

Integrating Deeper Learning and HQIR to Strengthen Tier 1 Instruction

The first big idea of *United We Learn's* vision for the future of public education in Kentucky is “creating a more vibrant experience for every student.” A vibrant learning experience is ultimately a joyful experience, with joy coming through the meaning found in engagement with relevant topics, the satisfaction felt after productive struggle with rigorous tasks and a sense of mastery when learning goals are met. Joy expands when that deep learning is shared with one’s classroom community, and when artifacts produced by it have an authentic place in the lives and concerns of a local community, and perhaps of the global community beyond. This call to provide a more vibrant learning experience for *every* student is also a call for equity.

How do educators provide vibrant student learning experiences? What is needed to establish a system that equitably supports these types of learning opportunities within Tier 1 instruction? This resource is designed to build understanding of the interaction between deeper learning and a local curriculum through the lens of learning science to help provide vibrant learning experiences for *all* students. Specifically, the resource aims to:

- Examine deeper learning and the role of a local curriculum anchored in high-quality instructional resources (HQIRs) in enabling deeper learning experiences in Tier 1 instruction;
- Explore how understanding of education research and learning science can inform effective integration of deeper learning and HQIR within a local curriculum; and
- Provide modules to support the work of curriculum integration according to learning science once a district has moved from early into ongoing HQIR implementation.

What is Deeper Learning?

Understanding how deeper learning can be enabled by a strong local curriculum to foster vibrant learning experiences begins with establishing clarity around deeper learning itself since it is what a strong local curriculum with its HQIR should be trying to achieve.

While some deeper learning experts stress the importance of acquiring content knowledge and applying that knowledge to new situations, others also point to the importance of “process” or “21st century” skills (McTighe & Silver, 2020). Key commonalities exist, however, across the various definitions of deeper learning (American Institutes for Research, 2022; Fullan, Quinn, & McEachen, 2018; Learning Policy Institute & Turnaround for Children, 2021; Mehta & Fine, 2020; William and Flora Hewlett Foundation, 2013), and they include:

- **Mastery of Core Academic Content** - Students develop and draw from rich disciplinary knowledge, understandings and skills and can creatively transfer them to novel situations.
- **Critical Thinking and Problem-Solving** - Students analyze complex problems and develop innovative solutions.

- **Productive Collaboration** - Students work in diverse teams to achieve shared goals.
- **Effective Communication** - Students use a variety of tools, modes and styles to communicate with different audiences.
- **Agency** - Students show initiative and take responsibility for their learning, including setting goals, monitoring progress, and making choices aligned to their learning needs and interests.
- **Identity** - Students become invested in thinking of themselves as someone who does the work of an academic discipline and can connect that domain-specific work to what matters to them.
- **Academic Mindsets** - Students develop attitudes and beliefs that support learning, such as perseverance, resilience, and a growth mindset, and show greater awareness of themselves as learners.

Fostering vibrant learning experiences in Tier 1 instruction that integrate the deeper learning characteristics listed above can be challenging work. While the effects of common deeper learning practices, such as problem-based learning or inquiry-based teaching, can be quite robust, research indicates their likelihood of positively impacting academic outcomes is contingent on certain enabling conditions (Hattie, 2016).

First among those enabling conditions is the need to ground deeper learning experiences in disciplinary content, as embodied by the *Kentucky Academic Standards (KAS)*. In fact, each of the characteristics bulleted above needs a basis in grade-level learning to achieve academic gains. However, when teachers are tasked with being the primary creators or curators of classroom materials, they often struggle to produce grade-level assignments. In fact, TNTP's "The Opportunity Myth" (2018) found that only 20% of teacher-created or -selected assignments were on grade level, which would mean 80% of classrooms could struggle to provide the foundational content deeper learning practices need to be significantly impactful.

A second significant challenge for deeper learning is the need for experienced educators (Mehta & Fine, 2020), those with considerable time teaching in a content area and engaging in professional learning to develop their craft and more fully understand the nuances of their discipline. This experience allows an educator to know when and how to leverage pedagogical practices, including those associated with deeper learning, to realize their effects. When designing for learning, especially for deeper learning, calling on the right strategies at the right time and deploying them effectively is critical if a unit or project is to allow students to master the intended learning outcomes (Hatti, Bustamante, Almarode, Fisher, & Frey, 2021). Now, however, schools are encountering unprecedented rates of turnover, with many teachers entering the classroom with less training and experience. If research shows teachers already struggle to create or curate grade-level learning experiences, asking them to design for deeper

learning, which depends upon that foundation and is also more complex, presents an unfair expectation.

What is a Strong Local Curriculum?

Based on Kentucky law (704 KAR Chapter 8), curriculum addresses how learning experiences are designed at the local level. The overall purpose of a curriculum is to articulate a coherent instructional experience within a course or grade level that systematically builds students' knowledge, understandings and skills aligned to the *KAS* while also embodying the values of a district's instructional vision. A strong local curriculum that ensures access to deeper learning experiences should be:

- Aligned to a district's Portrait of a Learner (PoL);
- Driven by a content-area instructional vision grounded in the *KAS*, current research for teaching and learning and the local context;
- Anchored in [high-quality instructional resources](#) (HQIRs) designed to provide educators the support needed to actualize the district's vision; and
- Inclusive of local priorities/initiatives (i.e., inquiry-based/project-based learning, cooperative learning, cognitive strategies).

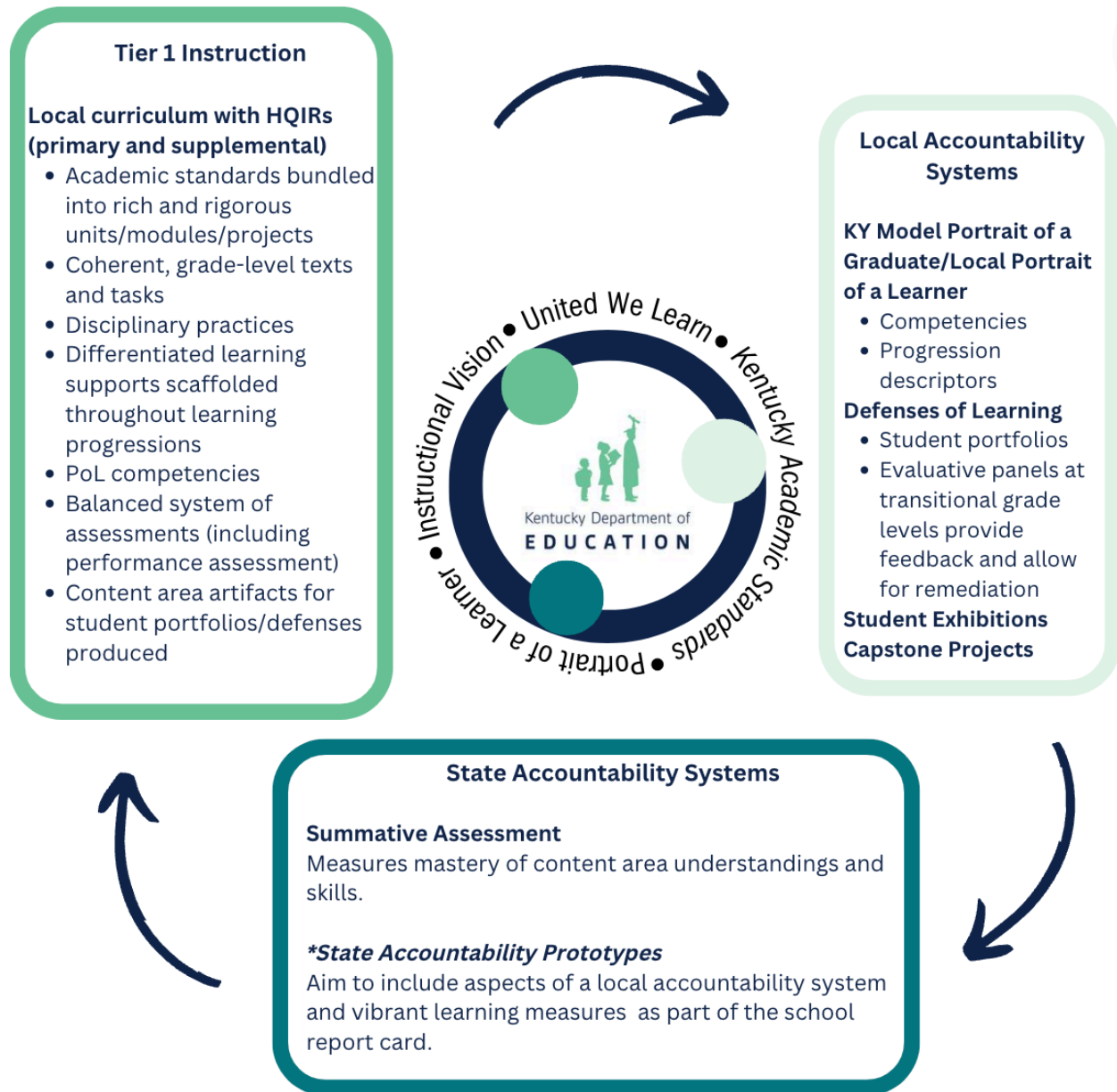
While all HQIRs ensure student access to standards-aligned, grade-level learning, the degree to which they foster vibrant learning experiences varies. Some HQIRs have successfully incorporated deeper learning as an integral component of their instructional designs. Other HQIRs offer a partial incorporation, embedding certain practices but not others, and they may have deeper learning "options" that are not as integral to the resource itself. And some may be more traditional, with limited incorporation of what would be recognized as deeper learning. In these latter two instances, the HQIR may require "smart adjustments," those that would not compromise the integrity of a resource, to fully actualize the deeper learning dimensions of an instructional vision, and those adjustments should be reflected in the local curriculum to ensure equitable access for all students in Tier 1 instruction.

A Theory of Action

A strong local curriculum that integrates deeper learning practices and HQIR can equitably foster vibrant learning experiences and improve student outcomes in Tier 1 instruction across a district system. Since deeper learning improves student outcomes in a content area when it has a foundation in disciplinary knowledge and skills, a HQIR can provide that foundation where most teachers have struggled to when having to rely upon creating or curating their own materials. This foundational support is especially critical given an increasing number of new teachers to the workforce. And since HQIRs vary in the degree to which they embed deeper learning practices, districts need to be able to analyze where those practices are present, and to know how to make smart adjustments to support what is not fully present.

A fuller sense of why effective integration of deeper learning and HQIR is essential comes into focus when set within a framework where what would happen in Tier 1 instruction is seen in relation to potential local and state accountability systems. Figure 1.1 offers an example of what this might look like, with “Local Accountability System” populated by measures already in place in certain Kentucky districts, and “State Accountability System” reflective of proposed changes.

Figure 1.1. *A Systems-Level View of Deeper Learning*



In Figure 1.1, strong Tier 1 instruction provides what both local and state accountability systems would use to determine how well a district is preparing its students for future success. The

content-area artifacts students generate within Tier 1 instruction produce quality evidence of vibrant learning for local accountability measures, such as student exhibitions, defenses of learning and capstone projects. Additionally, local accountability measures like these allow students opportunities to demonstrate disciplinary skills and understandings gained in Tier 1 instruction in authentic ways, and both accountability systems help validate vibrant learning happening in Kentucky classrooms.

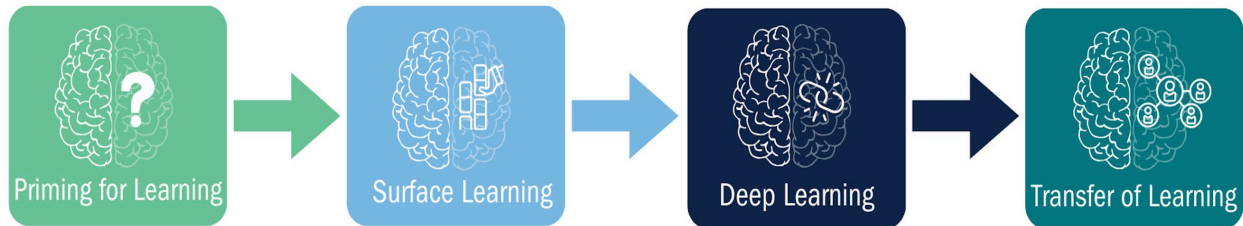
Anchoring Integration of Deeper Learning and HQIR in Learning Science

Students need to engage in practices proven to foster meaningful learning (Hernandez, Darling-Hammond, Adams & Bradley, 2019), and science and research continue to show that what is often regarded as “deeper learning” actually represents essential aspects of the learning process all students require. Classroom instruction needs to align with how the brain learns: how it takes in new information, works to make sense of it and is then able to transfer skills and understandings to novel situations (Hattie, Fisher & Frey, 2017). Therefore, gaining an understanding of educational research and learning science, which draws from disciplines like neuroscience and cognitive psychology, can help inform effective integration of deeper learning and HQIRs within a local curriculum to assure the full range of learners’ needs are met.

Research establishes learning as a process rather than an event. Education leaders such as John Hattie, Doug Fisher and Nancy Frey have found it useful to divide the learning process into three phases: surface, deep and transfer (Hattie, et.al., 2017). Core principles from learning science can also be laid out across a series of similar phases, adding an emphasis on “priming” for learning (Goodwin & Rouleau, 2023). All four stages, as outlined below, include essential deeper learning components and are necessary for vibrant learning:

- **Priming for Learning** - Occurs when curiosity is sparked and initial student interest, cognitive and emotional, is generated. Students connecting to meaning and purpose supports motivation to set goals and commit to the work of learning and mastery.
- **Surface Learning** - Occurs when students are initially exposed to concepts, skills and strategies. It provides a foundation on which to build as students are asked to think more deeply and is associated with “declarative” and “procedural knowledge.”
- **Deep Learning** - Occurs when students consolidate knowledge, extend sense-making and apply surface learning to support deeper conceptual understanding. It is also associated with “conditional knowledge,” students learning how to decide which knowledge, skills and strategies to use in a given situation.
- **Transfer Learning** - Occurs when students take their consolidated knowledge, skills and understandings and apply them to new scenarios and different contexts. Students are able to think metacognitively, reflecting on their own learning and understanding, and to use conditional knowledge to support transfer.

Figure 1.2. Phases of Learning



Modules will be released for each stage of learning, following the sequence shown in Figure 1.2, to support district curriculum teams in applying educational research and learning science in order to strengthen their local curriculum for Tier I instruction. Each module will build understanding of learning science principles for its phase, establishing connections to deeper learning and then providing indicators for analyzing the local curriculum and making smart adjustments during ongoing HQIR implementation (potentially year two and beyond).

- Module 1: Priming for Learning
- Module 2: Surface Learning
- Module 3: Deep Learning
- Module 4: Transfer of Learning

These modules can also inform resource evaluation prior to adoption. The KDE recommends districts use indicators provided within the modules to ensure a selected resource strongly aligns with deeper learning elements in their instructional visions.

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