 2018
Estimated reading time: 15 minutes
File size: 434 KB



WATCH: Universal Design for Learning in higher education

Creator: Humber Centre for Teaching and Learning
Date: 2019
Duration: 5 minutes



REFLECTION

Estimated time: 20 minutes

While the concept and framework of UDL was initially developed with Grade 1–12 learners in mind, it has grown to be recognised as an effective approach for diversifying higher education learning environments. The video offers numerous ways that UDL can be applied in higher education settings. Select at least one of these ideas and discuss its relevance to adult learners with differing needs and developing proactive reasonable accommodations.



READ: Rhode Island Modified UDL Educator Checklist – Version 1.3

Author: Elizabeth M. Dalton & Debbie Abruzzini

Year: 2019

Estimated reading time: 10 minutes

File size: 220 KB



READ: Step-by-step planner: UDL lesson design

Author: Understood For All

Year: 2019

Estimated reading time: 10 minutes

File size: 38 KB



REFLECTION

Estimated time: 20 minutes

These readings provide greater depth of information about some of the ways that UDL can be used to help build variation into the design of your instruction in order to address the diverse needs of learners. Consider the examples you read and comment on one way that you would want to use the principles of UDL in your own teaching to address a student or students' need(s). Describe briefly why you would begin here and a bit about what that might look like. Use the *Universal design for learning guidelines version 2.2 [graphic organizer]* to explore ways in which your identified student need could be addressed.

Introduction

In this chapter, we will explore in greater depth how UDL can benefit not only learners with disabilities, but also many other learners with diverse needs, and how it can benefit learners of **all ages**. We will take steps toward learning some of the ways that UDL can inform and be incorporated into the classroom and will consider some of the tools that can help with the goal of increasing meaningful inclusion for students with diverse needs and abilities.

What does UDL look like in the learning environment?

In the conclusion of **Chapter 11**, we learned that the ultimate goal of UDL is to support the development of motivated, knowledgeable and goal-directed learners by reducing barriers to learning through systematic variation that is embedded in the curriculum from the outset. Now, let's discuss what this really means and what UDL might look like when its use is integrated in environments serving Grade 1–12 students and environments serving adult students in higher education settings.

To begin our discussion, it is important to consider how the UDL curriculum design framework, with all of its components, translates into the practice of educators in a real and understandable way. One relatively simple and helpful way to consider this it through the



model of curriculum components developed and used by CAST in their *Universal design for learning guidelines version 2.2*, referred to in the preparatory activity at the start of this chapter. This model has four components that are interrelated and necessary in order to design any curriculum at any level of education. The four components of curriculum are: goals, materials, methods and assessments (CAST, 2018). The relationship between these components is not linear; each component interacts with and depends upon the other three in order to design a curriculum that is complete and can lead to learning success for all learners. Now, let's think about the relationship between the CAST guidelines and the four components of curriculum.

Goals and UDL

It is important to have clear goals in mind for learners, whoever they are, for any learning activity – specifically, *what* is it that the learner needs to learn? Goals may come from sources that are standardised or they may be more customised or personalised.

Standardised goals are those where the same outcome or product is expected from every student, at least at a minimum level. These goals may be set by national or state sources, or other professional training areas (such as nursing, accounting, teacher certification, etc.). Standardised goals often are accompanied by standardised assessments that every learner must take and pass in order to demonstrate competence. Standardised goals cannot be adapted to address learners' varied needs and interests, so other means must be used in order to make standardised goals more accessible and attainable for all.

Customised goals are those that have been developed to address areas of learning need that are personal to the individual student. This may be due to variation in the student's physical, sensory, emotional or cognitive needs, or other factors. Regardless of the source or type of learning need, this student will work towards the achievement of specific, customised goals in line with their identified needs. Often students who need customised goals have been diagnosed with a particular area of disability and may therefore be eligible for reasonable accommodations to the learning environment and to learning processes. Sometimes customised goals are framed as part of an individualised educational plan or programme within the learner's educational setting.

Whether goals are standardised or customised, we need to look to the other three areas of curriculum – materials, methods, and assessments – to discover how the CAST guidelines can help us to vary how learning can happen.



Materials and UDL

Classroom and educational materials naturally vary significantly, depending upon the setting in which they are being used. Materials can be physical and tangible, or they may be electronic – existing on the screen of a computer or smart phone. Regardless of whether they are physical or electronic, variation of materials is one of the means for pursuing the implementation of certain UDL guidelines. For example, if you wanted to address the UDL principle of providing multiple means of representation in your educational setting, the CAST UDL guidelines provide three guideline levels for doing this, and each can benefit by using varied materials. These levels are: **access**, **build** and **internalise**. They are located on the far left side of the CAST chart.

At the **access** level, we can provide options for perception by varying the ways in which we display information. For visual information, we can change the size, colour, contrast, spacing and layout of the material on the page or screen, or we can use alternative visuals like graphics, video, animation, or even actual physical objects. For auditory information, we can change the speed, timing, cueing, pitch and volume of the material to be accessed, or we can use alternatives like voice-to-text or visual sound alerts.

At the **build** level, we can provide options for language and symbols by using highlighting to identify key vocabulary or components of words, provide translations for key information in second languages, and provide non-language alternatives for concepts through graphics, animation, illustrations and other enhancements.

At the **internalise** level, we can provide options for comprehension through the use of various concept organisers like KWL charts (capturing what students “know”, “want to know” or have “learned”) and concept maps, embedded prompts and cues leading to key ideas and various types of checklists.

Additional ideas for varied methods can be found in the [*Rhode Island Modified UDL Educator Checklist – Version 1.3*](#), which was adapted from the CAST guidelines, and on the [CAST website](#).



Methods and UDL

Instructional methods and approaches are next in considering how best you can bring variation into your classroom and the design of your curriculum to address a wide range of student needs, capabilities and interests.

It is not only the things (materials) that are used in the educational setting that can vary; just as important are the ways (methods) that the teacher uses them to convey content that will help a diverse range of students to better understand, engage with, and ultimately learn the desired content. Sometimes, direct, point-by-point instruction with demonstration may be effective. However, many students may need to be more directly involved with hands-on activities in order to learn most effectively. In order to facilitate this, educators can set up peer-to-peer discussion groups so that students can learn from each other, and then report back for feedback and clarification. Presenting lessons through multiple means (orally, visually and even through tactile engagement) can convey concepts through a variety of senses – making it more accessible to students who receive and may understand information better through one sensory pathway over another, or who may benefit from reinforcing information through multiple means at one time in order to strengthen their learning.

When we consider the UDL curriculum framework and guidelines, we find that varied methods are embedded throughout the guidelines of the three core UDL principles. Again, it is helpful to consider the three levels of “access, build and internalise” to understand the full scope of how varied methods support instructional differentiation.

At the **access** level, considering the principle of multiple means of action and expression for students, varied methods can make a significant difference by offering multiple ways that students can access and use materials, such as by hand, by voice, by using a simple switch, or by using a keyboard. Considering multiple means of engagement, access can be supported by varying the content or context for learning; by varying the timing, pace, length and sequencing of tasks; or by varying the level of novelty and predictability of the learning tasks.

At the **build** level, considering multiple means of representation, we could vary the rules or the complexity of the language we use to help clarify our instruction, or we could provide key information and vocabulary in both dominant and second languages to build the connections across different languages. Considering multiple means of engagement at this level, varied methods can help to build knowledge and skills by varying the specificity of goals and restating learning goals for greater clarity; or you can vary the level of difficulty of core activities and provide scaffolds to vary the levels of challenge and support. You can also encourage learner perseverance and effort by giving frequent, ongoing feedback. To continue to build students’ means of action and expression, you can encourage students’ use of differing strategies to



work toward the same outcome and encourage work with different mentors who can offer guidance on different learning processes. All of these ideas help students to build their own capacity to better demonstrate what they have learned.

At the **internalise** level, when looking at multiple means of representation, we can activate the background knowledge of students through the use of various images and concepts. We can also apply strategies to highlight essential information in a lesson by varying the emphasis we provide on key elements, using prompts, cues and organisers to better identify key elements and ideas; or you can apply various mnemonic devices, note-taking strategies and other means of demonstrating connections between new ideas and prior knowledge to support independent development of memory skills and comprehension. Considering multiple means of engagement, some of the varied methods that can move students toward increased self-regulation include modelling or coaching students in goal setting, sharing different ways of managing frustration and developing effective internal controls, and demonstrating different ways to collect and reflect upon one's own behaviour over time.

To help students better internalise their own best ways of acting and expressing what they have learned, you can introduce students to tools such as checklists or prompts that support individualised goalsetting or guide them in the transition from long-term goals to setting short-term objectives through processes such as “think alouds”. You might even want to introduce students to self-monitoring techniques, such as the use of guiding questions, self-reflection activities or self-assessment strategies. All of these ideas can aid students in becoming more independent and self-reliant learners by developing their executive decision-making skills.

Additional ideas for varied methods can be found in the [Rhode Island Modified UDL Educator Checklist – Version 1.3](#), which was adapted from the CAST guidelines, and on the [CAST website](#).

Assessment and UDL

The area of student assessment is always of great interest to those who seek to integrate UDL into their instructional practice because there are times at which assessments are harder to vary, such as in nationally standardised assessments or professional certification assessments. These standardised assessments are bound by the laws of the country that protect equity of access to participate in the assessments. What this will usually mean is that these assessments need to allow what is referred to as “reasonable accommodations”.



Reasonable accommodation can be described as “a change, exception or adjustment to a rule, policy, practice or service that may be necessary for a person with disabilities to have equal opportunity to use and enjoy a dwelling, including public and common use spaces” (US Department of Housing and Urban Development, 2023). This same definition applies to necessary accommodation that must be made so that every student will have equity of access and an opportunity to learn. This does not impact the nature of the content or the *what* of learning, but it relates to how the assessment would be carried out and what adjustments are made to equalise access. The application of reasonable accommodations does, however, not negate the role that UDL can play in reframing how we think about assessments and the assessment process.

First, as we reflect upon the four components of curriculum explored in this chapter (goals, materials, methods and assessments), it is important to recognise the necessary connection between the stated goal and the nature of the assessment of that goal. A goal statement should not specify the methods or materials that will be used in order to reach that goal, as this would limit the varied means possible which could be used to teach or reach that goal. For example:

Do this: “The student will read [their] third-grade science materials and respond to questions on the materials with at least 80% accuracy.”

Don’t do this: “The student will read each chapter of [their] third-grade science textbook silently within 20 minutes and will respond to the questions at the end of the chapter, in writing, with at least 80% accuracy.” (Ikuta, 2019, p. 9)

The example demonstrates how the inclusion of specific materials and/or methods to be used restricts the options and flexibility of the educator to vary the focus of their instruction and it restricts the options available to the student to demonstrate their knowledge in a variety of ways. This principle applies to students at any level of instruction.



Multiple means of assessing student understanding

To address the challenges that both teachers and students face around assessment, the team of educators who developed the *Rhode Island Modified UDL Educator Checklist – Version 1.3* took the liberty to develop an unofficial fourth UDL principle: multiple means of assessment of student understanding. This fourth principle seeks to make more explicit the options that UDL can offer for developing and delivering assessments that educators use in their own classrooms. These options may or may not apply for standardised assessments – if this is the case, reasonable accommodations should be used.

There are five different areas that relate to this fourth principle in order to vary the parameters around determination of learning outcomes. These include: options for methods, options for formats, options for scope/range/level, options for product and outcome, and options for feedback. When we have the opportunity to use these various means in the design and delivery of assessments, students will more independently access and engage in the assessment process and will ultimately demonstrate better performance due to the reduction of restrictive barriers.

Conclusion

This chapter seeks to take some of the theoretical ideas relating to UDL and place them in the more applied context of what educators can actually do to bring variation into their instruction, and what that might look like in certain instances. There is much more to be learned about UDL, but I hope that the information and the exercises and activities provided in this chapter have expanded your understanding of UDL and given you a chance to try your hand at applying UDL in at least some small way that is relevant to your instructional level and to your students. While many of the examples of UDL in practice tend to be for students in Grades 1–12, as you learned in the video *Universal Design for Learning in Higher Education*, UDL is truly relevant for all learning environments at every level, including higher education and adult education. As you work more with the UDL framework and the various UDL tools and resources, you will find your own best path for applying UDL.



ACTIVITY

Estimated time: 30 minutes

This chapter introduces two UDL planning tools that you can use in designing, preparing, and diversifying your own instructional units. The first tool (the *Rhode Island Modified Educator Checklist*) can be used for observing UDL in classrooms or other learning environments, or for planning your own instructional materials and strategies for implementing UDL. The second tool (the **Step-by-step planner**) offers a three-step approach for planning the integration of UDL into lessons and teaching. These tools can work together to offer many ideas for your own UDL planning and instructional design.

You have been introduced to different ways of diversifying instruction in your preparatory reading. Now, take the time to put these ideas and resources together and try your hand at applying UDL to achieve a learning goal.

Begin by downloading both planning tools. If you can, it may also be helpful to print these documents. If you are not able to print, use a separate sheet of paper to record your responses to the activity questions.

Review the *Step-by-step planner* components and think about the three steps provided in this planner. Identify a learning goal that you want to use for this activity.

Fill in the sections of the planner as best you can by thinking of the learning goal that you identified by using the *Rhode Island Modified UDL Educator Checklist* and the readings for ideas for varying instructional methods, materials and assessments for students to achieve the learning goal. Document your ideas.

Reflect upon the experience and what you found to be easy, and what was much harder to do. Discuss your experience with someone else (such as a colleague, fellow student or instructor). To develop competency in using UDL, it will take both time and practice – this is **just the start** of your journey. Do not be discouraged – greet the challenge openly and don't try to take on too much all at once. Don't be afraid to use the tools that you have been introduced to and talk with your colleagues to gather different ideas about how UDL can help to vary your instruction and increase access to learning for all students.



References

Ikuta, S. (2019). *Handmade teaching materials for students with disabilities*. IGI Global. <https://doi.org/10.4018/978-1-5225-6240-5>

US Department of Housing and Urban Development. (2023). Reasonable accommodations and modifications: The Fair Housing Act. US Department of Housing and Urban Development.

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