The Linked Learning Advantage: Using Linked Learning to Implement the Common Core State Standards

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About this Brief

This brief examines the Common Core State Standards and their implications for Linked Learning, an innovative high school reform approach in California that prepares students for college and career by connecting learning in the classroom with real-world applications outside of school. This brief aims to address the ways in which the common standards align with and can be adopted by Linked Learning teachers, schools, and districts to ensure that all their students are ready for success in college, careers, and citizenship. This work is made possible through generous support from the James Irvine Foundation.

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Transforming today's education for tomorrow's economy
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Linked Learning is the vehicle with the most promise to implement the challenging Common Core State Standards at the high school level…[and] lead to increased student engagement and achievement. The Common Core is the "what"; Linked Learning [is] the "how." Both share the same "end in mind" — which is students who are college and career ready.

—Pamela Seki, Director, Curriculum, Instruction, & Professional Development, Long Beach Unified School District

Currently, 45 states, including California, and three territories have signed a memorandum of agreement with the National Governors Association and the Council of Chief State School Officers committing to a state-led initiative that establishes educational standards for college and career readiness. This initiative—the Common Core State Standards Initiative—defines what each student should know and be able to do from kindergarten through 12th grade in order to graduate high school and succeed in entry-level, credit-bearing academic college courses as well as entry-level jobs and workforce training programs. Currently, the standards are available in two subject areas: English language arts (ELA) and mathematics. A draft of the Common Core standards for science was released in spring 2012 for public comment and is currently being revised for a second public review in fall 2012.

Implications of the Common Core State Standards for Linked Learning

Before the standards were established, Linked Learning was already taking hold as a strategy for high school reform in California through the California Linked Learning District Initiative. This initiative supports nine districts statewide that are developing a system of high-quality, career-themed pathways to better prepare students for college and career.

Linked Learning pathways provide a four-year program of study integrating academic content with technical and advanced academic skills within a career theme. Linked Learning provides a variety of real-world contexts for teaching rigorous academic and technical content, making learning far more relevant for students. Linked Learning pathways feature four major components:

1. A college-prep academic core emphasizing real-world applications.
2. A technical core of four or more courses aligned with industry standards.
3. Work-based learning through career and technical education.
4. Student supports, i.e., academic, emotional and social, college and career guidance.

For teachers and administrators already engaged in Linked Learning, the idea of also adopting the Common Core standards may seem daunting, but Linked Learning connects, supports, and aligns with the Common Core in several ways, chief among them:

1. **Aligned goals and approaches** for college and career readiness; student learning outcomes; and curriculum, instruction, and assessment.
2. **Real-world integration and application** of academic and technical skills and knowledge.
3. **Student performance assessments** that demonstrate authentic learning.

Aligned Goals and Approaches

Both the Common Core and Linked Learning stress the problem- and project-based learning practices that research shows prepare students for success in college and career. Not surprisingly, the Common Core and Linked Learning approaches show strong alignment in defining the types of curriculum, instruction, and assessments needed to achieve these goals. Table 1 provides an example of this alignment.

Many Linked Learning pathways develop pathway-specific student-learning outcomes aligned with their district's overall student outcomes and graduate profile. This process of upward alignment offers Linked Learning teachers an advantage in mapping their student outcomes to the Common Core.

Tables 2 and 3 demonstrate how the instructional shifts outlined in the Common Core for English language arts and mathematics correlate to Linked Learning pathway approaches.

Real-World Integration and Application of Academic and Technical Skills

Research shows that student learning improves when content and higher-order thinking skills are applied to the real world. This real-world connection is central to both the Common Core standards and Linked Learning frameworks. In fact, research shows that quality work-based learning experiences, such as those used in Linked Learning pathways, are a powerful acceler-

Table 1: Example of Alignment of Common Core, College and Career Readiness Framework, and Student Learning Outcomes from a Linked Learning Pathway

Common Core Standards (2010)	LL College and Career Readiness Framework (2012)	LL Pathway Student Learning Outcomes (2012)
ELA "Speaking and Listening" standard; Presentation of Knowledge and Ideas (excerpt)	*Communication: Listening, speaking, writing, and nonverbal communication*	*Communication: Example from John Muir HS AEM Pathway. Grade-level benchmarks*
• Present information, findings, and supporting evidence clearly, concisely, and logically, demonstrating organization ... appropriate to purpose, audience, and task. (SL.9-10.4) • Make strategic use of digital media ... to enhance understanding of findings, reasoning, and evidence and to add interest. (SL.9-10.5) • Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (SL.9-10.6)	• Using active listening skills to obtain and clarify information • Articulating thoughts and ideas clearly and effectively • Public speaking skills • Written communication, including memos, letters, and complex technical reports that are clear and effective	• 9th/10th: Upon completing 10th grade, the AEM student composes and presents organized presentations as well as improvised oral responses that clearly articulate their ideas. • 11th/12th: Upon graduation, the AEM student exhibits confidence in both written and improvised oral presentations to articulate idea with impactful results.

Table 2: Common Core Instructional Shifts for English Language Arts/Literacy	
Common Core instructional shift	**Applying the shift in Linked Learning**
Balancing informational and literary text	Career themes and challenging technical coursework provide engaging and relevant contexts for students to read, struggle with, and comprehend.
Building cross-discipline collaboration	Teacher collaboration, student cohorts, and establishment of shared student learning outcomes in pathways allow teachers to align literacy building strategies and responsibilities across subject areas for specific projects and throughout the year.
Staircase of complexity	Linked Learning pathways create grade-level progress benchmarks towards key graduation outcomes, mirroring how Common Core standards increase in complexity across the grade spans. Projects with real-world tasks create engaging opportunities that motivate students, even those reading below grade level, to persist with challenging central texts. Projects go in depth and allow time for teachers to design scaffolds for differentiated support so that all students can be successful with rigorous tasks.
Text-based projects	Pathway themes provide engaging and authentic contexts for text-based discussions in which students may establish shared knowledge to assist their understanding and articulation of ideas. Examples include mock trials in law and justice academies or design presentations in engineering and architecture academies.
Writing from sources	Students regularly produce writing for a range of engaging and relevant purposes related to the theme of Linked Learning pathways. This writing is frequently presented to and assessed by an audience around specific criteria.

Table 3: Common Core Instructional Shifts for Mathematics	
Common Core instructional shift	**Applying the shift in Linked Learning**
Focus	Linked Learning pathways focus outcome-based and student-centered instruction. Student learning is monitored through formative and summative student performance assessments.
Coherence	Teacher teams in Linked Learning pathways collaborate to provide aligned multidisciplinary learning opportunities for students. Use of mathematics and mathematical practices purposefully extends out to other classrooms.
Fluency	The thematic approach of career pathways allows mathematics teachers to continually return to foundational skills and concepts. Students have multiple opportunities to practice in a variety of contexts until key mathematics tasks can be mastered.
Deep understanding	Complex, industry-based problems provide opportunities for students to use their mathematics knowledge in new contexts and in extended problem-solving scenarios.
Application	Real-world projects offer open-ended contexts in which students must make independent determinations about when and how mathematics should be applied and what mathematical approaches will best serve to solve a problem.
Cross-discipline application	Students engage in multidisciplinary projects where foundational mathematics skills can be learned and practiced to fluency within the math classroom, and applied to novel problems that span multiple classes.

erant of student proficiency. They're also an effective instructional strategy for integrating the standards into engaging learning experiences.

Student Performance Assessments

Twenty-first century learning goes beyond the mere acquisition of information, emphasizing students' ability to analyze, synthesize, and apply what they've learned and to solve problems, design solutions, and communicate effectively. To measure this more sophisticated learning, more sophisticated assessments are required than the traditional fill-in-the-bubble tests commonly used in the United States. These new assessments range from short-answer tasks, such as the construction and explanation of problem solutions, to extended work like essay writing, research, and laboratory investigations. Students use sophisticated knowledge to solve complex problems and explain their reasoning.

Strategies for Districts

Schools and districts can leverage Linked Learning as a primary vehicle to ensure student success with the Common Core. Districts can design professional development programs that provide teachers at all grade levels and in all content areas with a deep understanding of the standards. The interdisciplinary, collaborative structures and culture of Linked Learning pathways directly support accelerated teacher learning and skill development, which is essential to implementing the necessary shifts in instruction, curriculum, and assessment.

District Support for Teachers

Districts can design professional development programs to provide teachers at all grade levels and in all content areas with a deep understanding of the Common Core as they begin to make the necessary shifts in instruction, curriculum, and assessment. Capacity-building activities that help teachers with the process of change include:

- Cross-walking standards at different levels of the system in order to align the Common Core with state, district, and school-level student outcomes.
- Supporting teachers to make meaning of each standard by analyzing its content to clearly understand what is being asked of the student, the level of cognitive demand, and the types of tasks and activities by which students can effectively demonstrate the standard.
- Creating or adopting instructional frameworks to guide teams in their disciplinary and interdisciplinary curriculum and planning.
- Developing prototypes of performance assessments for interdisciplinary projects that are mapped to the Common Core, student learning outcomes, and graduate profiles.
- Supporting teachers in performance task design and in "backwards mapping" their curriculum and benchmarks to the Common Core standards. The greatest challenge here will be helping teachers to successfully differentiate and scaffold instruction for diverse learners, including those learning English as a second language.

Tapping the New Assessments

The new Common Core assessments being developed by the Smarter Balanced Assessment Consortium (SBAC) and the Partnership for Assessment of Readiness for College and Careers (PARCC) feature many components of well-designed systems of authentic performance assessment. These systems already incorporate much of the Common Core content concerning existing alignment of standards, skills, and outcomes. As Linked Learning pathways and districts develop their assessment systems, the SBAC and PARCC can inform the process. With such alignments already in place, Linked Learning students won't have to wait for the state assessments to get the opportunity to show what they know and are able to do for college and career readiness.

Further Reading

Additional resources, including a longer report, tables, and data are available at http://edpolicy.stanford.edu/publications/pubs/661