

STANDARD INDICATOR 1.2

APPLICATION OF LEARNING THEORY

The teacher demonstrates an understanding of how students develop and learn.

In addition to attaining knowledge specific to their students, accomplished educators consult a variety of learning and development theories to make informed decisions about instructional content and teaching methods. They are familiar with concepts about teaching and learning generated by social and cognitive scientists. Moreover, educators integrate that knowledge with personal theories about learning and development generated from their own practice. Based on their theoretical knowledge and practical experience in the classroom, accomplished teachers understand that each student has different cognitive strengths. Educators determine how to capitalize on those assets as they consider how best to nurture their students' abilities and aptitudes.

Accomplished teachers provide multiple opportunities for students to demonstrate their knowledge and showcase their abilities, both in and out of traditional school settings. For example, students who find the calculation of percentages challenging in school may be able to determine value discounts readily while shopping—a mathematics instructor may thus incorporate that activity within an exercise to provide students with an alternate way to demonstrate their knowledge and improve their abilities. Accomplished teachers strive to appreciate and understand their students' aptitudes and intelligences. By encouraging students to relate their personal experience to the classroom environment, teachers help students make learning relevant and advance their skills across academic settings.

Importantly, accomplished teachers recognize that, in a multicultural world, students possess a wide range of abilities and aptitudes that might be valued differently by families, local communities, and schools. For instance, the knowledge, skills, and dispositions nurtured in a Native American community may differ from those promoted in a Latino community. Similarly, those cultivated by a suburban community may differ from those developed in an urban community. That said, people share important similarities as well, regardless of their social affiliation or cultural background. Those similarities and differences are always shifting.

Thus, teachers must become attuned to their students' individual situations and changing circumstances. By doing so, accomplished teachers can develop an array of strategies for sharing differences, identifying similarities, and embracing diversity within the learning environment. Those strategies provide educational experiences that capitalize on classroom diversity by connecting students with various cultural experiences while broadening their perspectives on learning and thinking.

Adapted from NBPTS, *What Teachers Should Know and Be Able to Do*, 2nd ed. (2016, pp. 14–15).

Key Elements of Teacher Practice Related to Standard Indicator 1.2

- Understanding the importance of providing different ways for students to input information and demonstrate learning;
- Encouraging students to relate their personal experience to the classroom environment and events occurring in the world in order to make learning relevant;
- Drawing on students' prior knowledge in clear and meaningful ways to prepare students for new learning;
- Connecting learning to students' diverse personal experiences as well as events occurring in the world;
- Using knowledge of child development characteristics to select developmentally appropriate strategies from theory and personal experience; and
- Structuring social learning opportunities intentionally, drawing upon knowledge of students' cognitive strengths in ways that enhance the ways in which students learn from one another.

Questions for Reflection and Planning

- How do I ensure that my instruction is developmentally appropriate for my students?
- How do I incorporate my understanding of social and cognitive learning theories into my practice?
- How do I provide relevant learning experiences that build on the developmental strengths of this group of learners to engage and motivate them?
- As I plan, do I include a variety of ways for students to input new learning and also various ways for them to demonstrate understanding?
- Do I collaborate with students to help them understand and analyze their learning needs?
- How do I facilitate learners in choosing approaches that will be effective for them and produce quality work?
- How do I use my knowledge of students' cognitive strengths to design social learning opportunities that benefit students?

Core Proposition 1: Teachers are committed to students and their learning.

1.2 LEVEL 1	
Standard Indicator 1.2. Application of Learning Theory. The teacher demonstrates an understanding of how students develop and learn.	
Level 1, Ineffective	
Performance-Level Descriptors	<p><i>The teacher does not implement developmentally appropriate instructional strategies or those that support multiple ways for students to input information, instead expecting all students to demonstrate understanding in a single context determined by the teacher.</i></p> <p><i>The teacher does not provide opportunities for students to interact and learn from one another in a social context.</i></p> <p><i>The teacher does not connect learning to prior knowledge nor support students in making connections among new learning, their diverse personal experiences/backgrounds, or events occurring in the world.</i></p>
Critical Attributes	<ul style="list-style-type: none"> ■ The teacher routines and instruction represent unrealistic expectations for students. ■ The teacher does not structure learning opportunities to allow students to interact with, and learn from, one another. ■ The teacher does not demonstrate understanding of how to approach instruction using developmentally appropriate strategies. ■ The teacher does not connect instruction to students' prior knowledge or people and events that are relevant to the students' lives and the world.
Possible Examples	<ul style="list-style-type: none"> ■ When designing centers for a science unit for her kindergarten class, the teacher includes activities requiring fine motor skills beyond the capacity of many students and provides no alternative strategies. ■ A teacher provides his sixth graders who read at a beginning level with books borrowed from the kindergarten and first-grade classrooms. ■ A first-grade teacher's lesson includes a teacher-directed lecture for an entire 30-minute period without opportunities for students to share their thinking with others. ■ A teacher introduces long division by teaching the procedure for the algorithm before building conceptual understanding through concrete experiences and real world, relevant examples. ■ A ninth-grade English teacher presents a unit on <i>Romeo and Juliet</i> without engaging students in making connections between real-world examples such as relationship challenges teens experience developmentally and those of the characters in the play.
Implications for Professional Learning (adapted from InTASC Learning Progressions 1.0)	<p><i>Develop the ability to:</i> Use understanding of social and cognitive learning theories to better understand variations in development that can guide work with learners.</p>

Core Proposition 1: Teachers are committed to students and their learning.

Teaching practice is advanced through professional learning that will, for example:

Expand knowledge of learners.

- Access online resources such as structured courses, blogs, and podcasts addressing child development, social and [cognitive learning theory](#), and brain research.

Strengthen analysis and reflection on practice.

- Work with a coach or other colleague to learn how to plan and implement [developmentally appropriate](#) instruction and learning activities.
- Invite peers to observe in class or share a video of self and use feedback to better meet learner needs.

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1.2 LEVEL 2	
Standard Indicator 1.2. Application of Learning Theory. The teacher demonstrates an understanding of how students develop and learn.	
Level 2, Developing	
Performance-Level Descriptors	<p><i>The teacher attempts to implement some developmentally appropriate strategies that may not result in different ways for students to input information and demonstrate understanding.</i></p> <p><i>The teacher attempts to incorporate some opportunities for social learning and student to student interaction; however, these may not always result in helping students learn from one another in meaningful ways.</i></p> <p><i>The teacher attempts to build on students' prior knowledge to support students in making connections among new learning, their diverse personal experiences/backgrounds, or events occurring in the world; however, the connections may not be clear to students.</i></p>
Critical Attributes	<ul style="list-style-type: none"> ■ The teacher demonstrates some understanding of developmentally and age-appropriate strategies and learning experiences, but implementation of these strategies may not result in creating access to the learning for most students. ■ The teacher provides some activities for students to interact with one another; however, these interactions may not be structured to advance the learning. ■ The teacher recognizes that students learn in different ways but routinely provides one activity for all students to engage with the content. ■ The teacher includes connections to real-life experiences that may not be clear or relevant to students.
Possible Examples	<ul style="list-style-type: none"> ■ During the lesson on surface area of a cylinder, the teacher notices that students are approaching the problem in different ways but does not highlight alternative paths to the solution other than the use of a formula. ■ When forming partners during instruction, the teacher routinely allows students to select partners without considering how the pairings will benefit students in helping each other to accomplish the intended learning. ■ When teaching students to compare and contrast the characteristics of two pieces of music, the teacher has not prepared students with different strategies to use such as a visual or graphic organizer to assist students in assimilating the knowledge and demonstrating learning. ■ The teacher lacks a current knowledge of what interests her students and attempts to build on prior knowledge using an example from a television show that is unfamiliar to students of that age group.
Implications for Professional Learning (adapted from InTASC Learning Progressions 1.0)	<p><i>Develop the ability to:</i> Use understanding of social and cognitive learning theories to better understand variations in development that can guide work with learners.</p>

Core Proposition 1: Teachers are committed to students and their learning.

Teaching practice is advanced through professional learning that will, for example:

Expand knowledge of learners.

- Access online resources, such as structured courses, blogs, and podcasts addressing child development, social and [cognitive learning theory](#), and brain research.
- Use formal and informal means of eliciting feedback from students on how well learning activities meet their needs as learners.

Strengthen analysis and reflection on practice.

- Work with a coach or other colleague to learn how to plan and implement [developmentally appropriate](#) instruction and learning activities.
- Invite peers to observe in class or share a video of self and use feedback to better meet learner needs.

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1.2 LEVEL 3	
Standard Indicator 1.2. Application of Learning Theory. The teacher demonstrates an understanding of how students develop and learn.	
Level 3, Effective	
Performance-Level Descriptors	<p><i>The teacher implements developmentally appropriate strategies that provide multiple ways for students to input information and demonstrate understanding.</i></p> <p><i>The teacher incorporates opportunities for social learning, structuring opportunities for student-to-student interaction that help students learn from one another in meaningful ways.</i></p> <p><i>The teacher builds on students' prior knowledge to support students in making clear connections among new learning, their diverse personal experiences/backgrounds, or events occurring in the world.</i></p>
Critical Attributes	<ul style="list-style-type: none"> ■ The teacher actively seeks out, develops, and implements learning experiences that are developmentally appropriate and engages learners in a variety of learning experiences that capitalize on their developmental strengths and support areas for growth. ■ The teacher recognizes and understands how diverse learners process information and develop skills, and uses this knowledge to incorporate multiple approaches to learning and seek resources that engage a range of learner preferences. ■ The teacher structures social learning opportunities intentionally to promote learning through meaningful student interaction. ■ The teacher employs strategies designed to activate students' prior knowledge and that are relevant to students' lives.
Possible Examples	<ul style="list-style-type: none"> ■ At the beginning of the course, a science teacher supports the differing learning strengths of the students by providing instruction on strategies for taking combination notes using words, numbers, and pictures to represent the concepts he is presenting. ■ An early childhood teacher establishes a learning station where students are asked to order a group of objects from smallest to largest so she can determine which students are in the preoperational stage (possibly creating two groups, one small and one large), or moving toward concrete operational thinking involving the correct ordering of all objects. ■ For a culminating project, the art teacher proposes a subject for student art but allows students to choose the media they want to use to represent the subject. ■ The teacher provides visuals of food lines and recordings of radio reports and music, as well as excerpts from personal diaries of individuals who lived during that era, to provide a variety of ways for students understand the Great Depression. ■ A math teacher intentionally structures heterogeneous problem solving teams to allow students to capitalize on the different perspectives and levels of conceptual understanding among their peers. ■ At the beginning of her unit on weather, a teacher shares a story about her sister's experience in Hurricane Katrina and then asks her fourth graders to think about a time they were in a violent storm and share their example with a partner.
Implications for Professional Learning (adapted from InTASC Learning Progressions 1.0)	<p><i>Develop the ability to:</i> Use a deep understanding of learning theories to design and implement experiences that are responsive to learners' complex developmental needs.</p>

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Teaching practice is advanced through professional learning that will, for example:

Strengthen analysis and reflection on practice.

- Examine practice to see how well it addresses learners' varieties of developmental needs.

Build collaborative skills to support learners' complex development.

- Work in professional learning teams to extend knowledge of learner development.

Build skill in personalizing and customizing learning.

- Engage learners in generating ideas for multiple ways to achieve, and demonstrate achievement of, a particular outcome or set of outcomes.
- Engage in a cycle of coaching focused on improving design and practice of personalized learning.

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1.2 LEVEL 4	
Standard Indicator 1.2. Application of Learning Theory. The teacher demonstrates an understanding of how students develop and learn.	
Level 4, Distinguished	
Performance-Level Descriptors	<p><i>The teacher uses understanding of student aptitudes and intelligences to implement developmentally appropriate strategies that provide multiple ways for students to input information and demonstrate understanding.</i></p> <p><i>The teacher incorporates opportunities for social learning, designing student-to-student interactions that draw upon students' varied cognitive strengths, using student diversity in ways that help students learn from one another and enrich the learning environment.</i></p> <p><i>The teacher builds on students' prior knowledge to support students in making clear and personally relevant connections among new learning, their diverse personal experiences/backgrounds, or events occurring in the world.</i></p>
Critical Attributes	<ul style="list-style-type: none"> ■ Taking into account the specific developmental needs and characteristics of her students, the teacher modifies existing units of instruction or creates relevant and challenging learning experiences. ■ The teacher engages students in the process of structuring social learning opportunities intentionally to promote learning through meaningful student interaction. ■ Recognizing how diverse learners process information and develop skills, the teacher incorporates multiple approaches to learning and seeks resources that engage a range of learner preferences. ■ The teacher collaborates with students to help them understand and analyze their learning needs. ■ The teacher facilitates learners in choosing approaches that will be effective for them and produce quality work.
Possible Examples	<ul style="list-style-type: none"> ■ For the upcoming novel study the teacher draws upon the artistic abilities of the ELs in her class and their unique strengths in working collaboratively to develop a literature circle approach that includes the use of drawings to demonstrate comprehension and a vocabulary journal that has students create graphic representations of key terms. ■ A science, technology, engineering, and mathematics (STEM) teacher plans to provide multiple project options for the unit on forces of motion and allow each student to select the one that best supports his or her approach to learning. ■ A science teacher provides an environmental crisis scenario that uses student teams representing diverse strengths and asks them to determine the best way to share the responsibilities in determining a solution and presenting it to the rest of the class. ■ In addition to the class goals for the fifth-grade geology unit, students are asked to develop an additional learning experience of relevance to them with a plan on how they would show what they have learned. ■ The teacher selects an event in the community that is connected to the student learning and has students develop several related lessons to develop and present to the class.
Implications for Professional Learning (adapted from InTASC Learning Progressions 1.0)	<p><i>Develop the ability to:</i> Use a deep understanding of learning theories to design and implement experiences that are responsive to learners' complex developmental needs.</p>

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Teaching practice is advanced through professional learning that will, for example:

Expand knowledge of learner diversity and its implications for adjusting instruction.

- Interact with parents and local communities to identify resources that can be used to increase relevancy and learner engagement.

Strengthen analysis and reflection on practice.

- Share practices related to particular groups of learners with colleagues and use feedback to better meet specific learner needs.

Build skill in problem solving to ensure the achievement of learner outcomes.

- Draw on learner input to structure learning opportunities that allow for student choice and autonomy in their learning and in how they demonstrate proficiency.

Build skill in personalizing and customizing learning.

- Work with colleagues to design and test various supports for high-level achievement for learners with particular needs.