

Preparing Preservice Special Educators for Learner Variability: Integrating Universal Design for Learning and Differentiated Instruction in Coursework

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When teacher educators intentionally incorporate UDL and differentiated instruction into course design and instructional delivery, preservice educators experience flexible learning environments while simultaneously observing how these practices can support diverse learners in PreK–12 classrooms.

ABSTRACT

As inclusive education expands, PreK–12 classrooms increasingly include learners with diverse strengths, needs, and learning profiles. Teacher preparation programs are expected to prepare educators to support this diversity in inclusive settings. Preservice educators also bring varied backgrounds, experiences, and learning needs to coursework, requiring teacher educators to design learning environments that are responsive to this variability while preparing special education candidates to support diverse learners in PreK–12 classrooms. However, instructional approaches in teacher preparation do not always reflect these principles, and preservice educators may learn about inclusive instructional frameworks without experiencing how they are enacted in practice. This article introduces the Plan–Model–Embed framework, which integrates universal design for learning and differentiated instruction within teacher preparation coursework. The framework supports teacher educators in planning for learner variability, modeling instructional decision-making, and embedding opportunities for reflection and application across coursework. Drawing on course-based examples, the framework is illustrated through approaches to differentiating content, process, and product to support preservice educators with diverse backgrounds, experiences, and learning needs. These practices position preservice educators to both experience inclusive instructional approaches and examine their application within authentic learning contexts.

KEYWORDS

Differentiated instruction, learner variability, preservice special educators, teacher preparation, universal design for learning

In recent years, PreK–12 classrooms have become increasingly diverse as educational systems continue to move toward inclusive education and greater participation of students with disabilities in general education settings (Han & Cumming, 2024). As schools expand inclusive practices, classrooms reflect a wide range of learners with diverse strengths, needs, and learning profiles. This diversity includes students from culturally and linguistically diverse backgrounds as well as students with varying learning and behavioral support needs, including autism, attention-deficit/hyperactivity disorder, and other developmental or learning differences (National Center for Education Statistics, 2024). These trends highlight the growing importance of preparing educators who are equipped to respond to learner variability and support diverse students within inclusive educational settings (e.g., Clausen et al., 2023; Plotner et al., 2023).

Teacher preparation programs play a critical role in preparing educators to meet these demands. Preservice educators, particularly those enrolled in special education programs, are expected to develop the knowledge and instructional skills necessary to support diverse learners and collaborate within inclusive PreK–12 settings. This preparation includes delivering specially designed instruction, collaborating with general educators across a variety of service delivery models, including co-taught environments, and implementing instructional practices that promote equitable access to learning opportunities (Barron & Friend, 2025). Preservice educators who develop competence and confidence in supporting diverse learners can serve as im-

portant advocates for inclusive practices within their future school communities (Council for Exceptional Children, 2020).

At the same time, teacher preparation classrooms themselves reflect considerable diversity (Boveda & Aronson, 2019). Preservice educators enter preparation programs with varied academic backgrounds, prior experiences with disability and inclusive education, cultural and linguistic repertoires, and professional goals. Some candidates may have prior experience working with individuals with disabilities, while others may be encountering disability and/or inclusive education concepts for the first time. In addition, many preservice educators balance coursework with employment, field placements, and family responsibilities. As a result, teacher educators must design coursework that is responsive to variability among preservice educators while also preparing them to support diverse learners in PreK–12 classrooms.

This dual responsibility may present a challenge for teacher preparation programs. Preservice educators must learn how to design instruction that supports diverse learners while simultaneously experiencing instructional approaches that acknowledge variability within their own learning communities (Rowan et al., 2021). Although teacher educators are increasingly encouraged to incorporate evidence-based and inclusive approaches into their coursework, translating these principles into practice can be complex (Merle et al., 2022). During teacher preparation, teacher educators often draw from multiple frameworks and recommendations (e.g., culturally sustaining practices, universal design for learning), each of which offers valuable guidance for supporting learner variability. However, these approaches are not always implemented consistently or integrated in ways that make their connections explicit to preservice educators

(Gallagher et al., 2023). Consequently, preservice educators may encounter inclusive frameworks as a collection of separate concepts or strategies rather than experiencing how these approaches can work together within authentic learning environments. As a result, they may learn about inclusive instructional frameworks conceptually without consistently experiencing how such frameworks can be enacted systematically in practice.

Teacher preparation programs, therefore, face the important task of designing coursework that both supports the diverse learning needs of preservice educators and models coherent, intentional approaches to inclusive instruction that can be transferred to future PreK–12 settings. Practical examples of how teacher educators can integrate complementary frameworks into a unified instructional approach may help bridge the gap between knowing about inclusive practices and understanding how to enact them in everyday teaching.

Evidence-Based Frameworks for Addressing Learner Variability: Universal Design for Learning and Differentiated Instruction

Research in teacher education and professional learning suggests that preparing educators to support diverse learners requires more than conceptual knowledge of instructional frameworks (Darling-Hammond et al., 2020). Preservice educators benefit from learning environments that demonstrate how instructional practices can be implemented to address learner variability (e.g., Hayward et al., 2022). Two widely recognized approaches that support inclusive instructional design are universal design for learning (UDL; CAST, 2024) and differentiated instruction (Tomlinson, 2017). Both frameworks emphasize flexible instructional practices that respond to differences in learner

readiness, interests, and learning needs, and both have been widely applied in PreK–12 educational settings. Increasingly, scholars have also emphasized the value of incorporating these approaches within teacher preparation coursework to support the learning needs of preservice educators while strengthening their preparation to teach diverse learners in schools (e.g., Bondie et al., 2019; Scarparolo & Subban, 2021).

Although these frameworks share a common goal of supporting learner variability, they approach instructional design in different ways. UDL focuses on proactively designing learning environments that reduce barriers and provide flexible pathways for learning (Ok et al., 2017), whereas differentiated instruction emphasizes adjusting instruction in response to learners' needs (Suprayogi et al., 2017). Together, these approaches can provide complementary strategies for designing inclusive learning environments across educational contexts.

UDL

UDL is an instructional framework that emphasizes proactive design of learning environments to support learner variability and reduce barriers to learning (CAST, 2024). Grounded in principles of universal design originally developed in architecture, UDL encourages educators to anticipate differences in how students access, engage with, and demonstrate learning. The UDL framework is organized around three core principles: providing multiple means of engagement, multiple means of representation, and multiple means of action and expression (CAST, 2024). These principles guide educators in designing flexible learning experiences that support diverse learners.

In PreK–12 classrooms, UDL practices may include providing multiple formats for accessing content, such as visual supports, text, video, or hands-

on materials; offering varied ways for students to demonstrate understanding through written work, presentations, or projects; and incorporating strategies that promote engagement and student choice (Ok et al., 2017). For example, a teacher may provide instructional materials in both written and visual formats while allowing students to demonstrate learning through written responses, oral presentations, or multimedia projects. Such practices reduce barriers to participation and allow students with diverse strengths and needs to access and engage with learning opportunities.

Within teacher preparation programs, UDL can similarly guide the design of inclusive learning environments for preservice educators. For example, instructors may provide course materials in multiple formats (e.g., readings, recorded lectures, visual summaries), incorporate varied instructional activities such as discussions, collaborative work, and applied practice, and offer flexible options for demonstrating learning through assignments or projects. These practices can help support the diverse learning needs and experiences of preservice educators while also illustrating how instructional flexibility can be implemented in educational settings.

Differentiated Instruction

Differentiated instruction is an instructional approach that emphasizes adjusting instruction in response to students' readiness levels, interests, and learning profiles (Tomlinson, 2017). Rather than providing identical instruction to all students, differentiated instruction encourages educators to tailor aspects of instruction so that learners can access and engage with content at appropriate levels of challenge and support. Differentiation can occur across several dimensions of instruction, including content (what students learn), process (how students engage with learning activities), and product (how students demonstrate

understanding). Effective differentiation also occurs within supportive learning environments that promote student engagement, flexibility, and responsiveness to learner needs.

In PreK–12 classrooms, differentiated instruction may involve strategies such as flexible grouping, scaffolded instruction, varied levels of instructional materials, or multiple options for completing assignments (Suprayogi et al., 2017). For example, a teacher might provide reading materials at different levels of complexity, offer structured supports such as graphic organizers or guided practice, or allow students to demonstrate learning through different formats such as written responses, projects, or presentations. These practices allow teachers to respond to differences in students' readiness and learning needs while maintaining shared learning goals.

Within teacher preparation coursework, differentiated instruction can also support the diverse experiences and learning needs of preservice educators (Santangelo & Tomlinson, 2009; Struyven et al., 2022). Instructors may differentiate coursework by providing varied levels of scaffolding for assignments, offering multiple opportunities for practice and feedback, or incorporating flexible grouping and collaborative learning activities. For instance, preservice educators with prior classroom experience may engage in more advanced instructional planning tasks, while those new to teaching may receive additional scaffolding or guided practice. Through these approaches, teacher educators can create learning environments that support preservice educators' development while also illustrating how differentiation can be applied in educational settings.

Integrating UDL and Differentiated Instruction in Teacher Preparation Coursework

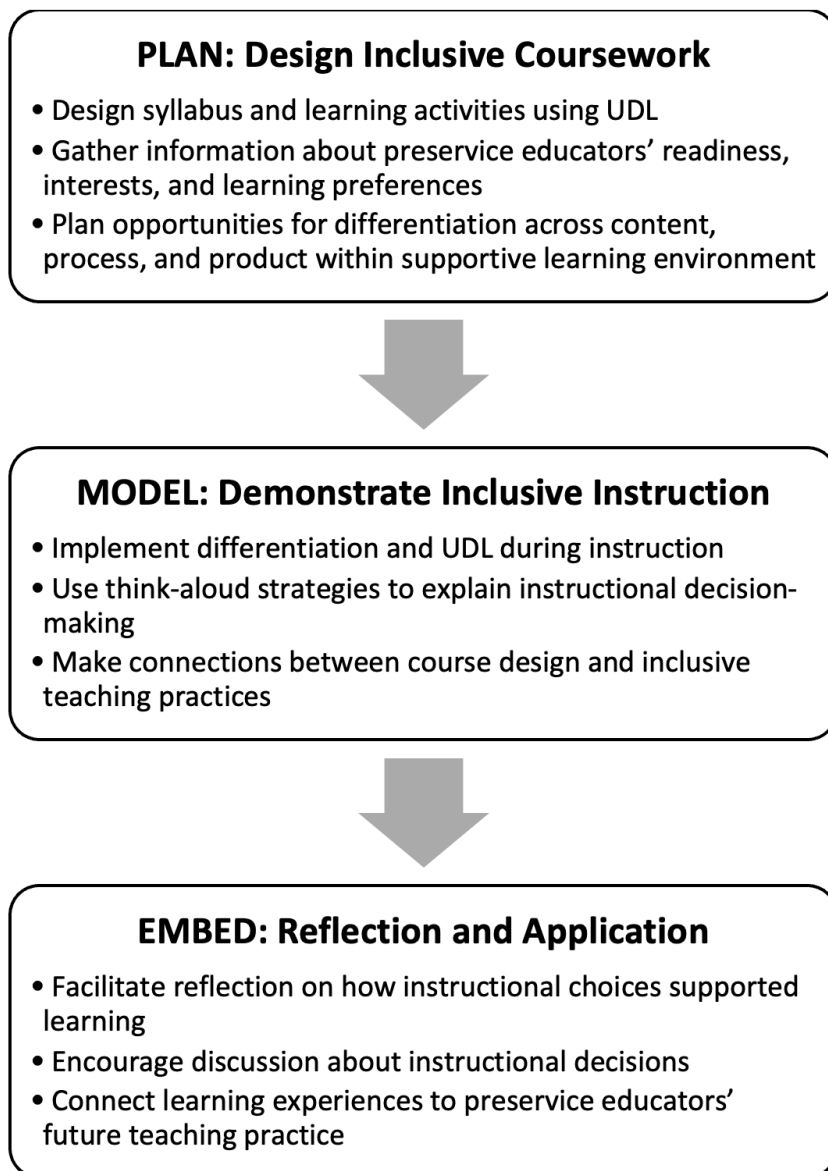
Teacher preparation coursework

provides a meaningful opportunity for instructors to demonstrate how inclusive instructional practices can be implemented in authentic learning environments (O'Brien et al., 2024). When teacher educators intentionally incorporate UDL and differentiated instruction into course design and instructional delivery, preservice educators experience flexible learning environments while simultaneously observing how these practices can support diverse learners in PreK–12 classrooms. In this way, teacher preparation courses function not only as spaces for learning instructional theory but also as environments where preservice educators can experience inclusive instructional practices as learners themselves.

Although UDL and differentiated instruction are often discussed separately in teacher preparation literature, they can be integrated to create responsive and inclusive learning environments. Differentiated instruction provides a framework for adjusting instruction based on learners' readiness, interests, and learning preferences (Tomlinson, 2017), while UDL offers principles for designing flexible learning environments that reduce barriers to access and engagement (Zhang et al., 2024; see Table 1). In teacher preparation coursework, integrating these frameworks can help instructors design courses that both support preservice educators' learning needs and illustrate how inclusive instructional practices may be implemented in PreK–12 classrooms. The following sections describe how teacher educators can integrate UDL and differentiated instruction by differentiating content, process, and product while considering preservice educators' readiness, interests, and learning preferences.

To support this process, we propose a Plan–Model–Embed framework for integrating UDL and differentiated instruction within teacher preparation coursework (see Figure 1). This frame-

FIGURE 1: Plan–Model–Embed Framework for Integrating UDL and Differentiated Instruction in Teacher Preparation Coursework



work organizes instructional decisions across three interconnected phases that occur throughout the course. During the planning phase, instructors intentionally design course structures, learning activities, and assessments that anticipate learner variability among preservice educators. During the modeling phase, instructors make their instructional decision-making visible by explaining how course design and instructional strategies support diverse learners. Finally, during the embedding phase, preservice educators analyze, reflect on, and apply these

practices through discussion, reflection, and instructional design activities.

Experiencing these instructional approaches as learners allows preservice educators to observe how flexible instructional design can support engagement, comprehension, and participation (Sims et al., 2026). Importantly, when instructors create opportunities for preservice educators to reflect on these experiences, students begin to recognize how similar approaches can be applied in their own future classrooms. In this way, teacher preparation coursework

becomes a space where preservice educators both experience and analyze inclusive instructional practices.

Plan: Learner Variability in Teacher Preparation Courses

Implementation of the Plan–Model–Embed framework begins during the course planning process. Teacher educators can design course structures that anticipate learner variability by incorporating flexible learning opportunities and gathering information about preservice educators' backgrounds, experiences, and learning preferences early in the semester. Understanding these characteristics allows instructors to make informed decisions about instructional supports, grouping structures, and learning activities throughout the course (Please see Figure 2 for checklists to guide instructors throughout the planning phase).

Using UDL in the Plan Phase. *“UDL involves the proactive application of instructional design concepts, pedagogical knowledge, and instructional technology to create instruction that is accessible and engaging to learners across the spectrum of ability” (Spencer, 2011, p.10).*

UDL emphasizes proactive instructional design, requiring educators to anticipate learner variability and create accessible instruction before encountering specific students (CAST, 2024). Therefore, during the plan phase, UDL is used to design or edit a syllabus that provides opportunities for multiple means of engagement, multiple means of representation, and multiple means of action & expression. The syllabus is the first place where student-teachers see UDL and differentiation and it is the launching pad instructors will use to begin modeling these practices on the first day of class.

For example, for a class teaching behavioral analytic instructional strategies, such as enhanced milieu teaching, students will read about enhanced milieu

FIGURE 2: Checklist for Class Planning to Use the Plan–Model–Embed Framework for UDL and Differentiation

1. Plan before Class Start

- ☐ Design Class Syllabus using UDL and allude to differentiation through language choice
- ☐ Create & send out student survey activity

2. Plan for Class Day One

- ☐ Modeling UDL + Differentiation with think-alouds on Day One
- ☐ Multiple means of access, engagement, and action & expression
- ☐ Building relationships and gathering data for differentiation on-going planning
- ☐ Begin to establish norms and procedures for constructive and critical reflection discussions by asking students to review the syllabus in pairs and facilitating a whole group discussion

3. Process for Every Class

- ☐ Model based on plan and on-going planning both in the moment and in-between classes, use think-alouds
- ☐ Make revisions in the moment and share why and what you are doing with the students, referencing UDL and differentiation
- ☐ Constructive and Critical Reflection, throughout in the class and/or done at the end of the class

teaching, they will watch videos of enhanced milieu teaching, and they will watch their class members and teacher do enhanced milieu teaching. When it is time to act and express what they know, they are given choices in the syllabus: to submit written reflections and critiques of their experience using enhanced milieu or they can submit a video reflection and self-critique. For some learning units or class sessions, there will be choices for access and engagement (e.g., pick the reading, video, or peer-to-peer demonstration). For this class, all three are required, but the student-teacher can choose some access option, i.e., to read the text or listen to it using a read-aloud app. In the UDL syllabus, a non-exhaustive list of choices for access, engagement, and expression is presented, and there is a statement encouraging students to use and share other options that are not listed. For example, all articles and readings include links to audio and visual resources when available.

Using Differentiation in the Plan Phase. *“In differentiated classrooms, teachers begin where students are, not*

the front of a curriculum guide” (Tomlinson, 2017, p. 15).

Differentiation requires teachers to deeply understand their students’ readiness levels, interests, and learning profiles to effectively tailor instruction (Tomlinson, 2017). Special education teacher preparation classrooms often include preservice educators with varied levels of prior knowledge and experience. Some students may have previously worked as paraprofessionals, tutors, or classroom aides in inclusive educational settings, while others may have limited experience interacting with students with disabilities. In addition, preservice educators may differ in their familiarity with instructional terminology, comfort with instructional planning, and preferred ways of engaging with learning materials. Collecting information about these characteristics early in the course allows instructors to identify patterns in students’ readiness, interests, and learning preferences (see Figure 3 for an example survey designed to better understand learner variability).

Additionally, a plan is made to set time aside for planning and discussion about differentiation and getting to know the students on the first day of class (see Figure 1). The information gathered in this conversation, the survey, and on-going conversations throughout the semester will inform the ongoing planning that differentiation requires. Also, the syllabus directly illustrates that differentiation requires ongoing planning and knowing the students by noting opportunities for differentiation that build on the UDL being utilized (see Table 1).

Dr. Rivera teaches a junior-level undergraduate course titled “Instructional Methods for Students with Moderate and Severe Disabilities” within a special education teacher preparation program. During the first week of the semester, she invites preservice educators to complete a brief learning profile survey designed to help her better understand their backgrounds and learning preferences. Students are asked to share information about their prior coursework, experiences working with individuals with disabilities, areas of interest within special education, and preferred ways of engaging with course materials. To demonstrate flexibility in responding, students may submit written responses through the course learning management system or record short audio reflections. Marcus, a preservice teacher who previously worked as a paraprofessional in an inclusive elementary classroom, records an audio response describing his interest in autism intervention and behavioral supports. Another student, Aisha, explains that she has limited experience working with students with disabilities and hopes to build confidence in designing instructional supports.

Model: Demonstrating Inclusive Instruction in Teacher Preparation Courses

The second phase, model, begins on the first day of class. While the instructor

FIGURE 3: Learner Profile Survey Sample

This brief survey helps the instructor better understand students' backgrounds, experiences, interests, and learning preferences. The information gathered will help guide instructional planning and support inclusive learning experiences throughout the course. You may respond in written form or by submitting a short audio or video response, if preferred.

1. What is your current program status?

☐ Sophomore

☐ Senior

☐ Junior

☐ Graduate student

2. Which of the following courses have you already completed? (Check all that apply)

☐ Classroom Management

☐ Instructional Methods in Special Education

☐ Inclusive Education

☐ Applied Behavior Analysis

☐ Assessment or Progress Monitoring

☐ None of the above

3. Have you worked with children or youth with disabilities in a school or community setting?

☐ Yes (briefly describe your experience: _____)

☐ No

4. What are some topics, activities, or hobbies that you enjoy outside of school?

5. What are some areas you are most interested in learning more about during this course?

6. What types of classroom examples or learning activities tend to be most engaging for you?

☐ Real classroom case studies

☐ Group discussions

☐ Video demonstrations

☐ Problem-solving scenarios

☐ Hands-on practice activities

☐ Other: _____

7. When learning a new instructional strategy, which formats help you understand the material best? (Check all that apply)

☐ Reading articles or textbook chapters

☐ Small-group discussions

☐ Watching video demonstrations

☐ Visual diagrams or graphic organizers

☐ Instructor modeling

☐ Other: _____

☐ Practicing strategies with peers

8. Which learning activities help you feel most confident applying new ideas?

☐ Practicing with peers

☐ Discussing ideas with classmates

☐ Observing demonstrations

☐ Writing reflections

☐ Working through case examples

9. What is one instructional skill you hope to develop in this course?

10. Is there anything you would like your instructor to know about how you learn best?

is reviewing the syllabus and expectations, they inform the class that they are modeling UDL and differentiation throughout the semester. The instructor does a brief lesson on UDL and differentiation as frameworks and asks students to review the syllabus in pairs or groups. Then, the instructor facilitates a discussion to allow students to share their observations on how UDL and differentiation are used in the syllabus. Modeling is done throughout the semester.

Modeling UDL. Since UDL is a proactive process, the instructor models what UDL they planned for the students and clearly explains the UDL used—multiple means of engagement, multiple means of representation, and multiple means of action & expression.

Dr. Rivera is reviewing the syllabus on the first day of class with her students. She points to Week 3 on the syllabus and says, “For the Week 3 assignments you will be asked to design a mini lesson for an AAC user. Since this class has mastered lesson plan writing you can either turn in a written lesson plan, slide presentation with visuals and speaker notes, video of you explaining the lesson, or an infographic of the lesson. This assignment was planned using UDL and provides you with multiple means of action & expression. Who can tell me more about that aspect of UDL?”

Modeling Differentiation. The survey activity allows the instructor to learn about the class while also modeling flexible participation options that support diverse learners. Information gathered during this phase informs instructional planning throughout the semester, including decisions about scaffolding, grouping, and opportunities for applied practice. Once instructors have developed a clearer understanding of their students, they can intentionally incorporate differentiation across instructional dimensions, including content, process, and product. Because you need to be

in front of your students to effectively differentiate, modeling and planning are always entwined. The instructor is both planning and modeling throughout the semester in the classroom as needs come up. Table 1 provides an example of how teacher educators may conceptualize differentiation planning and modeling when designing teacher preparation coursework.

Differentiating content involves adjusting how learners access course materials and instructional information. Within special education teacher preparation coursework, instructors can provide multiple entry points to course concepts while maintaining shared learning goals. Providing varied ways of accessing content allows preservice educators with different levels of background knowledge and learning preferences to engage with course materials in meaningful ways. In order to differentiate effectively, special educators need to get to know their students and form relationships with them. It is ongoing throughout the semester and requires both making new instructional choices in the moment and in between class planning.

Process differentiation focuses on how learners engage with instructional activities and interact with new information. In teacher preparation coursework, instructors may differentiate process through flexible grouping, collaborative learning activities, and structured opportunities for discussion and application. Flexible grouping can be particularly helpful when preservice educators enter the course with varied levels of experience. Instructors may intentionally form groups that include students with different backgrounds so that preservice educators can learn from one another’s experiences and perspectives.

Differentiating products involves providing multiple ways for learners to demonstrate their understanding while maintaining shared learning goals.

Within teacher preparation coursework, instructors may provide flexible options for how preservice educators complete assignments or demonstrate mastery of course concepts (see Table 1).

Following a practice activity implementing enhanced milieu teaching, Dr. Rivera asks preservice educators to reflect on their implementation of the strategy. Students may choose to submit either a written reflection or a short video reflection. Marcus submits a written reflection analyzing how he used modeling and prompting during the practice activity. Aisha records a short video reflection discussing the challenges she encountered and describing how she would adjust her instruction in a real classroom.

Both formats require preservice educators to analyze their instructional practice and connect their experiences to course concepts. Providing multiple formats for demonstrating understanding allows preservice educators to communicate their learning in ways that align with their strengths while maintaining consistent expectations for learning outcomes.

Embed: Reflection and Connection to Future Teaching Practice

The final phase of the Plan–Model–Embed framework involves embedding opportunities for preservice educators to analyze and reflect on the instructional practices they experience throughout the course (deBettencourt & Nagro, 2019; O’Brien et al., 2021). Reflection plays an important role in helping preservice educators connect instructional theory with teaching practice. Teacher educators can incorporate structured opportunities for reflection through end-of-class discussions, short written reflections, or small-group conversations embedded within instructional activities. These reflective activities encourage preservice

educators to consider how instructional decisions influence engagement, comprehension, and participation. In this phase, the focus is on helping students reflect and make real-life connections to all aspects of UDL and differentiation.

At the end of a class session, Dr. Rivera invites preservice educators to reflect on the learning activities used during the lesson. She asks students to discuss in small groups: “Which aspects of today’s lesson helped you understand the instructional strategy most clearly?” and “How did the different learning activities support your engagement with the material?” Marcus explains that watching the video demonstration before practicing the strategy helped him visualize how the intervention works in real classrooms. Aisha shares that practicing the strategy in small groups allowed her to build confidence before applying it independently. Dr. Rivera then facilitates a whole-class discussion connecting these experiences to future teaching practice. “Today you experienced several ways of learning about this strategy,” she explains. “In your future classrooms, you will also have students who benefit from different types of learning opportunities. How might you use similar approaches to support the diverse learners in your classroom?”

Through these conversations, preservice educators begin to recognize how instructional decisions influence engagement and access to learning. By reflecting on their own learning experiences, preservice educators develop a deeper understanding of the value of UDL and differentiated instruction and gain insight into how these approaches can support diverse learners in their future classrooms.

Think-Alouds. Modeling is an evidence-based practice for learning and commonly already used in special education teacher preparation. The next step in the embed phase is for instructors

to externalize their thought processes—through verbal explanation, strategic decision-making, and iterative refinement. In this way, instructors provide learners with experienced examples of UDL and differentiation. Think-alouds promote metacognitive awareness by verbalizing the reasoning behind decisions, which helps learners reflect on and refine their own strategies (Eagan, 2023).

When reviewing the course roster before and during the first class session, the instructor is getting to know the students and beginning to gather relevant data for differentiation (e.g., disability support information from the disability support center; progress thus far in the program). While doing this, the instructor can use a think-aloud protocol to actively model for the students. For example, the instructor may say:

Please raise your hand if you have already taken behavior management. I am asking who of you has taken behavior management already to help me form groups for Assignment 2 on the syllabus. Grouping in this way is part of differentiation.

Thinking-alouds will be used every class session while modeling UDL and differentiation practice and planning. For example, when it is time for Assignment 2, the instructor will share:

Remember on the first day of class when I asked who has already taken behavior management? If you notice, every group has at least one person who has already taken that class because they have been exposed to some of these concepts already. These groupings are intentional to help me differentiate instruction.

Early in the semester, instructors will be doing think-alouds often and as the semester goes on the instructor will fade this strategy. As it is being faded out, the instructor will then pose questions to the class for more quick, critical, and constructive reflections. For example,

in Week 2 an instructor will say, “I am making these groupings based on (reason) because of (UDL/differentiation).” Later, in Week 7, the instructor will ask the class, “What are some things I may have thought about when I rearranged groups for the new topic?”

Constructive and Critical Reflections. There are two ways these are used when embedding and modeling UDL and differentiation: (1) End-of-class discussions that are about 10 minutes long. These will only happen a few times across the semester to ensure time is mainly spent on class content. (2) Questions embedded in the class where the instructor listens to 1–3 student responses and moves quickly back to class content.

In these reflections, students are asked questions about (1) What is the instructor doing? (2) How does the instructional choice fit into the differentiation or UDL frameworks? (3) What is done well? (4) What can or needs to be changed or improved for better implementation of UDL and differentiation? (5) How do differentiation and purposeful observations of specific students’ abilities and needs impact how well you can use UDL in future planning?

Students are asked to be thoughtful, courteous, and respectful in their responses. Reflection is central to learning. This form of questioning has been named constructive and critical reflection to highlight to students the expectations and learning outcomes.

Bringing it All Together: Plan-Model-Embed UDL and Differentiation

At the beginning of the semester, Dr. Rivera asked preservice educators whether they had previously completed a classroom management course. Later in the semester, when students begin working on a behavior support planning assignment, she forms collaborative groups intentionally. Each group

TABLE 1: Using UDL as a Foundation to Plan Differentiated Instruction in Special Education Teacher Preparation

UDL foundation	Differentiated instruction dimension	Students' readiness	Students' interests	Students' learning preferences
Proactively supports multiple means of representation by offering varied ways to access course content for all learners	Content (How specific learners access course material)	Provide scaffolded readings or optional advanced articles; offer brief concept overviews for students new to a topic based on specific student's needs	Incorporate examples aligned with students' interests (e.g., early childhood, autism intervention, transition planning)	Provide materials in multiple formats based on specific student's needs (e.g., readings, video demonstrations, visual summaries)
Proactively supports multiple means of engagement through varied learning activities and collaborative participation for all learners	Process (How specific learners engage with learning activities)	Use flexible grouping so students with prior experience can support peers; provide guided practice for students needing additional support	Offer opportunities to select discussion topics or case studies aligned with professional interests	Include varied learning activities based on specific student's needs (e.g., small-group discussion, peer practice, instructor modeling, case analysis)
Proactively supports multiple means of action and expression by allowing different ways to demonstrate learning for all learners	Product (How specific learners demonstrate understanding)	Provide optional scaffolds such as reflection prompts or planning templates based on specific student's needs	Allow students to select topics relevant to their specific career goals	Offer multiple ways to demonstrate learning based on specific student's needs (e.g., written reflection, video reflection, presentation)

includes at least one student who has previously taken the behavior management course. During class, Dr. Rivera explains her reasoning to the students: "You may notice that each group includes someone who has encountered these concepts before. I intentionally formed groups this way so that students with prior experience can help facilitate discussion and support peer learning."

Through these explanations, preservice educators observe how instructional decisions can support learners with different levels of experience. Instructors may also model their instructional reasoning through think-aloud strategies, which make instructional decision-making visible to students. When instructors explain why they make particular instructional choices, preservice educators gain insight into the planning and decision-making processes involved in inclusive teaching.

Later in the semester, Dr. Rivera re-arranges groups for a new instructional unit. Before beginning the activity, she asks the class, "What factors do you think I considered when reorganizing the groups today?"

Students identify several possibilities, including prior coursework, familiarity with the topic, and opportunities for peer collaboration. Through these discussions, preservice educators begin to recognize how instructional decisions align with inclusive teaching practices.

CONCLUSION

Preparing preservice educators to teach in inclusive classrooms requires learning environments that reflect the same principles of flexibility and responsiveness expected in PreK–12 settings. Integrating UDL and differentiated instruction within teacher preparation coursework allows preservice educators to experience inclusive instructional practices as learners while developing the knowledge and skills needed to support diverse students in their future classrooms.

The Plan–Model–Embed framework described in this article offers one practical approach for incorporating these principles into teacher preparation courses. By planning for learner variability, modeling instructional decision-making, and embedding opportunities for reflection

and application, teacher educators can create learning environments that both support preservice educators' development and illustrate how inclusive instructional practices can be implemented in practice. Through these experiences, preservice educators can better understand how flexible instructional design can support engagement and access to learning for all students.

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