

DESIGNING FOR EXCEPTIONALITY

Leveraging UDL to Support Gifted and Twice-Exceptional (2e) Learners

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INTRODUCTION: WHY GIFTED AND 2E STUDENTS NEED UDL

Universal Design for Learning (UDL) and Differentiated Instruction (DI) are powerful frameworks to support the needs of all learners. But what about students who are gifted or twice-exceptional (2e)? Where do the unique needs of these students fall in a universally designed learning environment, and how can we leverage the promise of UDL to support advanced learners?

Gifted learners demonstrate advanced cognitive abilities, creativity, and deep curiosity, often needing accelerated or enriched learning opportunities. They may also display heightened emotional sensitivity or asynchronous development, where their intellectual, social, and emotional growth occurs at different rates. Twice-exceptional (2e) learners are both gifted and have one or more learning differences or disabilities, such as ADHD, dyslexia, or autism. These dual identities can mask each other, making identification and support complex. Recognizing both strengths and needs is crucial to providing meaningful and equitable learning experiences.



Many states are addressing the needs of students with exceptionalities in different ways. Check out the [California Association for the Gifted's Gifted and Talented Education \(GATE\) Services Guide](#) to get inspired.

Characteristics of Gifted Students

(Davidson Institute)

- + Ability to comprehend material several grade levels above their age peers
- + Surprising emotional depth and sensitivity at a young age
- + Strong sense of curiosity
- + Enthusiastic about unique interests and topics
- + Quirky or mature sense of humor
- + Creative problem solving and imaginative expression
- + Absorbs information quickly with few repetitions needed
- + Self-aware, socially aware, and aware of global issues

Characteristics of 2e Students

(Baum et al., 2017)

- + Conceptually-advanced ideas, but difficulty writing them on paper
- + High-level comprehension, but challenges with reading
- + Able to commit to tasks and participate in activities if a preferred activity; difficulty attending when tasks are non-preferred or lack novelty
- + Often can do the hard things before learning novice skills and developing automaticity
- + Desire to fit in socially, but may not be aware of social norms or expectations
- + Inconsistencies in the quality of work produced

WHO ARE GIFTED AND TWICE-EXCEPTIONAL LEARNERS?

The [National Association for Gifted Children](#) (NAGC) states “the current federal definition of gifted students was originally developed in the 1972 Maryland Report to Congress, and has been modified several times since then. The current definition, which is located in the Elementary and Secondary Education Act, is:

Students, children, or youth who give evidence of high achievement capability in areas such as intellectual, creative, artistic, or leadership capacity, or in specific academic fields, and who need services and activities not ordinarily provided by the school in order to fully develop those capabilities.”

Gifted students demonstrate advanced cognitive abilities, intense curiosity, and heightened emotional sensitivity. They require academic challenge, opportunities for creative expression, and support for their unique social-emotional needs. In the absence of intentional alignment between appropriately challenging opportunities, supportive scaffolds, and a deep understanding of individual learner assets and barriers, gifted and twice-exceptional students may experience boredom, frustration, or disengagement.

In 2009, the National Joint Commission on Twice-Exceptional Students created this definition:

“Twice-exceptional learners are students who demonstrate the potential for high achievement or creative productivity in one or more domains such as math, science, technology, the social arts, the visual, spatial, or performing arts or other areas of human productivity AND who manifest one or more disabilities as defined by federal or state eligibility criteria.”¹

Twice-exceptional (2e) students simultaneously have one or more domains of giftedness combined with one or more disabilities. Abilities and disabilities often mask each other. A student’s giftedness may hide their challenges, or a student’s disability may mask their areas of giftedness. Alternatively, a student may appear to have neither a disability nor areas of giftedness, adding to the complexities of meeting their dichotomous needs. 2e students must be taught using a strength-based, talent-focused approach while supporting their unique learning challenges.

1 Baum, S., Schader, R., & Owen, S. (2017). *To be gifted and learning disabled: Strength-based strategies for helping twice-exceptional students with LD, ADHD, ASD, and more*. Prufrock Press.



COMMON BARRIERS THEY FACE

Gifted and 2e students, while often perceived as high-achieving, can face unique challenges.

These include:

- + **Asynchronous Development:** Uneven development across different skill areas.
- + **Overexcitabilities:** Intense reactions to stimuli in areas like intellect, imagination, emotion, senses, and psychomotor activity.
- + **Social Emotional Learning (SEL):** Emotional regulation needs due to heightened sensitivities or perfectionism, peer relationship challenges due to asynchronous development or social isolation, misunderstanding or masking of needs (e.g., anxiety or frustration mistaken for defiance or disengagement), increased anxiety and stress.
- + **Underachievement:** Occurs due to boredom, lack of challenge, lack of self-regulatory skills, and misidentification or unidentified twice-exceptionality.
- + **Cultural and Linguistic Barriers:** Multilingual learners may experience difficulties being identified as gifted due to language proficiency misconceptions, cultural differences in learning strengths and preferences, or biases in assessment tools.
- + **Socio-Economic Barriers:** Limited access to challenging, advanced learning opportunities, enrichment programs, and gifted services due to financial constraints or under-resourced schools can hinder equitable support.
- + **Intersectionality of Identity:** Gifted students from diverse cultural backgrounds may struggle with balancing their giftedness with family and community expectations, leading to feelings of isolation or underachievement.

» [Learn more about underachievement here.](#)

» [Learn more about Cultural and Linguistic barriers here.](#)





HOW UDL SUPPORTS THESE LEARNERS

Universal Design for Learning (UDL) is a framework that can significantly benefit the diverse needs of gifted and 2e students by providing:



Flexible Learning Environments

UDL principles support personalized learning, allowing gifted and 2e students to work at their own pace and explore topics of interest in depth.



Multiple Means of Engagement

UDL promotes intrinsic motivation by fostering curiosity, relevance, and challenge, which are essential for engaging gifted and 2e learners.



Multiple Means of Representation

UDL encourages the use of various instructional strategies, ensuring that gifted and 2e students can access information in ways that align with their learning preferences.



Multiple Means of Action and Expression

UDL provides opportunities for gifted and 2e students to demonstrate their understanding in creative, innovative, and diverse ways.

Dual Differentiation for 2e

To best serve twice-exceptional students, we must provide dual differentiation in the classroom. Dual differentiation is the concept that teachers use their awareness of a given student's strengths as well as their challenges when planning curriculum. If we offer a rigorous curriculum to a 2e student but do not provide appropriate accommodations, such as speech-to-text or extra time for completing work, the student may not succeed due to their learning differences. If the same 2e student spends a significant portion of their day in remediation activities, they may become disengaged and bored. We must provide a strength-based, interest-driven curriculum with any necessary accommodations to help 2e students reach their full potential.

LAYERING UDL WITH GATE STANDARDS

Acceleration, Depth, Complexity & Novelty

The GATE Standards of Acceleration, Depth, Complexity, and Novelty can be layered onto any content for all grade levels to extend, enhance and enrich students' learning. Using GATE strategies such as Depth & Complexity, Universal Themes and Think like a Disciplinarian provides opportunities for students to think critically and creatively about the grade-level content.

DEPTH & COMPLEXITY THINKING PROMPTS & UDL

Depth and Complexity thinking prompts² give gifted students a way to move closer to an industry expert's level of thinking. The visual prompts provide a scaffold for developing a certain aspect of learner agency, supporting higher levels of thinking, connections and reflections. They prompt students to think of:

- + The big idea
- + Essential details
- + Language of the discipline
- + Rules
- + Patterns
- + Ethics
- + Change over time
- + Multiple perspectives
- + Unanswered questions
- + Across disciplines connections
- + Trends
- + Impact
- + Process
- + Motive
- + Context
- + Proof
- + Original
- + Translate
- + Judgement

This same concept can be applied to higher-level thinking to support developing learner agency for ALL students in your classroom as well!

» Want to learn more about differentiating state standards for students who are gifted or 2e? Check out this [guide](#). Consider how this supports the development of UDL and learner agency.

2 The Prompts of Depth and Complexity emerged from the [California State Department of Education \(1994\)](#) and [Jacob Javits Grant, Project T.W.O \(1995\)](#).

ALIGNING GATE STANDARDS WITH THE THREE PRINCIPLES OF UDL

UDL Principle: Engagement

“The Why of Learning” – How students become motivated and involved.

GATE STANDARD: NOVELTY

Novelty enhances engagement by tapping into curiosity, personal interest, and creative thinking. Giving students space to generate original ideas, explore passion projects, or solve real-world problems cultivates intrinsic motivation.

Example: Let students design their own inquiry project on a topic of personal relevance using project-based learning.

GATE STANDARD: COMPLEXITY

Complexity fosters emotional and intellectual engagement by encouraging learners to consider multiple perspectives, analyze real-world issues, make connections, synthesize information and explore ambiguity.

Example: Facilitate discussions around how dilemmas are viewed in different social, political or environmental contexts.

UDL Principle: Representation

“The What of Learning” – How information is presented and understood.

GATE STANDARD: DEPTH

Depth enhances representation by encouraging students to explore foundational content through multiple lenses (e.g., patterns, rules, big ideas). It invites students to uncover nuance and significance through varied sources.

Example: Use primary sources, infographics, and scientific models to analyze patterns in history or ecosystems.

GATE STANDARD: COMPLEXITY

Complexity aligns here again as it supports the layering of content across disciplines, over time, and through varied contexts, extending comprehension through connection.

Example: A lesson on climate change could incorporate geography, literature, science, and ethics.



UDL Principle: Action & Expression

“The How of Learning” – How students demonstrate what they know.

GATE STANDARD: ACCELERATION

Acceleration aligns with action/expression by allowing students to move beyond grade-level expectations and express mastery through advanced products, performances, or interdisciplinary synthesis.

Example: Students who demonstrate early mastery can create a multimedia documentary, conduct a survey, or present findings at a school forum.

GATE STANDARD: NOVELTY

Novelty also connects here by supporting creative risk-taking in how students express their learning. Giving choices in medium, format, or mode allows students to demonstrate understanding in original, personalized ways.

Example: Provide options like podcasts, digital art, or simulations to reflect learning.

Integrating the GATE standards with the UDL principles enhances rigor and deepens meaningful inclusive practices. This alignment encourages intellectual risk-taking, meaning-making, and equitable access, ensuring gifted learners—and all learners—have opportunities to thrive in ways that honor their strengths, needs, and identities.

TIPS

■ Promoting SEL

- ✦ To cultivate emotional intelligence, we must teach our learners the language of emotions, enabling them to self-regulate, persevere, and manage intense feelings while developing self-awareness, emotional vocabulary, self-regulation, and empathy-building through perspective-taking.
- ✦ Level up these ideas and add voice, choice and flexible learning paths while teaching SEL skills. This all connects to the UDL principle of engagement and when we remove barriers for some, we remove them for all.
- ✦ To support gifted and twice-exceptional (2e) learners, we must be empathetic teachers who recognize their unique challenges, respond with compassion and understanding, and create safe, affirming environments that foster trust, validation, and belonging.
- ✦ Teach the Scholarly Attributes and make them part of classroom culture to promote intellectual curiosity, strong work ethic, commitment to excellence, and a passion for learning and research.

■ Strategies for Aligning UDL with Differentiation Ensure Personalized Learning Paths and Include

- ✦ Content: Streamline curriculum for students who master content quickly while providing advanced opportunities to deepen learning with UDL.
- ✦ Process: Connect universally designed lessons to students' passions and real-world applications to increase engagement and relevance.
- ✦ Product: Use multiple methods for students to demonstrate understanding, such as projects, portfolios, and performance tasks, and support the principle of action/expression.

■ Set Up for Success

- ✦ Balance Strengths and Challenges: Address both the giftedness and learning challenges of 2e students for them to access the curriculum.
- ✦ Provide Organizational and Executive Function Tools: Offer checklists, schedules, graphic organizers and tools for breaking tasks into manageable chunks.
- ✦ Extended Time and Varied Pacing: Allow for flexible timelines and pacing to accommodate processing deficits or other challenges.
- ✦ Address Overexcitabilities: Teach students how to manage heightened intellectual, psychomotor, emotional, imaginative, and sensory intensities.
- ✦ Use an Asset-Based Approach: Focus on students' strengths and preferences to boost motivation and engagement.
- ✦ Keep high expectations while providing scaffolds.
- ✦ Use interest-based tasks and tiered assignments.

■ Leverage AI and Assistive Technologies

- ✦ For Executive Function and Accessibility: Implement speech-to-text, text-to-speech, graphic organizers, and AI-assisted writing tools to support students.
- ✦ Utilize chatbots and in-app messengers to connect one-on-one with students.
- ✦ Digital platforms can facilitate research, collaboration, and creativity.



CLOSING

Gifted and 2e students thrive in environments that remove barriers, affirm their identities, and provide both challenge and support. By honoring each learner's unique learning path, UDL creates space for gifted and twice-exceptional students to thrive as their full, authentic selves.

GATE STANDARDS & UDL CROSSWALK

UDL Principle 1: Engagement

How do we spark interest, sustain effort, and support motivation?

GATE Element	Integration Ideas	I Integrate these strategies into my practice...
Depth	+ Use provocative essential questions that require analysis of ethical, philosophical, or global issues	<input type="checkbox"/> Always
	+ Anchor inquiry in universal themes like change, systems, justice, or identity to promote relevance and purpose	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Complexity	+ Create learning experiences where students explore multiple perspectives, differing viewpoints, or unresolved problems	<input type="checkbox"/> Always
	+ Facilitate debates or structured academic controversies to drive curiosity	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Novelty	+ Incorporate surprise, humor, or unconventional prompts to hook learners	<input type="checkbox"/> Always
	+ Use creative role-play scenarios (e.g., students act as futurists, scientists, diplomats) to simulate real-world decision-making	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Acceleration	+ Pre-assess and compact mastered material to free up time for student-chosen, challenging tasks	<input type="checkbox"/> Always
	+ Offer independent study or Genius Hour projects based on interest and readiness	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never

UDL Principle 2: Representation

How do we present information in ways that support understanding for all learners?

GATE Element	Integration Ideas	I Integrate these strategies into my practice...
Depth	+ Use graphic organizers like the Depth & Complexity Frame to scaffold understanding of abstract ideas	<input type="checkbox"/> Always
	+ Provide advanced texts with side-by-side scaffolds (e.g., historical timelines, thematic connections)	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Complexity	+ Layer content with multiple viewpoints, sources, and disciplines	<input type="checkbox"/> Always
	+ Use concept maps, Thinking Maps, or hexagonal thinking to show relationships between ideas	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Novelty	+ Present content through unexpected mediums: virtual reality, storytelling, satire, or poetry	<input type="checkbox"/> Always
	+ Introduce advanced content using cutting-edge research or current events	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Acceleration	+ Allow gifted students to access varied, complex, or above-grade-level materials	<input type="checkbox"/> Always
	+ Provide tiered texts or media sources so students can move beyond surface-level facts	<input type="checkbox"/> Sometimes <input type="checkbox"/> Never

UDL Principle 3: Action & Expression

How do students show what they know in flexible and authentic ways?

GATE Element	Integration Ideas	I Integrate these strategies into my practice...
Depth	<ul style="list-style-type: none"> + Let students create performance tasks that analyze cause/effect, patterns, or contributions across time + Use layered rubrics that emphasize conceptual depth and symbolic thinking 	<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Complexity	<ul style="list-style-type: none"> + Encourage synthesis across disciplines or conflicting viewpoints in projects + Design tasks requiring students to evaluate multiple variables or solve open-ended challenges 	<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Novelty	<ul style="list-style-type: none"> + Allow creative product options like documentaries, museum exhibits, zines, or TED Talks + Support innovation with design thinking, invention challenges, or student-authored simulations 	<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never
Acceleration	<ul style="list-style-type: none"> + Enable flexible pacing for early finishers to pursue extended projects + Use digital portfolios or capstone tasks to demonstrate long-term growth and higher-level application 	<input type="checkbox"/> Always <input type="checkbox"/> Sometimes <input type="checkbox"/> Never