Applying Universal Design for Learning Principles and Guidelines to Lesson Design

The educator applies the Universal Design for Learning (UDL) guidelines to design instruction to optimize teaching and learning during lesson implementation for improved student outcomes.

Key Method

The educator develops learner profiles using the Universal Design for Learning (UDL) guidelines, analyzes methods, materials, and data sources for learning barriers, and evaluates and revises current learning design for the critical elements of UDL.

Method Components

Universal Design for Learning (UDL) is a research-based instructional approach rooted in the neuroscience of learning. The goal of UDL is to identify and remove barriers to learning and provide options for the diversity of learners in classrooms today.

UDL practices are organized around three core principles that engage the cognitive networks involved in learning. Cognitive networks are neurological processes that support how we acquire information, maintain motivation and engagement, and express understanding. The three UDL principles consider and support these research-based networks. When UDL principles are incorporated into learning design and implementation, barriers to learning are lessened or removed, allowing all learners to access and participate in meaningful and challenging learning opportunities.

Three Key UDL Principles

The aligned networks and principles address the "why," "what," and "how" of learning for all students. In a classroom implementing UDL principles of instruction and design, education professionals implement the following three key principles:

Affective Networks: Provide Multiple Means of Engagement

Affective networks control the elements of emotional involvement in learning, such as motivation and the ability to focus and remain engaged with a task. When students feel safe, respected, and valued, they are more likely to persist with tasks, take learning risks, and accept challenges. Education professionals support the affective network by

- offering options that teach students self-regulation to support independent learning.

- facilitating engagement by recruiting students' interests and encouraging them to share their interests as they relate to content.

- motivating students to sustain learning efforts by explicitly stating learning goals and providing time for students to independently reflect on their progress toward goal achievement.

Recognition Networks: Provide Multiple Means of Representation

Recognition networks are responsible for receiving and analyzing information gathered through the senses. In addition, recognition networks link new information to prior knowledge and support concept development. Education professionals support the recognition network by

- providing multiple resources, materials, and ways of presentation to support students as they learn and build their understanding of content.
- presenting students with choices by offering multiple tools, supports, and media to access content.

Strategic Networks: Provide Multiple Means of Action and Expression

Strategic networks are responsible for planning, performing, and monitoring actions. Education professionals support students' strategic networks by offering flexibility and options in how students demonstrate their understanding. Educators can provide multiple means of action and expression by

- varying methods of response when checking students' understanding (e.g., group and individual verbal, auditory, and written responses).
- evaluating student mastery of skills or objectives through a variety of means (e.g., verbal, auditory, and written expression options).

Supporting Research and Resources

The Supporting Research and Resources includes several articles and videos for learning more about the UDL Principles and Guidelines. As you interact with these learning materials, take time to reflect on your professional practice.

Supporting Research

CAST (2018). Universal Design for Learning Guidelines version 2.2. Retrieved from http://udlguidelines.cast.org

Hall, T., Vue, G., Strangman, N., & Meyer, A. (2004). Differentiated Instruction and Implications for UDL Implementation. Wakefield, MA: National Center on Accessing the General Curriculum.

Lohmann, Marla & Hovey, Katrina & Gauvreau, Ariane. (2018). Using a Universal Design for Learning Framework to Enhance Engagement in the Early Childhood Classroom. Journal of Special Education Apprenticeship. 7.

McGhie-Richmond, Donna; Sung, Andrew N. (2013). [Applying Universal Design for Learning to Instructional Lesson Planning.](#) *International Journal of Whole Schooling*, v9 n1 p43-59.

Nelson, L.L. & Basham, J.D. (2014). A blueprint for UDL: Considering the design of implementation. Lawrence, KS: UDL-IRN. Retrieved from https://udl-irn.org.

Supporting Resources

UDL at a Glance. Developed by CAST, this four-minute [video](#) provides a brief overview of Universal Design for Learning.

The Universal Design for Learning – Implementation and Research Network. This [collection of resources](#) provide guidance and examples on how to integrate the UDL framework into your instruction planning, implementation, and evaluation.

UDL and the Learning Brain. This [resource](#) explores the concept of neuro-variability and reminds us that learners do not have an isolated learning "style," but instead rely on many parts of the brain working together to function within a given context.

The Myth of Average. In this [TEDx video](#), Todd Rose, a high school dropout turned Harvard faculty, shares a simple way of thinking that helps nurture individual potential.

UDL Profile Characteristics. Adapted from CAST UDL class learning profile templates, this [resource](#) outlines common strengths and challenges or barriers for students, with consideration for each of the three UDL Principles and aligned networks.

Assistive Technology Resource Guide for Arkansas Schools. Assistive technology is used to increase or improve the independence of a student with a disability in education. This [guide](#) places an increased focus on assistive technology and the application to a Universal Design for Learning Framework.

Arkansas Accessible Educational Materials. This [website](#) is designed to provide information about accessible educational materials, including available resources, trainings, and services, to ensure educational access for every Arkansas student.

National Center on Accessible Educational Materials. The National Center on [Accessible Educational Materials for Learning](#) at CAST provides technical assistance, coaching, and resources to increase the availability and use of accessible educational materials and technologies for students.

Submission Guidelines and Evaluation Criteria

This micro-credential is divided into three areas: Overview, Artifacts and Evidence, and Reflection. To earn this micro-credential, you must receive "Passing" on Parts One and Three, and "Yes" on all criteria in Part Two.

Part One. Overview

Read the Overview criteria carefully to ensure a thorough understanding of the expectations for a "passing" submission.

Prompt: Describe your current educational setting and context for implementing UDL. Include the following:

- grade(s) level served and content or specialty area(s)
- school demographics (race, economic, English learners)
- demographics for the class of students selected for UDL implementation (gender and number of students with 504 plans and/or IEPs)
- type of school setting (private, charter, public)
- previous experience(s) with UDL

Note: Utilize myschoolinfo.arkansas.gov to obtain information on school demographics.

__This submission is scored either "passing" or "not passing."__
__Passing:__ Earner includes a response to each part of the prompt; total response should be at least 250-words and provide adequate detail to help the scorer understand the context for your submission.

Part Two. Artifacts and Evidence

Read the Artifacts and Evidence Submission requirements carefully to ensure a thorough understanding of the expectations for a "Yes" on each task.

Task 1: Learner Profiles

Create Learner Profiles for **four** students from the class you described in Part 1 Overview. For each student, include in the Learner Profile characteristics for each of the UDL networks using the **Key Characteristics for UDL Principles** resource as a guide. This resource is not an exhaustive list, so you may include additional characteristics as appropriate. When choosing students, select diverse learners and consider learner needs, strengths, and interests. Use the UDL Learner Profiles template to complete this task.

Please submit the four to five learner profiles as one file with the title "__Task 1 Learner Profiles__" as evidence for Task 1.

Task 2: Evaluation of Methods, Materials, and Data Sources

Complete and submit an evaluation of the methods, materials, and data sources used to identify potential student learning barriers. Include at least three data sources for each selected student (if applicable, you may use the same data source for each student). Include actual scores or ratings and remember to remove any personally identifiable

information. Use the UDL Evaluation of Methods, Materials, and Data Sources template to complete Task 2.

Please submit the evaluation of methods, materials, and data sources and the potential barriers with the title "Task 2 Evaluation" as evidence for Task 2.

Task 3: Learning Design using UDL

Create a new or existing lesson that is annotated to show how UDL principles and guidelines are incorporated in the learning design to provide students with multiple means of engagement (motivation and interest in learning); multiple means of representation (access to content); and multiple means of action and expression (demonstration of learning).

Lesson Annotation Key

Annotation Color	UDL Principles and Guidelines
Green	Means of Engagement
Purple	Means of Representation
Blue	Means of Action and Expression

Annotations should include how the new learning design supports the students selected for the learner profiles created in Task 1 and include references to the methods, materials, and data from Task 2. Additionally, your learning design should include the following critical elements of UDL:

- Clear Goals and Outcomes
- Intentional Planning for Learner Variability
- Flexible Methods and Materials
- Timely Progress Monitoring

You may annotate your lesson for the critical elements or complete the Critical Elements of UDL Design template and include it with your lesson.

Please submit the annotated lesson and rationale as one file with the title "Task 3 Learning Design with UDL" as evidence for Task 3.

Artifacts and Evidence Scoring Guide

Tasks	Not Yet	Almost	Yes
Task 1: Learner Profiles	Earner does not submit learner profiles.	Earner submits learner profiles that lack alignment to the characteristics in the three cognitive networks OR submits learner profiles for fewer than four students.	Earner submits robust learner profiles for four to five students that correctly align with the characteristics in the three cognitive networks.
Task 2: Evaluation of Methods, Materials, and Data Sources	Earner does not submit the evaluation of methods, materials, and data sources. .	Earner submits a partially completed evaluation of methods, materials, and data sources that identify potential barriers to student learning. **AND** Earner submits documentation that partially connects the identified barriers and data sources to the student learner profiles.	Earner submits a thoroughly completed evaluation of methods, materials, and 3 data sources that identify potential barriers to student learning. **AND** Earner connects the identified barriers and data sources to the student learner profiles.
Task 3: Learning Design using UDL	Earner does not submit an annotated lesson plan OR the lesson plan does not include the critical elements of UDL.	Earner submits an annotated lesson plan that includes some of the critical elements of UDL with limited descriptions of how the principles and guidelines are incorporated.	Earner submits an annotated lesson plan that includes all of the critical elements of UDL and thoroughly describes how the principles and guidelines from Tasks 1 and Task 2 are incorporated.

Part Three. Reflection

Read the Reflection criteria carefully to ensure a thorough understanding of the expectations for a "passing" submission.

Prompt: Submit a reflection that addresses the following guiding questions. Include specific evidence to support your reflections:

- How did using the UDL guidelines to develop learner profiles change or clarify your thinking about lesson design?

- If you were to reteach the lesson, what additional methods and materials would be beneficial to incorporate and why?

- How has learning about Universal Design for Learning impacted your professional practice and improved student outcomes?

This submission is scored either "passing" or "not passing."
Passing: Earner includes a response for each part of the prompt (300-word minimum). Responses should clarify and further explain how earning this micro-credential has impacted your professional practice and student outcomes.