

BranchED AI Compass

Domain-to-Practice Guide

Domain 4

This guide is designed for teacher educators to support the development of teacher candidates' (TC) readiness for an AI-enabled world. It translates the BranchED AI Compass domain and competency language into concrete learning experiences, evidence sources, and course- and clinical-design decisions that teacher educators can incorporate into existing preparation experiences. The sections below show how the competencies within the domain work together and provide practical guidance for helping TCs develop and demonstrate the knowledge, skills, dispositions, and professional judgment reflected in the AI Compass.

How the Competencies Work Together

The competencies within this domain are distinct but interdependent. AI-Supported Learning Facilitation focuses on guiding students to use AI purposefully for inquiry, feedback, revision, communication, problem-solving, and creation. Productive Struggle, Rigor, and Academic Integrity focuses on protecting the cognitive work and authentic demonstrations of understanding that learning requires. Together, they help TCs facilitate AI-supported experiences without allowing the technology to displace student thinking or ownership.

A Note on Policy and Context

AI use takes place within institutional, professional, and educational contexts. Teacher educators and teacher candidates should be familiar with and adhere to applicable program, institutional, school, district, state, and other relevant policies and guidance related to AI use, data privacy, approved tools, academic integrity, and professional practice. The AI Compass and accompanying resources are intended to support the development of AI readiness and informed professional judgment within these contexts; they do not establish or supersede institutional or district policy.

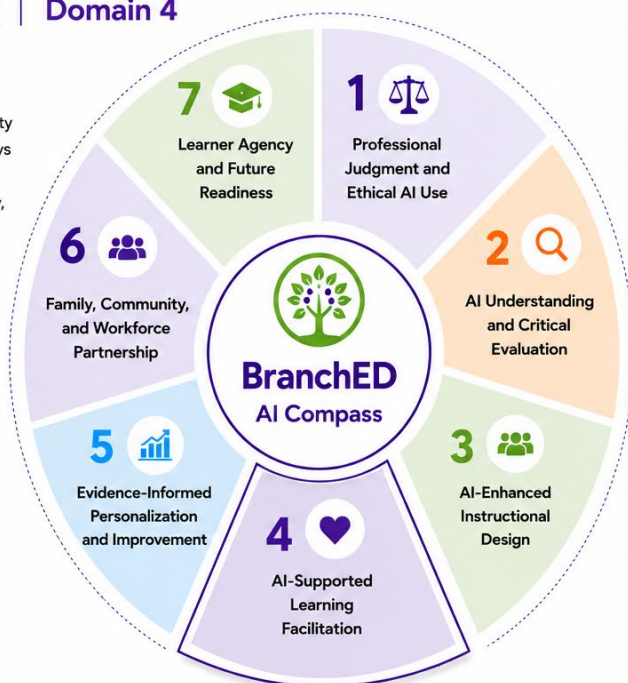


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Domain 4

Each domain contributes to educators' ability to use AI in ways that advance learning, equity, and human flourishing.



YOU ARE HERE:
DOMAIN 4

AI-Enhanced Teaching and Learning

Educators use AI-enabled technologies to enhance pedagogical practice, deepen engagement, and foster meaningful, inclusive learning experiences.

COMPETENCIES IN THIS DOMAIN

C7 AI-Supported Learning Facilitation

Educators use AI-enabled technologies, when appropriate, to facilitate interactive, engaging, and collaborative learning experiences that support learner agency, discourse, and deep understanding.

C8 Productive Struggle, Rigor, and Academic Integrity

Educators use AI-enabled technologies to cultivate productive struggle, uphold high expectations, and promote academic integrity by preparing learners to do original, ethical work and understand the responsible use of AI.



WORKING TOGETHER

These seven domains are interconnected and mutually reinforcing. Strength in one domain amplifies impact across all others.

Domain 4: AI-Enhanced Teaching and Learning

Educators facilitate learning experiences that leverage AI to deepen understanding, creativity, inquiry, collaboration, critical thinking, student agency, meaningful connection, and application.

This domain brings together competencies that help TCs facilitate purposeful AI-supported learning while protecting the thinking, effort, and ownership that meaningful learning requires. Read the competencies as connected parts of instructional practice: guide students to use AI in ways that deepen inquiry, feedback, revision, communication, problem-solving, and creation while intentionally preserving productive struggle, rigor, academic integrity, and authentic demonstrations of student understanding.

Each competency section below explains the distinct contribution of that competency. The later domain-level sections consolidate development activities, readiness indicators, evidence sources, and Compass connections so teacher educators can see how the competencies work together in practice.

Competency 7 | AI-Supported Learning Facilitation

AI Compass Competency

AI-Supported Learning Facilitation: Educators guide students in using AI-enabled technologies productively for learning, exploration, feedback, revision, meaningful communication, problem-solving, and creation while supporting learner voice, curiosity, and meaningful engagement.

What This Means for Teacher Candidate Development

For TC development, this means learning to facilitate AI-supported experiences in ways that keep the learning goal, not the technology, at the center. TCs need opportunities to plan for and guide purposeful AI use; model questioning, verification, and revision; and make intentional decisions about when AI strengthens inquiry, feedback, communication, problem-solving, or creation. They should also learn to recognize when AI use begins to diminish student curiosity, interaction, voice, or meaningful engagement and adjust their facilitation accordingly.

Design Principle: Use AI to open learning up, not to close thinking down.

In Practice

For TCs, this competency means facilitating learning in which AI expands inquiry, feedback, revision, communication, problem-solving, or creation without becoming the center of the experience. TCs should be able to model and guide purposeful use, ask questions that deepen thinking, and keep student voice, curiosity, and engagement visible.

Why This Matters

Students will increasingly encounter AI as part of how they search, create, communicate, and solve problems. Educators need to do more than permit or prohibit use; they need to teach students how to use AI in ways that deepen learning and preserve ownership of the work.

What Teacher Candidates Need to Know & Understand

- AI can support multiple phases of learning, including exploration, idea generation, feedback, revision, communication, problem-solving, and creation.
- Productive facilitation requires clear learning goals and purposes, appropriate boundaries for AI use, and active educator guidance rather than unstructured tool use.
- Student voice, curiosity, choice, collaboration, and meaningful engagement should remain central when AI is introduced.
- AI-supported learning should include opportunities to question, verify, revise, reflect on, and make decisions about AI contributions.

What Teacher Candidates Need to Practice

- Modeling purposeful AI use and making the reasoning behind prompts, evaluation, revision, and decisions visible.
- Designing questions and facilitation moves that require students to interpret, challenge, extend, or improve AI contributions.
- Guiding students to use AI for feedback and revision while retaining ownership of goals and final decisions.
- Monitoring student engagement and adjusting AI use when it begins to reduce curiosity, interaction, or meaningful participation.

Competency 8 | Productive Struggle, Rigor, and Academic Integrity

AI Compass Competency

Productive Struggle, Rigor, and Academic Integrity: Educators design learning experiences that promote authentic thinking, maintain academic integrity, and intentionally integrate AI in ways that preserve meaningful cognitive engagement, learner agency, and opportunities for students to demonstrate their own understanding.

What This Means for Teacher Candidate Development

For TC development, this means learning to identify the cognitive work students need to do to achieve a learning goal and to make intentional decisions about where AI can support that work without replacing it. TCs need opportunities to distinguish productive scaffolding from cognitive offloading, design expectations for AI use that align with the purpose of a task and create meaningful ways for students to demonstrate their own reasoning, process, and understanding. They should learn to approach academic integrity not simply as a matter of detecting or restricting AI use, but as an instructional design challenge, one that requires creating learning experiences in which students are expected to think, make decisions, explain their reasoning, and take ownership of their work. Ultimately, TCs should be prepared to make purposeful decisions about when, why, and how AI can enhance teaching and learning while preserving productive struggle, maintaining appropriate rigor, and strengthening students' development as independent learners and thinkers.

Design Principle: *Preserve the thinking that produces learning; use AI to support the work, not to do the learning for the student.*

In Practice

For TCs, this competency means recognizing that productive struggle is part of learning and that AI should not routinely remove the thinking students need to do. TCs should be able to design clear, rigorous expectations for AI use that protect authentic reasoning and student ownership while moving beyond a compliance-only view of academic integrity.

Why This Matters

AI can reduce friction in ways that are helpful, but it can also allow students to bypass practice, reasoning, persistence, and creation. Educators need to distinguish productive support from cognitive offloading and design learning that makes integrity and authentic thinking possible.

What Teacher Candidates Need to Know & Understand

- Productive struggle is purposeful cognitive effort that supports learning; not all difficulty is productive, and not all efficiency is harmful.
- AI can scaffold learning or reduce barriers, but it can also replace essential reasoning, practice, or creation if the task is poorly designed.
- Academic integrity in AI-enabled environments requires clear expectations, transparent use, meaningful evidence of student thinking, and tasks worth doing.
- Student agency grows when students make informed choices about when AI helps, when it hinders, and what work they need to do themselves.

What Teacher Candidates Need to Practice

- Identifying the cognitive work a student must do to achieve a learning goal and protecting that work in task design.
- Distinguishing helpful scaffolding from AI use that substitutes for essential thinking or practice.
- Designing transparent AI-use expectations aligned to the purpose of the task rather than relying on blanket rules.
- Creating opportunities for students to demonstrate process, reasoning, reflection, or performance alongside final products.

Ways to Develop the Domain

Teacher educators can develop this domain by giving candidates repeated opportunities to apply the connected competency practices. The experiences below show how each contributes to the domain as a whole.

Learning Experience	Primary Focus	How It Builds the Competency
Facilitate the Learning	C7	TCs plan a short learning segment in which students use AI for a defined purpose and script teacher moves that prompt questioning, verification, discussion, and reflection.
Feedback as Conversation	C7	TCs design a process in which students obtain AI-generated feedback, evaluate it, decide what to use, and explain revisions.
Watch the Learning	C7	Using a scenario or video case, TCs identify signs that AI is deepening or diminishing engagement and propose facilitation adjustments.
Protect the Thinking	C8	Give TCs an assignment and ask them to identify the essential cognitive work, where AI could support it, and where AI would undermine the learning purpose.

Learning Experience	Primary Focus	How It Builds the Competency
Scaffold or Shortcut?	C8	Present several AI-supported student behaviors. TCs determine which represent productive scaffolding, unproductive offloading, or context-dependent use and defend their reasoning.
Make Thinking Visible	C8	TCs redesign a product-focused task to include evidence of reasoning, iteration, decision-making, or performance without creating unnecessary surveillance.

Indicators of Developing Readiness

These indicators describe how readiness across the domain may develop over time. They should be interpreted across multiple forms of evidence rather than as a rubric for scoring a single learning activity. Teacher educators can use evidence gathered across coursework, clinical experiences, simulations, reflections, and authentic performances to identify where TCs are developing and where additional practice opportunities may be needed.

Developmental Level	Observable Indicators
Emerging	Uses AI mainly as an answer source, demonstration, productivity tool, or integrity concern, with limited attention to student thinking, voice, cognitive engagement, or ownership.
Developing	Structures some purposeful student AI use and recognizes the need to preserve rigor, but facilitation or task design may inconsistently distinguish productive support from cognitive offloading.
Ready	Facilitates purposeful AI use that deepens learning while protecting essential cognitive work, productive struggle, student voice, and ownership. Communicates clear integrity expectations and adjusts AI use when it diminishes meaningful engagement.
Extending	Adapts facilitation and task design responsively across students and contexts, anticipates new forms of cognitive offloading, balances access with rigor, and helps others move from policing AI toward designing for authentic learning.

Possible Sources of Evidence

Teacher educators may draw on multiple sources to understand how a TC is developing this domain, including:

- AI-supported facilitation or lesson plans
- Clinical observations or lesson video analyses
- Student-use protocols and feedback/revision cycles
- Assignment redesigns and cognitive-demand analyses
- AI-use expectations and integrity plans
- Student process artifacts, scenario rationales, and TC reflections

Try It in Your Course

Use these prompts to identify one practical opportunity to strengthen this domain in an existing course or clinical experience.

Where do these connected competencies already show up in my course or clinical experience?

My idea:

Where could TCs more explicitly practice facilitating productive student AI use while protecting rigor and authentic thinking?

My idea:

What existing assignment or learning experience could be adapted so candidates examine both facilitation and productive struggle?

My idea:

What evidence could I collect to understand whether TCs can keep student thinking, voice, engagement, and ownership at the center of AI-supported learning?

My idea: