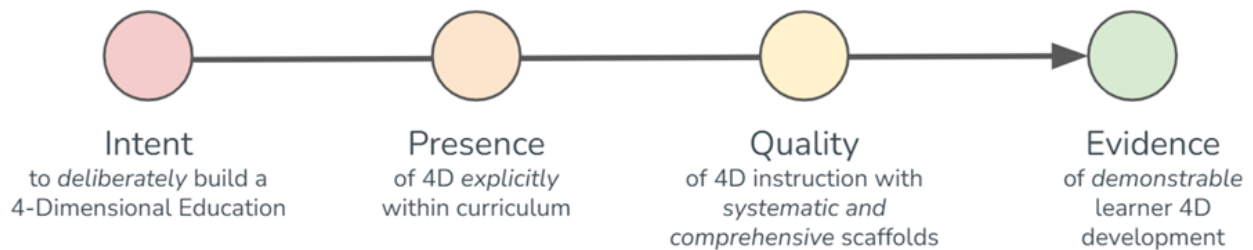


## From Intent to Evidence: A Pathway to 4D Proof

written for the National Center on Education and the Economy (NCEE)

A [Brookings survey](#) has shown that most countries around the world intend to deploy “21st century skills” and other facets of social-emotional learning as necessary pieces of a modern education. From countries and jurisdictions to local districts and schools, it is challenging to find a school or district mission statement *without* a reference to [4-Dimensional Learning](#). At the [Center for Curriculum Redesign](#) (CCR), we see the same words often, something like: “We wish for our students to be strong critical thinkers, collaborative leaders, and ethical people.”

However, a mission statement is *just* a wish until a systematic approach creates a pathway to turn it into reality. Our systematic approach focuses on equipping schools and districts with this pathway.



A recent [CCR-Brookings study](#) has shown that no jurisdiction, among the 22 surveyed, equips its teachers with pedagogy or assessments. An administrator at one of our partner 4D Schools recently commented on the challenges of change efforts: “It’s like we’re all in a giant rowboat but we’re blindfolded, so we’re all rowing in different directions.” Mission and vision statements (and “Portraits of a Graduate”), like the aforementioned nods to strong critical thinkers and collaborative leaders, help remove this blindfold and identify a common “compass” for all participants in a school community to strive toward. It has good intent.



But *intent*—everyone seeing the same destination—while a necessary start, is not the same as rowing! We collaborate with our partner schools to identify an explicit *presence* in the curriculum where 4D Competencies will be taught. One school has each of its departments select a “featured competency,” selecting from our well-researched [recommendations](#) of which 4D Competencies align best with which disciplines. For example, math classes focus on developing a growth mindset in learners, while science classes work on building curiosity. Other schools build that explicit presence at the course or unit levels. A ninth grade social studies teacher may identify critical thinking as a key piece of the course, and build that

proficiency in learners through a series of analytical writing assignments. The ninth grade English teacher may balance out this emphasis by focusing the English curriculum on creative writing, knowing that the critical thinking is being covered. The competencies serve as vital lenses through which necessary writing standards are accomplished.

### **Pedagogy:**

With an explicit mapping of the “what” of teaching, focus then can shift to the “how.” To build high *quality* instruction for the 4D Competencies, it is useful to narrow focus. Because teaching competencies is such a big endeavor, and there are so many words and definitions for them, it is challenging to clearly operationalize them. Imagining, innovating, wondering, designing—all of these words can get interchangeably jumbled with “creativity.” To ensure learners actually develop proficiency at a competency, we focus on being much more *precise* by drilling down to the research-identified subcompetencies of the 4D Framework. All writing assignments can be argued to be “creative” in some shape or form, but a shift in the subcompetency can shift the target:

**Same 4D Competency, Different Subcompetency Targets**

 <p><b>Generating and seeking new ideas.</b> <i>Creativity 1 from the 4D Framework</i></p> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px; background-color: #f0f0f0; margin-top: 10px;">Write as many reasons as you can for why the protagonist might have made this decision...</div>	 <p><b>Realizing ideas while recognizing constraints.</b> <i>Creativity 5 from the 4D Framework</i></p> <div style="border: 1px solid gray; border-radius: 10px; padding: 5px; background-color: #f0f0f0; margin-top: 10px;">Pretend you are the protagonist. Explain why you made the decision, incorporating one quote from the text, in fewer than 250 words.</div>
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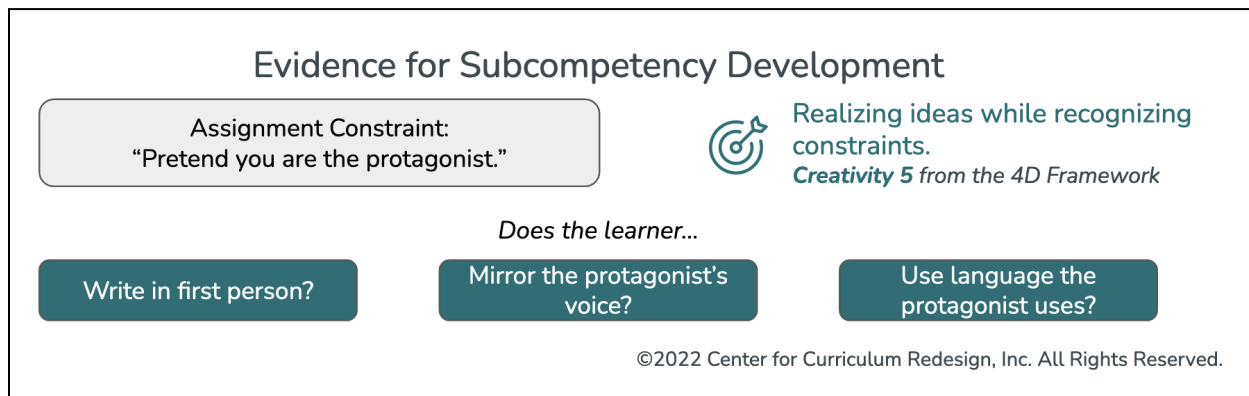
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With this end goal in mind, systematic scaffolding can help the learners practice these subcompetencies. Our professional learning program focuses on utilizing a “rule of three”—identify three areas in which learners can deliberately practice the subcompetency in a unit. The first time is a chance for learners to practice “with training wheels on,” the second an opportunity to remove the training wheels and try in a low-stakes environment, and the third a formative assessment opportunity to identify strengths and growth areas.

### **Assessments:**


This formative assessment opportunity highlights the most necessary piece of the process to tangibly improve student outcomes: evidence of *demonstrable* learner development. A common misunderstanding of educators is that proficiency in 4D Competencies—like creativity,

or collaboration, or resilience—can't be measured. But in the aforementioned examples, we can collect evidence that a learner is demonstrating more creativity than another. Depending on the target, a teacher can develop rubrics and look-for's for evidence of proficiency. For the “generating and seeking new ideas” subcompetency, how many reasons were generated? How detailed were the reasons? How original were they? For the “realizing ideas while recognizing constraints” target, there are three constraints. Even an instruction like “pretend you are the protagonist” can have a series of learning objectives:



Key here is that the 4D Competency—creativity—is *not* divorced from writing standards. Instead, the competency is *infused* into the writing process. Learners can simultaneously showcase their growth in creativity, tackle key writing standards like style and voice, and showcase their understanding of a literary text. This infusion process works across all disciplines and competencies. A science lab on light's wave-particle duality might focus on “seeking different perspectives to broaden understanding” (a curiosity subcompetency). A math class may focus on “adapting flexibly” (a resilience subcompetency) by learning how to use imaginary numbers, when a problem can't be solved without them. In all these cases, rigor isn't sacrificed to teach a 4D Competency. Standards are accomplished, and extra time is not added to the schedule. Instead, learning is *deepened* by the competency infusion.

Pairing this instruction with CCR's patent-pending multi-modal formative assessments allows learners to gather additional evidence on a learner's competency proficiency. Our 4D Growth Rubrics establish four tiers of proficiency for each subcompetency. A teacher and learner can then review these tiers of proficiency together, identify where the strengths and growth areas are, and chart a path for improvement. Learners can be proud of 4D Portfolios that gather and demonstrate evidence of growth.



With this approach, a school or jurisdiction then can point at its mission statement and know that it has more than just “intent” to build “strong critical thinkers,” “collaborative leaders,” or “ethical citizens.” It has *evidence*.

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