Transformational Learning Principles in Practice

What Are the Transformational Learning Principles?

The Transformational Learning Principles (TLPs) are a set of practices to ensure all students have access to joyful and meaningful learning every time they come to school. They were developed by ISTE+ASCD to bring focus and a common language to the work of improving student learning experiences. Grounded in learning science and centered on connection, engagement, and agency, they highlight key instructional approaches that schools and educators can use to elevate the experience of school for students—and ensure that learning truly works for them.

8 Principles for Transformational Learning

Nurture

- **Cultivate Belonging**
  Educators prioritize relationship building in physical and virtual spaces. They strive to create learning cultures that ensure students' safety and belonging and foster durable skills such as empathy, creativity, and collaboration.

- **Connect Learning to the Learner**
  Educators hold high expectations for all students and tailor instruction to meet students' individual needs and interests. They use differentiation strategies and impactful technology tools to embrace learner variability, increase engagement, and advance progress toward mastery.

- **Ensure Opportunity**
  Educators are responsive to students' cultural and developmental contexts. They celebrate and build on students' unique experiences, strengths, and voices. They reduce barriers to meaningful learning for all students.

Guide

- **Spark Curiosity**
  Educators connect content and skills to students' prior knowledge, experiences, and passions to spark curiosity and inspiration. Technology is used to create new pathways for student engagement and enable students to express knowledge, skills, and aspirations in a variety of ways.

- **Develop Expertise**
  Educators use evidence-based practices to ensure students learn and develop essential skills and knowledge. They frame learning around key conceptual understandings, use multiple modes of presentation and inquiry, model skills, and prioritize intentional practice.

- **Elevate Reflection**
  Educators use a variety of data and tools to provide timely and specific feedback to students that helps them understand how to improve and encourages critical thinking. Students are given time and support to reflect on, learn from, and apply feedback. They monitor their own progress and set goals.

Empower

- **Prioritize Authentic Experiences**
  Educators create opportunities for students to apply and extend their learning in meaningful, real-world contexts. They facilitate authentic performance-based projects and assessments that elevate students' roles as designers, creators, collaborators, and problem solvers.

- **Ignite Agency**
  Educators use a mix of learner-led approaches and flexible learning formats to encourage student agency and exploration. Students have opportunities to follow their own intellectual pursuits, take risks, make discoveries, challenge assumptions, and build lifelong learning skills.

3 Domains of Impactful Learning

The TLPs are grouped into three domains that denote a continuum of instructional approaches to support effective student learning experiences.

Nurture

Establishing the foundations and connections, both academic and interpersonal, for engaged student learning.

Guide

Developing students' knowledge and competencies in ways that foster curiosity and depth of understanding.

Empower

Supporting student-driven learning, authentic problem solving and discovery, and the development of complex learning skills.

Cultivate Belonging

In Context

A growing body of research shows that to grow fully as learners, students must feel like they belong and are valued in their classroom and school (ISTE+ASCD, 2025). "When we focus on relationships, learning follows," educator Pete Hall and mental health counselor Kristin Van Marter Souers (2022, p. 58) remind us. With this in mind, educators can take intentional steps to build authentic relationships with students and create thriving learning communities in their classrooms. Students need to feel seen and known and have genuine opportunities to contribute to and create their classroom experience, whether online or in person. They also need opportunities to develop ideas and solutions with their peers. These relational aspects of learning are foundational to student engagement, and they help students develop skills like social awareness, collaboration, and problem solving that are critical to in-depth learning.

★ Tips for Practice ★

- Greet students by name when they enter the school, classroom, or virtual learning space, and let them know you are glad to see them there.
- Create opportunities for students to help set behavioral norms, learning expectations, and classroom routines.
- Periodically meet with students one-on-one or in small groups to learn about their interests and what they value.
- Create routines such as circle time, class meetings, or online chats where students share personal stories and discuss their learning as it relates to their lives.
- Facilitate opportunities for students to resolve conflicts and understand one another's viewpoints in a respectful way.

- Use collaborative formats such as think-pair-share, mixed small groups, or shared digital workspaces to enable students to work together and give one another feedback.
- Regularly talk with students about what it means to be a good digital citizen and provide opportunities for them to practice using these skills.
- Publicly showcase students' work and contributions to the class using portfolios, publications, or presentations.
- Use technology tools that facilitate communication with students and families about a student's contributions, experiences, and individual learning progress.

Connect Learning to the Learner

In Context

The best educators "do not force-fit learners into a standard mold; these teachers are students of their students," writes differentiated instruction expert Carol Ann Tomlinson (2014, p. 4). This means they take time to develop a nuanced understanding of their students' strengths, needs, and interests, and they design learning experiences that are flexible enough to respond to such differences. In these environments, students have varied options and tailored support to pursue learning goals. The learning feels relevant to them in that they can see how it connects to their progress and aspirations. They experience both success and appropriate struggle, and they learn to take risks. Digital tools can help adapt content to various levels and provide a variety of ways for students to demonstrate learning.

★ Tips for Practice ★

- Create learner profiles, based on surveys, interviews, and available data, that document students' strengths, needs, interests, and preferences.
- Regularly use formative assessment (e.g., checks for understanding, exit tickets, online polls, and quizzes) to monitor students' needs and inform instruction.
- Establish flexible seating and grouping systems based on learners' needs and progress to facilitate greater support and participation.
- Develop a menu of learning pathway options that allow student choice while ensuring alignment to learning goals and standards.

- Regularly meet with students one-on-one or in small groups to provide customized support and get their input on their work.
- Provide a range of supplementary materials such as manipulatives, visuals, graphic organizers, and digital resources to support students in processing learning content.
- Modify lesson materials (e.g., by using artificial intelligence [AI] tools) to reflect different levels of complexity and understanding while maintaining alignment to learning goals.
- Implement digital programs, including assistive technology tools, to adapt assignments and support varied learning pathways.

Ensure Opportunity

In Context

Ensuring that students have genuine opportunities to learn at high levels and in ways that speak to their experiences is an important and often complex element of effective pedagogy. To paraphrase scholars Pedro Noguera and Joaquín Noguera, it requires a conscious "commitment to serving all students, regardless of background or need" (2023, p. 30). In practice, this means all students have access to rich and exciting lessons—and the individualized support they need to get the most from them. It also means that students feel included in learning materials, activities, and routines and that their unique backgrounds, voices, abilities, and perspectives are honored and integral to the learning process. A big challenge for educators is that students' access to high-value learning opportunities can be undermined, often unintentionally, by inherited assumptions, practices, and structures in classrooms and schools. To create genuine opportunity, educators must consistently monitor and address both obvious and subtle barriers to meaningful learning, asking, "Who is flourishing here, who is being left out, and why?"

★ Tips for Practice ★

- Avoid remediation structures that keep some students working on low-level or passive assignments or exercises.
- Where possible, use grade-level or advanced texts and assignments, accompanied by scaffolding to enhance access.
- Design learning activities and facilitate discussions that draw on and validate students' interests, communities, and existing background knowledge.
- Incorporate culturally responsive content and examples throughout lessons and units, regularly auditing curriculum and addressing gaps.
- Create systems—including through digital tools and video observations—for tracking student engagement and participation patterns to ensure all students are included.
- Ensure students have ample opportunities to share their own questions, perspectives, and ideas.
- Encourage students to use technology to explore and share their identities, strengths, and voices.
- Provide opportunities for English learners to use their native language to deepen conceptual understanding and develop projects.
- Understand and honor students' IEPs (individualized education programs) to ensure all students have the support they need to participate fully in learning.
- Ensure students have access to and can effectively use technology that is required for learning.

Spark Curiosity

In Context

Effective learning experiences can only happen when students feel a sense of intrigue and interest in learning. With this in mind, educators should see themselves as "orchestrating curiosity," says instructional expert Zaretta Hammond (Rebora, 2021, p. 15). Studies show that introducing content in novel ways and connecting it to students' knowledge, experiences, and interests significantly boost engagement and achievement (Goodwin & Rouleau, 2023; ISTE+ASCD, 2025). When students feel that what they're learning matters to them personally and is intellectually compelling, it builds intrinsic motivation and connection. They are primed for problem solving and deeper thinking. Technology tools can enhance this effect by giving students opportunities to build on their knowledge, make connections, and pursue unique learning paths. Used with intention, digital tools can also support relevance and agency, further inspiring students' curiosity.

★ Tips for Practice ★

- Begin units with questions, problems, or scenarios designed to stretch students' thinking and create relevance.
- Incorporate demonstrations, data, or contradictions that challenge students' assumptions.
- Offer scenarios and ask students to make predictions about them as a way to build their interest and anticipation.
- Create wonder walls or digital spaces where students can post questions about what they are learning.
- Design entry activities, such as writing prompts, that encourage students to connect new lesson content to their lived experiences and prior knowledge.

- Design hands-on activities (including through digital experiences) that allow students to experience lesson concepts firsthand and play a role in demonstrations.
- Use storytelling to tap into the powers of emotion and imagination.
- Integrate multimedia resources such as videos, images, and interactive simulations into lesson design.
- Give students opportunities to use digital tools to explore new content and ideas and imagine possible applications.

Develop Expertise

In Context

To gain expertise and proficiency as learners, students must build and retain essential disciplinary knowledge and skills. This happens when instructional strategies are grounded in the science of how the brain learns. This means limiting passive learning experiences and rapid-fire curriculum coverage approaches and instead exposing students to new material in ways that help them contextualize it and work with it in meaningful and substantive ways. Students should get the big picture of what they are learning and have opportunities for guided practice that go beyond skimming and cramming and take them deeper into expert habits and skills. Effective educators, researcher Bryan Goodwin (2025) suggests, don't just transmit knowledge and skills. They provide opportunities for students to develop and refine their "mental schemas" around new knowledge and skills, a process that is at the heart of expertise.

★ Tips for Practice ★

- Map the key concepts and skills in your curriculum to identify essential understandings.
- Structure learning activities to build conceptual understanding before procedural fluency.
- Present new concepts and information in multiple modes (e.g., both verbally and visually).
- Use explicit modeling routines to demonstrate skills and make your thinking visible.

- Give students opportunities to actively process new content through writing, inquiry-based discussions, visualizations, and technology-facilitated research and analysis.
- Use exemplar texts, models, and work products to show expert practice.
- Give students opportunities to practice thinking processes and discrete skills used by subject-area experts.
- Establish deliberate practice structures that give students regular opportunities to work on and improve specific skills.

Elevate Reflection

In Context

Reflection is a critical though often underused component of academic growth. Students need genuine opportunities to think critically about their work and what they've learned. This helps them assimilate new information and skills and build greater awareness of their progress and potential. High-quality feedback is essential to this process and has been shown to significantly boost student performance (ISTE+ASCD, 2025). Feedback can come in many forms (including from peers and technology tools), but to be effective, as educator Grant Wiggins (2012) emphasized, it must be timely, specific, and actionable. It should be tailored to encourage students to think directly about their learning or work, what they need to do to improve, and what their next steps should be. Ultimately, a culture of effective feedback can help students become more active and thoughtful participants in their own learning.

★ Tips for Practice ★

- Give students opportunities to regularly reflect on what they're learning and how it connects to their lives or future ambitions (e.g., through quiet time, writing, discussion, drawing/ animation).

- Design reflection routines that prompt metacognition (e.g., journaling, think-alouds, revision periods).

- Implement regular formative assessment checkpoints throughout lessons.

- Co-create rubrics with students that show clearly what high-quality work looks like.

- Ensure that your feedback to students is formative (not just corrective), aligns to learning goals, and identifies what students need to do or think about to improve.

- Establish peer-to-peer feedback protocols for students that focus on specific criteria for reviewing work.

- As a basis for providing more effective feedback, use digital tools to collect and analyze student learning data trends.

- Give students access to digital tools that help them see their progress toward learning goals.

- Ask students, "What went well? What would you do differently next time?" to help them sharpen their reflection skills.

- Schedule conferences with students to discuss progress and steps for improvement.

- Teach older students to use AI tools to get feedback on and analysis of their work and ideas.

Prioritize Authentic Experiences

In Context

To internalize and deepen their learning, students need to apply their knowledge and skills to scenarios that are realistic and compelling to them. Hands-on or active-learning projects that draw on real-world problems or issues can help students make sense of and build on their learning, as well as deepen inspiration, discovery, and engagement. As students engage in genuine inquiry and problem solving, they also develop complex thinking, collaboration, and self-direction skills. Technology tools are integral to authentic learning tasks and projects and can enhance students' capacity as creators and problem solvers. As researcher Liz Kolb writes, "When students are using technology to create, analyze, evaluate, gather, and synthesize knowledge, there can be long-term and positive cognitive growth" (2019, p. 24).

★ Tips for Practice ★

- Audit current units to identify opportunities for real-world application.
- Create performance-based tasks and assessments that mirror real-world scenarios and tasks.
- Develop connections with community partners who can provide authentic learning contexts.
- Design project-based learning initiatives (including interdisciplinary projects) that enable students to use their learning to create solutions or products addressing community or global issues.

- Bring experts from relevant fields into your classroom, either in person or virtually, to give students a better understanding of how disciplinary knowledge is used in real-life jobs and projects.
- Teach students to use AI tools to research issues, synthesize information, and create project plans.
- Have students use technology to create digital content (e.g., podcasts, videos, portfolios, data representations) to apply and demonstrate their learning.
- Establish structures and opportunities for students to share their work with real audiences, such as in presentations, published works, and digital portfolios.

Ignite Agency

In Context

To thrive and grow as learners, students need opportunities to take ownership of their learning and not feel like school is something that is being "done to them." Ownership happens when students are given space to make decisions about their learning and to pursue their own ideas and interests. To support this process, educators can create contexts and assignments where students are empowered to drive their own learning— to determine what they will learn, how they will learn, and how they will demonstrate what they've learned. These experiences increase students' sense of autonomy and competence, which are central to agency and motivation. They create excitement and relevance around learning. In addition, they can boost the development of digital competencies and transferable skills like critical thinking, collaboration, problem solving, and knowledge construction. As educational leader Tanji Reed Marshall writes, "Student agency development increases to the degree to which an adult understands and believes children should be partners in their education" (2022, p. 35).

★ Tips for Practice ★

- Establish regular protocols within units for gradual release of responsibility to students (i.e., "I do," "We do," "You do together," and "You do alone") (Fisher & Frey, 2021).
- Give students structured opportunities to make choices on how they pursue and demonstrate their learning.
- Establish "genius hour" or passion project time where students can engage in their own initiatives and products related to learning goals.
- Create projects that encourage productive risk taking and allow students to learn from mistakes.

- Arrange opportunities for students to pursue personalized learning outside school through community partnerships, externships, or independent research.
- Have students use technology to collaborate with peers and external learning partners or experts on independent learning projects.
- Encourage students to use technology, including AI, to plan and develop their learning paths, explore topics and ideas, ask their own questions, and make refinements to projects.
- Create processes for students to set and monitor their own learning goals.

Ideas for Instructional Leaders

Although the TLPs are focused on instructional interactions and approaches, their implementation depends on the support and vision of school and district leaders. Here are key steps for supporting the TLPs at the school or system level.

Building a Foundation

- Conduct a comprehensive school- or systemwide practice assessment to identify strengths and areas for growth.
- Collaboratively refine your school or system's instructional vision to explicitly incorporate the three TLP domains: Nurture, Guide, and Empower.
- Map existing practices to the eight principles, recognizing what's already working well.
- Create a TLPs implementation team with representatives from different grade levels, content areas, and student support roles.
- Reach out to students, families and caregivers, and community members to invite their participation in planning for transformational learning experiences.
- Audit current resource allocation (e.g., time, staff, funding, technology, attention) to identify what supports and what hinders integration of the types of practices reflected in the TLPs.
- Ensure that technology infrastructure enables connected learning experiences.

Transforming Instructional Practice

- Structure regular, protected time for teacher collaboration focused on each principle (or principles identified as priorities).
- Implement lab classrooms where exemplary practices can be observed and discussed.
- Focus classroom visits on noticing and celebrating principle implementation.
- Create visible representations of the principles throughout buildings.
- Align coaching conversations to specific principles based on teacher needs.
- Provide targeted resources, examples, and support for teachers at different implementation stages.

Sustaining Implementation

- Use evidence of student engagement, achievement, and well-being to guide adjustments.
- Partner with families and caregivers to extend principle implementation beyond school walls.

- Connect with community organizations that can provide learning contexts and support for integrating the principles.
- Establish formal and informal ways to recognize innovative practice.

- Create opportunities for teachers to share their growth journeys and those of their students.
- Document and share transformation stories within and beyond the school.

Questions for Reflection

As you begin looking for ways to integrate the TLPs into your practice, it's important to think about what they mean to you as an educator and how they might challenge or support routines or structures in your classroom or school. Consider what kinds of changes, large or small, you could make to give students a more active and engaged role in their own learning. Here are some questions to spur your thinking.

What does transformational learning mean to you?

In what ways do these principles align with your own experiences of transformational learning, either as an educator or as a learner?

Which principle do you feel most needs attention in your school, classroom, or other learning environment?

What steps could you take to better integrate that principle into your practice or that of the teachers you support? Are there areas within the TLPs that are strengths for you or your school? What conditions or actions led to those "bright spots"?

How do you see AI and other emerging technologies supporting these principles? How could use of these technologies in teaching and learning be transformative rather than transactional?

How might you involve students, families and caregivers, and community members more directly in planning for transformational learning experiences?

Take the TLP Self-Assessment at **iste-ascd.org/tlps-self-assessment**.

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