

Universal Design for Learning: Script

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B1T0: Introduction to Module & Learner Pathway

Hi there! Welcome to this module on an Introduction to Universal Design for Learning or UDL, and thank you for watching! In today's classrooms, we see a diverse set of students, each having a unique set of strengths, learning preferences and challenges. To support each child to achieve their full potential, we must find ways to provide the right amount of challenge for each individual that promotes their development. Universal Design for Learning is a framework to help educators achieve this.

Since Universal Design for Learning is a huge and very important topic, we have dedicated an entire learner pathway to exploring the various concepts and skills associated with it. Through this set of modules, we will discuss fundamentals of UDL, differentiated instruction, differentiated assessment, response to intervention, and emotional social well-being to equip you with the skills necessary to create a truly inclusive classroom.

Please note that this set of modules is built upon the concepts that were covered in the foundations of special education learner pathway. To recap, we discussed what are exceptionalities, including types of exceptionalities, and how everyone experiences and is impacted by an exceptionality differently. We discussed why equity in education is important, and that our focus should be on providing each student with the necessary support for them to succeed.

Our foundations of special education also included an introduction to differentiated instruction, including assessing learner needs, and then meeting those through the differentiation of content, process, product, and environment. If you haven't looked at that one, do not worry as it will be part of this module set, and if you have already completed it, feel free to skip it as we progress through this pathway.

Introduction to Universal Design for Learning is the first module in this set, and will provide an overview of UDL, including, what is UDL, why UDL is important, principles of universal design, and the core concepts of universal design for learning. Please note that this module will be very conceptual, and as we learn, we should always keep our guiding principles in mind, understanding the individual, empathy, and patience.

I can't wait to get started, so let's begin by discussing What is UDL and why UDL is important in the next video. Thank you again for tuning in, and we hope this information will help you in your classroom.

B1T1: What is UDL? Why is it important?

Hi, in this video we introduce what is UDL, why it is important, and some lessons we can learn from universal design.

The modern-day classroom is extremely diverse. We have students from all sorts of backgrounds, all sorts of upbringings, and different kinds of personalities. Each student has their own unique set of strengths, challenges, ways they learn best, and may have learning



differences that stem from exceptionalities. In fact, it is believed that every individual's learning style is as unique as their finger print! If we are to create a truly inclusive classroom, the learning environment must be welcoming of all students. UDL is important because it equips us with skills to help approach this.

~~But it's even a little more complicated than that. As many school systems have transitioned to inclusive education models, many children with exceptionalities have come into the general stream. To clarify, on this site we often use special education and inclusive education interchangeably as we support the inclusive model of special education. But in certain contexts, they can be a little different. With this change, teacher to student ratios for exceptional learners went from 1:4 or maybe even 1:12 up to 1:30. If we are to truly include these students, we must realize that some of the techniques used in 1:4 ratios need to be adapted for larger classroom, and some new strategies must be learned. UDL is important because it equips us with skills to help approach this.~~

The focus of UDL is simple: diverse classrooms, means diverse learning preferences, which means that we need to find ways to teach in effective ways for all learners. So, is UDL just a fancy word for differentiation? Although it can be easy to confuse the two, UDL is different as focuses on proactively addressing the learning environment and teaching practices to removing barriers for students. Differentiation is about focusing on the unique learner readiness, and learner profile of each individual student, and is a component of UDL. We can think of DI as a tool we can add to the toolkit for successful UDL.

One common myth is that UDL is only for classrooms containing students with an individual education plan, but this is not true! Because every learner is different, all students benefit from UDL. If we are creative and think critically about our teaching styles, we can design learning in a way that meets everyone's needs.

This may seem daunting, but this was a very similar question faced by architects in the 1990s. Think about the entrance to building, stairs might seem like a practical way to get to a door-step, and in day-to-day scenarios, many able-bodied individuals don't think about the barriers this can create someone who is a wheelchair user.

If we were to consider a transportation option that is inclusive of these individuals, we can utilize a ramp. Not only is a ramp inclusive of individuals that use wheelchairs but also individuals that might utilize other mobility aids like a walker, senior citizens, someone who has recently broken a leg, and able-bodied people too! Although this is a very obvious example, if you take a look around your community, you will likely realize that this was not taken into consideration for the majority of buildings.

There are a few key points we're trying to make in this example:

- It can be difficult to realize other people's challenges, because it is easy to take our day-to-day function for granted.
- Traditional methods and practices may not be inclusive of everyone.
- Simple changes can make big differences.
- Designing for inclusion can benefit all individuals.



- There is still room for improvement in implementing universal design in our communities.

I hope this video has given you some background on why UDL is important. In the next video we are going to look at Learner Variability, a foundational concept in UDL.

Thank you for watching.

B1T2: Learner Variability

One of the most important concepts in Universal Design for Learning is Learner Variability. More and more research evidence is showing that just as each one of us has our unique set of fingerprints, we all have a unique way of learning. When we approach a task, we all have our unique toolkit of experiences, skills, ideas, and perspective that we draw from to learn material, gain mastery, work in groups, and share our learning. Yet, with all this variability, many schools across the world are still set in traditional lecture and note-taking methods.

Let's say we have a class of 30 students. If we were to represent the diversity of learning variability of this class as a continuum it would probably look something like this. With traditional teaching methods, we essentially force all students through this narrow funnel that meets only a small portion of the students' way of learning. Consequently, many of our students are unable to learn the material to the best of their abilities.

Embracing learner variability is about accepting and celebrating these differences in learning and recognizing that for students to succeed, they need to be able to learn in ways that are best for them. It is often easiest to point to learner variability for children that may have learning disabilities, autism spectrum disorder, or other exceptionalities. But learner variability contains much more. Learner variability could be the student that has English as their second language, the student that has just moved schools and is worried about getting settled socially, the student that is from a lower socioeconomic status, or the student that was taught fractions early by their parents and is outpacing the curriculum. Each of these students will have their own unique strengths, preferences, and challenges in school.

As Dr. Todd Rose from the Harvard Graduate School of Education and his colleagues talk about how individual learning can be better understood by pathways. If we think about a student that might not be progressing in their reading with grade level standards, the traditional perspective would be to label this as delayed. Although this might be true for some students, research suggests that there are multiple pathways to learning to read, and perhaps the student is progressing on an alternative pathway. As educators, we may need to better understand our students and provide learning in multiple ways to nourish this.

Accepting learning variability is the foundation of Universal Design for Learning. Now that we have an appreciation of differences in learning, let's begin taking a look at how we can create a learning environment to support all students to succeed. Thank you for watching and in the next video we will discuss the 7 principles of universal design and how you might consider them in your teaching.

B1T3: 7 Principles of Universal Design



Before we get into discussing universal design for learning, we should have a look at universal design itself. This is the creation of spaces, tools, and products to be as barrier free and inclusive as possible. The father of universal design is Ronald Mace, an American architect, product designer, and wheelchair user gathered a group of experts to create the 7 principles of universal design. This is one of the ways you can approach UDL and some people may prefer this over the concepts of UDL we will cover in the next video. Let's go over each of these principles and how they relate to education.

The first principle is Equitable Use. This means that whatever we design should be inclusive of people of all abilities. If we take the perspective of education, this means that we should find ways to make sure our lessons, activities, assessments, and assignments are created in ways that support students with exceptionalities to succeed. One simple example is ensuring that students with certain learning exceptionalities are given extra time on tests.

The second principle is Flexible Use. This is similar to the first principle but focuses a bit more on preference of use. For example, most crutches today have adjustable heights to meet the preferences and need of each person. In the classroom, we can apply this principle by being both flexible in our teaching but also giving options for students in their learning. This might mean offering students choice of where they work (flexible seating), providing students with a variety of technological media and tools, and having different choices for an assignment.

The third principle is that designs should be Simple and Intuitive. Assignments, assessments, and lessons should be easily understood by students of all abilities. This includes methods, goals, purpose and expectations. For example, teachers can minimize distracting information by breaking instructions down into small steps, collaborating with students to construct learning goals using clear student friendly language. Other guidelines to consider are arranging information by importance, and supporting students by providing feedback during and after the task.

The fourth principle is Perceptible Information, which focuses on making sure that information is communicated in ways that is inclusive of all individuals. In the classroom, we can try to vary the way we present information by utilizing verbal, written, and visual forms. For example, we can have a visual diagram, and provide students with a handout when explaining a topic. Videos and demonstrations are another great way to do this. This not only benefits students with exceptionalities but the rest of the class as well.

Tolerance for Error is our fifth principle. Not only should we design our tasks in student learning to be resistant to errors, this principle can apply in a variety of other ways. The first, is that we should anticipate possible barriers, errors and misconceptions that students may have with tasks. One example is that in teaching students to spell, we can anticipate tricky words. I always struggled with spelling the word "beautiful." Next, we should implement strategies to reduce the possibility of this error. We can sound out the word in a way that is more suggestive of the spelling, be-a-utiful. Lastly, if students are not meeting certain expectations, we should identify barriers and areas of challenge, supporting students to overcome these.

The sixth principle is low physical effort, and quite simply, when applied to education, is focused on maintaining energy and reducing fatigue. Varying the form of instruction, incorporating activities, and allowing for breaks are great ways to help achieve this.



The seventh and last principle is Size and Space for Approach, ensuring that the environment is inclusive of learners. Although educators often do not get much say in choosing their space, our video on Differentiating Environment, in the Differentiated Instruction module provides some more information on how to make our spaces more inclusive.

That finishes all 7 principles of universal design and how they can apply to education. Of course, this does not cover all the ways the 7 principles can help shape learning, but I hope this provided you with some ideas and structure to approach UDL in your classroom. I find that these principles can be used almost like a checklist to ensure we are designing in an inclusive way.

Thank you for watching, and in the next video, we will discuss the core concepts of UDL.

B1T4: Core Concepts of UDL

Hi there, in the last video we covered the 7 Principles of Universal Design and how they apply to education. For those, like myself, who have difficulty remembering a list of 7, there are 3 core principles specifically for Universal Design for Learning. We will be referencing the CAST Guideline for UDL, which is a great free tool you can utilize.

One great thing about universal design for learning is that it is based off of neuroscience. There are three core networks in the brain that are activated during learning. These are affective, recognition, and strategic networks that we can think of as the why, what, and how an individual learns. In the next three videos we will discuss each one individually.

As we discussed previously, UDL is all about finding different ways to think about and deliver education in order to foster inclusivity. This is why when we construct our principles around these neural networks, we get:

- Multiple means of engagement, targeting motivation and “why” a student is driven to learn.
- Multiple means of representation, focusing on providing information in different ways to allow students to best absorb “what” they are learning and
- Multiple means of action & expression, providing different options and ways to do tasks that will assist in “how” a student learns.

I realize we’ve presented a lot of principles for you to remember, and it parts may seem redundant. These three principles of UDL are more important to remember, but I suggest approaching universal design for learning with a combination approach.

At a high level, the three principles of UDL identify the areas in instruction and learning that need to be addressed for inclusive education. When we move to creating, differentiating, or adapting a task within an area of instruction, the 7 principles of universal design can be used as guidelines to ensure that the task is most inclusive of all learners. This way, we have a more comprehensive approach to UDL. Together, this offers a framework to guide the design of instruction and instructional materials.

When we look at the UDL Guidelines, which can be found at udlguidelines.cast.org, we read the table through columns and rows. Each column covers one of engagement, representation,



and expression. As we move down, we have three rows, access, build, & internalize, with access being the most teacher support, and moving down to internalize, being the most student driven. The ultimate goal of Universal Design for Learning is to help students become expert learners. By mastering the domains of engagement, representation, and action/representation, expert learners are purposeful & motivated, resourceful & knowledgeable, and Strategic & goal directed.

Thank you for watching, and in the next video, we will discuss the first principle, Multiple Means of Engagement.

B1T5: Multiple Means of Engagement

Hi, in this video, we will discuss the first principle of UDL: Multiple Means of Engagement. This principle is based off of research done into the affective network of the brain during learning, so let's start by getting a better understanding of what that means.

The affective networks of the brain work to evaluate patterns and then assign them emotional significance. Because of this, it drives our emotions, motivations, and ultimately engagement in a task. This is the reason we refer to it as the “why” of learning.

If we refer back to the UDL Guidelines, we can see that engagement is broken down into three levels, with the ultimate goal of creating learners that are purposeful and motivated. They provide three main recommendations for providing multiple means of engagement. Providing options for recruiting interest; Sustaining effort and persistence; and Self-regulation.

So, why is this important? Looking to providing options for recruiting interest, the key point is that information that does not engage students' attention is actually inaccessible. If students are not motivated to sustain their effort and persist through challenges they will won't be able to build and develop their skills. Providing options for self-regulation promotes students to take ownership over their learning, develop self-awareness, and can increase emotional wellbeing.

CAST, the creators of these UDL guidelines understand that this is easier said than done. To help with this, they've included 3 checkpoints for each point and more information on their site. To avoid us simply reading the document to you, we will instead focus on some key points and examples.

The learning environment must be place where students feel safe, welcome, and valued. If these emotional needs are not met, students are unlikely to be willing to take on challenges in their learning and trust teachers. Their capacity to learn decreases due to the amount of energy required to address emotional concerns. These factors may also stem from situations that originate outside the classroom. Investing time to create a community where peers are supportive, diversity is embraced, and everyone is accepting of others can help all students feel like they belong.

Goals and expectations should be clear, explicit, and set in ways to optimize motivation. Students that know what they are working towards and why, are more likely to be engaged. Some ways to help with this is to have learners rewrite a goal, set personal goals, and divide larger goals into smaller achievable steps. Having clear goals and expectations also creates the structure necessary for self-assessment and reflection.



Engaging the entire class can be a challenge since every student has unique way in which they learn best. In fact, not only do learners have unique sets of interests, but their interests and preferences for learning will evolve and change over time. This is where choice and student input can be very powerful, the key is finding the right amount of choice. Too unstructured or too many options can make students feel lost or overwhelmed, but too little may make learning seem like a chore. By having clear goals and expectations, we can identify which areas can have room for options, such as topic of an essay, or the form of a presentation, and which areas do not, very often being curriculum objectives.

One example of this, is instead of silent reading time, we can have silent activity time, where students are given options of reading, or practicing skills from the day such as writing or math problems. Through choice, students can take more ownership of their learning, feel more pride in accomplishment, and develop self-awareness in how they learn best.

That concludes this video on Multiple Means of Engagement. Thank you for watching, and in the next video we will discuss Multiple Means of Representation.

B1T6: Multiple Means of Representation

Hi, in this video we will discuss Multiple Means of Representation, based off of the recognition network. This pathway in our brains is responsible for the “what” of learning, helping us to gather information from our senses and synthesize it to knowledge. As we know, each individual gathers and processes information differently, and because of this it is important that we represent information in ways that are inclusive.

This is especially important for children that have physical and sensory exceptionalities, learning disabilities, language exceptionalities, autism spectrum disorders, and other exceptionalities. These students have different challenges in perception and comprehension of information which needs to be considered in lesson planning.

The guidelines for Multiple Means of Expression includes 3 checkpoints: perception, language and symbols, and lastly, comprehension. It’s easiest to think about it in learning steps: information has to be perceived, it has to be in a format that makes sense to students, and has to be meaningful to generate new understandings.

Providing options for perception is all about alternative and varied ways of presenting information. We also need to consider that if an individual has an exceptionality, our alternative representation of information has to be comprehensive of the knowledge the student needs to gain. Providing written or spoken descriptions for all images, graphics, videos, or animations can be examples of this.

Our language, symbols, and format of communication need to be able to create a shared understanding between students. Consider the class that you have, backgrounds in the language of instruction, and where students struggle. In the context of communication exceptionalities, we should remember that just students may understand explicit language but have difficulties with abstract and implicit language. Tone, metaphors, analogies, and sarcasm may be more difficult for some students to pick-up on. Communicating points through multiple



media, preteaching vocabulary, highlighting complex terms, and anticipating where barriers and errors in understanding may occur can help represent information in a more inclusive way.

Lastly, we should ensure that we represent information in multiple ways to support the comprehension of information. This involves understanding information in a way that supports useable knowledge. The first consideration is having information organized and presented in a way that supports comprehension. Organizing information in relation to importance, having concept maps, building and making connections to previously learned concepts, and examples of applied knowledge are effective techniques.

Having support resources for students such as extra practice problems, summary sheets, and visual organization of concepts can assist with the understanding and ensuring students have enough time to process and learn. Highlighting goals of learning, previous background knowledge, and how it all relates creates stronger connections in learning.

There are many more suggestions and techniques available at udlguidelines.cast.org and I would suggest going there for more information on applying UDL in your classroom!

Thank you for watching, and in the next video, we will discuss multiple means of expression.

B1T7: Multiple Means of Action & Expression

Hi, let's begin this video by talking about the strategic network. These networks are responsible for the "how" of learning, and is related to the third principle of UDL: Multiple Means of Action & Expression.

Recommendations for this principle are to provide options for physical action, expression & communication, and executive functions. Let's discuss how we can do this.

For providing options for physical action, or focus is on making sure that learning and expression is accessible to all. We should ensure tools and environments make learning physically accessible to all, and optimize access to tools and assistive technologies. This could include text-to-speech for students who are visually impaired, but may also benefit other students.

The next is providing options for expression and communication. As we know, preference of expression varies between all learners. Some types of media are more effective for some kinds of expression or learning. To support all students, we should try to allow options for students to express their learning. At times, student must specific key skills, such as writing. Yet, when building a skill like writing is not a core objective a task, we can allow this opportunity learners need to build skills in other areas, such as composition.

When identifying goals in learning, we should see if we can provide multiple means to how students express themselves to meet that goal. For example, to demonstrate proficiency in social studies on the middle ages, students may choose to create a diorama, short story, video, or presentation.

Within this category also encompasses approach to problem solving. Different students may prefer different methods of problem solving and we can facilitate this by being flexible in our



teaching, presenting various strategies, and adapting our interactions with students to understand and develop the process they have chosen.

The last recommendation is to provide options for executive functions. In the UDL model, they have identified that executive functioning capacity is reduced when either lower-level skills are not automatic and thus taking up too much cognitive resources, or when executive function is reduced due to a disability. If we think about the complex task of writing an essay, it is much more difficult to think about idea formation and justification when a student is focused on proper spelling.

Their framework outlines 2 primary ways to address executive capacity. The first is to provide supports and scaffolding to ease the cognitive burden of lower-level tasks. This could be using a spell-checker on a computer for an essay. The second is to provide scaffolding of higher level skills to support development. We could do this by providing an optional template outline of an essay and paragraph structure for students to reference.

With that, we have discussed the 3 principles of UDL: multiple means of engagement, representation, and action & expression. We hope you found this overview helpful, and for more information and teaching strategies, please visit udlguidelines.cast.org where much of this information originated from!

Many of the skills in varying teaching can be found in our Differentiated Instruction and Differentiated Assessment modules. Our goal with these is to provide you with some structure and framework to build your skills in inclusive education.

Thank you for watching and in the next video we will cover an example using an approach to UDL.

B1T8: Approach to UDL example

Hi, thank you for watching! In this module, we looked at what is universal design for learning, the 7 principles of universal design, and the three principles of UDL, providing multiple means for engagement, representation, and action & expression.

To recap what we've learned, we are going to take a look at an example of teaching an elementary math class. Let's think about giving instruction about multiplication and then practicing with beads. Within our class we have three students with exceptionalities, one child uses a wheelchair, one has mild learning disability, and one has a language exceptionality. How can we design our instruction to be inclusive for all of our students?

To start we can reference the UDL guidelines, for this example, let's focus on engagement and representation.

With multiple means of representation, our goal is to provide information in ways that supports all students to learn. If we break this down into smaller objectives, we should ensure that the information is perceivable to all, there is a universal language of communication, and that the comprehension of information is supported in multiple ways.



Before the lesson, we can speak to the parents of the child with the learning disability to ask how they learn best. These considerations can then be incorporated in our representation of information.

For the instruction part of the lesson, we can ensure that we clearly bridge the background information in addition to the new skill of multiplication. We can outline steps for introductory multiplication, and use the board and other visuals to provide different ways to vary our instruction. During this, we decide to use beads to illustrate the question of 2×5 , 2 groups of 5. By modelling how we approach this question, and speaking through our steps, we are providing information in various formats to help different learners.

To provide another form of representation, we can give out a handout with written and visual instructions on how to multiply. Not only is this helpful for students who may learn better through this method, but this now gives a resource that students can reference throughout the activity. Ensuring we have visuals helps to include students with language exceptionalities, and learning disabilities, as well as benefit students that are more visual learners. Some students will require more time for them to fully comprehend and learn the steps of multiplication, so having a handout supports their learning as well.

When the class moves to the activity, we can consider multiple means of engagement to support motivation from the class. Instead of only having beads, the students can be offered the choice of beads, Legos, or pennies. This way students have choice of fun materials to work with throughout the lesson. As we approach other lessons and multiplication practice, we can vary the materials we offer, or build in creative activities, like using flashcards, playing cards, or multiplication bingo.

Now that we have an idea of how to approach this lesson, we can utilize the 7 Principles of Universal Design to ensure we didn't miss anything.

Our lesson meets equitable use, flexible use, is simple & intuitive, and accounts for perceptible information. For tolerance for error, we need to make sure that we have enough materials to count and that students with questions are able to access an instructor or help. To prevent learner fatigue, we can build in a short break, consider lesson time, and maybe mix in another practice activity. Lastly, for size and space for approach, we should consider that the way we set up the room and distribute the materials is inclusive of our student with a physical exceptionality.

That concludes our example for implementing Universal Design for Learning in a Math Class, and this module on an Introduction to UDL. We hope you enjoyed this module and found areas of UDL that can be helpful for you! As with all of our content, our goal is to provide you with some foundational knowledge and skills, not to prescribe how you should approach teaching. By adapting and using these skills to best fit your classroom, we can support all students to be the best they can be.

Thank you for watching, and thank you for supporting Pastel Education.

