ALLIANCE FOR EXCELLENT EDUCATION

ADVANCING ADOLESCENT LITERACY:

Pennsylvania's Keystones to Opportunity Comprehensive Literacy Program

APRIL 2014

SUMMARY

As one of six states in 2012 to receive a federal Striving Readers Comprehensive Literacy (SRCL) grant, Pennsylvania provides an early road map and shows how taking comprehensive action to improve literacy instruction can benefit traditionally underserved students and boost learning outcomes while improving overall teaching.[1] In 2006, Catherine Snow, the Henry Lee Shattuck Professor of Education at the Harvard Graduate School of Education, wrote, "We all hold a stake in the literacy achievement of youth, and if we do not rise to meet this challenge today, we risk our cadre of struggling readers and writers facing a future of sharply diminishing opportunities."[2] The work under way in Pennsylvania and the other SRCL states illuminates what states, districts, and schools must do to ensure that all students graduate with the advanced literacy competencies essential to succeed in college, careers, and life.

The nation is watching as Pennsylvania and the other SRCL state grantees implement comprehensive birth-through-grade-twelve literacy initiatives. The federal support for state-level action to dramatically improve literacy outcomes comes at a time when the demands on students graduating from high school are changing radically. In order to compete with young people across the globe, U.S. students must have reading and writing proficiency that is commensurate with their international peers.

Like most states, Pennsylvania is in the throes of a literacy crisis that seriously threatens the state's prosperity by failing to produce a highly literate, twenty-first-century workforce capable of competing in a global economy. The five-year federal SRCL grant resulted in the state awarding $36.7 million to local school districts to advance literacy instruction and outcomes for students with the greatest needs. This report describes the design and implementation of Pennsylvania's SRCL discretionary literacy grant, including information gathered from participation in a three-day regional meeting of state department leaders and district teams to examine data and design strategies for local implementation. The report profiles the core processes and professional learning undertaken by educators across the state to dramatically improve instruction and literacy achievement, with a specific focus on improving standards-based literacy practices in middle and high schools, and includes a set of policy recommendations.

INTRODUCTION

The majority of U.S. students currently leave high school without the advanced reading and writing skills needed to succeed in college and a career. According to the National Assessment of Education Progress (NAEP), commonly called the Nation's Report Card, more than 60 percent of eighth and twelfth graders read and write below the proficient level.[3]
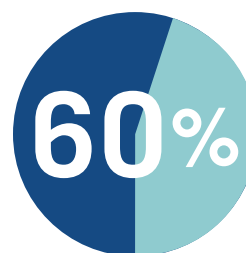
60% More than 60 percent of eighth and twelfth graders read and write below the proficient level.

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For particular subgroups, the figures are even more disturbing: more than a third of Hispanic and African American twelfth graders, for example, read below the basic level.[4] Pennsylvania state education leaders recognized the urgent need to reverse the downward trajectory in students' literacy achievement overall, as well as to improve language and literacy achievement for targeted subgroups of underperforming students.

According to projections produced by Pennsylvania's Value-Added Assessment System (PVAAS), the state's approved growth model, the percentage of eighth graders at risk for not being proficient in reading by the eleventh grade increased between 2007 and 2010. The Pennsylvania growth model allows the state to determine if individual students are on the path to achieve and maintain proficiency as measured by state tests.[5] State reading assessment data from School Year (SY) 2009–10 shows that 48.1 percent of eighth-grade students have a 70 to 100 percent probability of being proficient in reading in the eleventh grade, down from 51.4 percent in SY 2008–09 and 55.8 percent in SY 2007–08.[6] The Pennsylvania Department of Education (PDE) concluded that if these projections prove correct, in just two years the majority of Pennsylvania students in the eleventh grade may not be proficient in reading.[7]

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The PDE Division of Federal Programs directs the improvement initiative in collaboration with Pennsylvania's twenty-nine intermediate units (IUs), the regional educational service agencies that serve member school districts. The project management team includes Cindy Rhoads, state program director; Cindy Anderson, project coordinator and lead writer for the Pennsylvania Comprehensive Literacy Plan; and Sandy Strunk, project manager and program director for development at Lancaster Lebanon IU 13. In addition, the PDE formed a guiding coalition that includes the state agency, district and school leaders, teachers, local parent-teacher representatives, and community members to help coordinate strategies and diffuse innovative solutions to improving reading and writing proficiency.

The federal Striving Readers Comprehensive Literacy (SRCL) grant award presents a unique opportunity for the state to address systemic gaps in literacy instruction and development across early education and elementary, middle, and high schools. In 2011 the U.S. Department of Education awarded a total of $183 million in SRCL grants to Georgia, Louisiana, Montana, Nevada, Pennsylvania, and Texas to advance literacy skills from birth through grade twelve. These five-year competitive awards followed the 2010 SRCL grant program, in which forty-eight states received federal funding to create state literacy teams and prepare a state birth-through-grade-twelve plan for a comprehensive literacy development and education program.[8]

Pennsylvania saw this as an opportunity to dramatically improve learning outcomes, not only for students targeted within the SRCL program but for all students throughout the state. The Pennsylvania SRCL grant program, called Keystones to Opportunity (KtO): Pennsylvania's Vision for Sustainable Growth in Reading Achievement, awards competitive sub-grants to local school districts and early childhood education programs to improve

language and literacy using evidence-based instruction and interventions. Effective implementation depends on districts creating a coherent, aligned framework to teach and assess literacy across the curriculum and to coordinate supplemental academic support programs. To achieve these ends, state, district, and school leaders must cultivate cadres of teacher leaders and specialists to undertake this new effort and assume responsibility for its implementation and impact.[9]

The PDE acknowledged that dramatic improvements in literacy instruction and performance would be unlikely without the creation of a strong, visible, and common culture of instructional practice. "Despite what we know about the nature of the problems of struggling readers and the need to bring effective literacy strategies to life in content-area classrooms, what actually goes on in classrooms often remains removed from education administration and policy," noted KtO state program director Cindy Rhoads.[10]

Recognizing these barriers to improving teaching practices on a widespread basis, KtO coordinators created structures and educative processes to help districts and schools improve literacy instruction across the state. Tools were designed to enable districts to self-assess their literacy performance and the literacy needs of targeted students at risk of educational failure—low-income students, students with disabilities, English language learners (ELLs), and those students not on track to college and career readiness by graduation. Teams of educators shared responsibility for instructional decisionmaking and developing local literacy plans, by using data to identify students' skill gaps, examining curriculum and patterns of practices in relation to students' literacy needs, and leading evidence-based improvement in their schools. These processes served the multiple purposes of

> ## EFFECTIVE IMPLEMENTATION DEPENDS ON DISTRICTS CREATING A COHERENT, ALIGNED FRAMEWORK TO TEACH AND ASSESS LITERACY ACROSS THE CURRICULUM AND TO COORDINATE SUPPLEMENTAL ACADEMIC SUPPORT PROGRAMS.

- increasing educators' knowledge of the English language arts (ELA) standards and literacy instruction;

- identifying districts with demonstrable needs in targeted student populations;

- ensuring that the sub-grantees had the capacity to produce improvements and short-term gains; and

- instituting educative processes regarding data use and research-based literacy instruction and assessment.

To build professional capacity, state project leaders harnessed the network of IUs along with PDE staff and consultants from the University of Pittsburgh to model data-based decisionmaking and design professional learning around evidence-based literacy practices. They developed a rigorous sub-grantee application requiring districts to complete a comprehensive needs assessment to determine both their needs and their capacity for success.[11] Pennsylvania worked with practitioners and education leaders from special education, universities, career and technical education, and school districts to frame a common vision of effective literacy practices and bolster alignment among existing state and district programs.

Pennsylvania State Literacy Plan Guiding Principles[12]

1. Literacy is a foundation for learning and a "keystone to opportunity." Literacy instruction must be extended into academic disciplines as a means of developing the literacy competencies essential for students to be college and career ready.

2. All students are entitled to build their literacy competencies. Students' cultural experiences, including language, must be taken into consideration as a means of enhancing student learning and the motivation to learn. Moreover, differentiation of instruction is a critical element of instruction.

3. High-quality literacy instruction must be grounded in evidence-based practice. Research on effective instructional practices must be implemented in Pennsylvania classrooms.

4. A shared responsibility for literacy learning among families, community, and education professionals is essential for improved student learning.

5. The professional learning of educators is critical in order to address the challenges of twenty-first-century literacy. Such learning must be based on the evidence regarding improving schools and adult learning.

SCHOOL DISTRICT SUB-GRANTS

In the first phase, 329 of the 500 districts in the state opted to complete a rigorous pre-application process and comprehensive literacy needs assessment. The goal was to engage potential sub-grantees in a team-based inquiry process to inventory the district's capacity to succeed in instituting a robust literacy initiative. Local teams were expected to assess their district's

- implementation of a research-based, core literacy curriculum aligned to ELA content standards;

- use of data to identify and respond to students' literacy needs;

- opportunities for ongoing, collaborative professional learning; and

- strategies to improve literacy in coordination with other state and federal programs, such as special education, English language learning, and Title I.
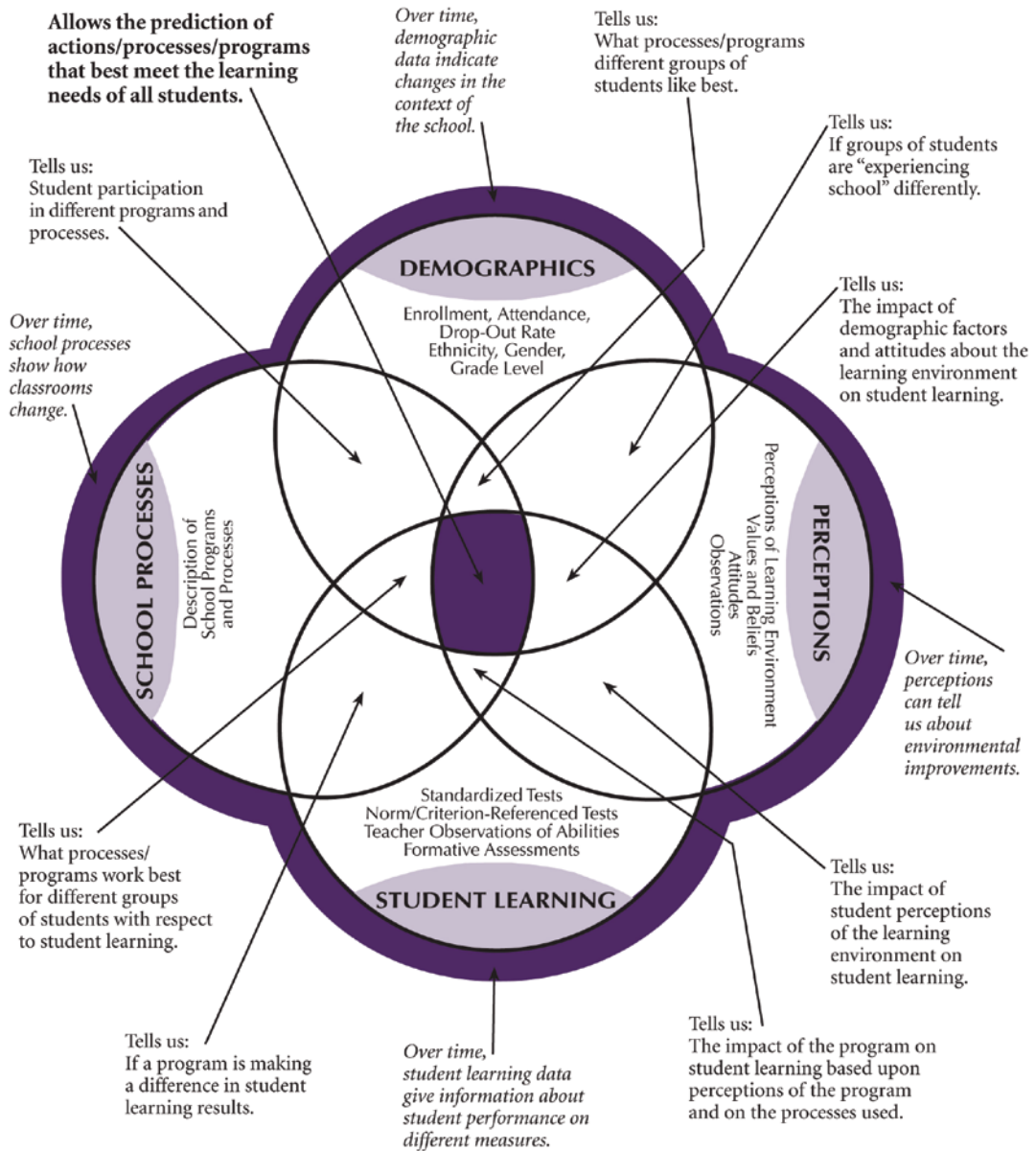
Building a Culture of Inquiry and Data Use

Accurate local data and a thorough understanding of literacy research were essential elements of a successful application. The district core literacy teams, including teachers, instructional specialists, and district and school leaders, provided school-level data showing which students were most at risk for not becoming proficient in reading and specified the evidence-based strategies for improving literacy instruction and outcomes.[13] Teams had to identify the most significant demographic challenges, determine the district's achievement and growth in reading compared to other locales, explain their students' growth trajectory, and assess the impact of literacy achievement on the district's ability to graduate students ready for college and careers. In addition, they had to commit to using specified state summative, standardized diagnostic tools as well as formative measures for purposes of reporting, monitoring, and evaluating the grant program.

District teams received intensive technical assistance from the PDE and IUs on using rigorous inquiry-based processes that would be meaningful for all applicants regardless of the final outcome of the grant competition. The state provided guidance and support in using data based on Victoria Bernhardt's logic model for using multiple measures for continuous improvement. Teams participated in regional training to learn how to use data across the multiple domains of demographics, perceptions, school processes, and student learning. The Bernhardt model afforded a common language in using data to formulate questions and set priorities regarding how to increase the impact of learning environments on targeted students' literacy performance.

MULTIPLE MEASURES OF DATA

Allows the prediction of actions/processes/programs that best meet the learning needs of all students.

Over time, demographic data indicate changes in the context of the school.

Tells us: What processes/programs different groups of students like best.

Tells us: Student participation in different programs and processes.

Tells us: If groups of students are "experiencing school" differently.

Over time, school processes show how classrooms change.

Tells us: The impact of demographic factors and attitudes about the learning environment on student learning.

DEMOGRAPHICS
Enrollment, Attendance, Drop-Out Rate Ethnicity, Gender, Grade Level

SCHOOL PROCESSES
Description of School Programs and Processes

PERCEPTIONS
Perceptions of Learning Environment Values and Beliefs Attitudes Observations

Over time, perceptions can tell us about environmental improvements.

Tells us: What processes/programs work best for different groups of students with respect to student learning.

Standardized Tests Norm/Criterion-Referenced Tests Teacher Observations of Abilities Formative Assessments

STUDENT LEARNING

Tells us: The impact of student perceptions of the learning environment on student learning.

Tells us: If a program is making a difference in student learning results.

Over time, student learning data give information about student performance on different measures.

Tells us: The impact of the program on student learning based upon perceptions of the program and on the processes used.

Bernhardt, V.L. (2013). Data Analysis for Continuous School Improvement. Third Edition. New York, NY: Routledge. Page 17.

The design of the KtO grant program induced districts to develop systematic routines for collecting various types of data to assess the trajectory of literacy growth within schools and within student subgroups. The grant application encouraged districts to develop a "culture of assessment use," whereby educators worked collaboratively using detailed measures to identify the learning gaps of a small subset of struggling students. This strategy of "starting small to go big" helps to identify what kind of teaching works best with students with significant needs so that it can be applied more broadly across schools and districts. Sandy Strunk, KtO project manager, remarked, "Many who did not get grants noted that completing the needs assessment was a powerful learning experience; it became apparent that they did not know which questions to ask, which data to use, or what it meant."[14]

Collaborative inquiry has emerged as a promising means of supporting teachers and building their capacity to implement complex curricula and reform initiatives to improve student achievement. Rigorous studies of inquiry-based approaches by Stanford scholar Joan Talbert and

her colleagues point to the importance of navigating colleague resistance and facilitating teacher learning by challenging assumptions and surfacing practices that limit student success.[15] As a result, teachers shift responsibility for student performance to their teaching rather than to external causes. Student achievement and survey data of professional practices shows that high school educators using these inquiry practices become more collaborative and adept in data-driven decisionmaking and attain the

Each facet of the KtO application process challenged local literacy teams to develop inquiry-based approaches

- using multiple data sources to identify target students and their literacy needs;

- designing high-leverage instructional and programmatic responses to close skill gaps and accelerate achievement;

- integrating formative assessment as essential to monitoring student progress and the impact of literacy instruction and interventions;[16]

- examining literacy instruction through the lens of target students to understand the consistency and effectiveness of curricular and instructional decisions; and

- leading evidence-based improvement efforts in their schools.

greatest gains in student outcomes—including attendance rates, graduation rates, credit accumulation, and state assessment pass rates—relative to comparison schools.[17]

In addition, for far too long teachers have served as passive recipients of policy, curricular, and professional reforms, leading to marginal results in improving student learning and achievement. The PDE designed a framework in which developing the knowledge and skill of frontline practitioners would be the central concern. "To promote educational equity and meet new standards for student learning, we are asking educators to operate at a high level of practice that requires informed judgment and continuous adaptation," said Cindy Anderson, KtO project coordinator.[18] To that end, state leaders created an infrastructure to develop teachers' literacy expertise— the ability to draw on knowledge of evidence-based instruction and interventions, recognize patterns of problems, and apply that knowledge in developing a repertoire of solutions.

The PDE asked 149 of the initial 329 districts to submit a full application.[19] In addition, sub-grantee applicants submitted a comprehensive local literacy plan that set priorities within a coherent framework for integrating literacy education into the implementation of ELA Common Core State Standards (CCSS); federal programs such as Title I, Race to the Top, English language learning, and special education; and other reform initiatives. The KtO team worked closely with the districts in shaping a common vision for standards-aligned literacy education and ensuring the connection of funding levels, the size and complexion of student groups, and the intensity of the core intervention. Ultimately fifty-four districts and two charter schools received KtO funding in the spring of 2012 and were eligible to apply for continued funding in the spring of 2013. To date, fifty-three districts and two charter schools are funded.

BASELINE PROFESSIONAL LEARNING OF LITERACY

The PDE used its IUs to provide training and technical assistance to administrators and teachers. Nine baseline content modules were created to build educators' knowledge of literacy development and to promote persistent and pervasive practices in alignment with the ELA standards. These new rigorous expectations for what students know and can do are meant to complement the knowledge demands within a subject area—deepening students' conceptual understanding by connecting thinking and understanding with strategic reading and effective writing.

KtO Baseline Modules

- Using Data for Literacy Decisionmaking
- Successful Transitions Along the Literacy Continuum
- Building Blocks of Literacy
- Family Literacy and Family Engagement
- Reading Apprenticeship®
- Literacy Design Collaborative
- Universal Design for Learning (UDL)
- Navigating Content with English Language Learners (ELLs)
- Supporting Learners with Special Needs

Source: Pennsylvania Department of Education, Division of Federal Programs, Keystones to Opportunity: *Pennsylvania's Vision for Sustainable Growth in Reading Achievement*, Pennsylvania Application for Striving Readers Comprehensive Literacy Grant (Harrisburg, PA: Author, 2011).

> **THE VISION FOR AN EFFECTIVE LITERACY PROGRAM RECOGNIZES THAT CREATING FLUENT AND PROFICIENT READERS AND WRITERS IS A VERY COMPLEX TASK AND REQUIRES THAT TEACHERS COORDINATE THEIR INSTRUCTION TO REINFORCE IMPORTANT STRATEGIES AND CONCEPTS.**

The ELA standards place a premium on defining literacy in practice-based, subject-specific ways. Students must demonstrate advanced literacy proficiencies such as comprehending increasingly complex text, constructing text-based arguments, synthesizing information from multiple sources, and communicating clearly what they are learning in their subjects. The majority of secondary-level teachers, however, report inadequate pre- and in-service education in content-based reading and writing instruction and in designing instruction that accounts for differences in students' language, literacy skills, and culture.[20]

Moreover, most secondary schools are not organized to foster purposeful reading, writing, and discussion as the primary models of learning both content and thinking competencies. Gina Biancarosa and Catherine Snow, authors of *Reading Next*, write, "Often in today's schools one teacher has no idea what another is teaching; this is particularly true in high schools. The vision for an effective literacy program recognizes that creating fluent and proficient readers and writers is a very complex task and requires that teachers coordinate their instruction to reinforce important strategies and concepts."[21]

Selected Baseline Training Modules

The numbered section below describes five KtO baseline training modules with a focus on the implications for middle and high school teachers. Pennsylvania identified an optimal mix of evidence-based practices to increase teachers' effectiveness in integrating reading and writing into course work and providing students with systemic supports to ensure that all students are able to attain the competencies in the ELA state standards. As emphasized in *The Comprehensive Literacy Plan: Pennsylvania Keystones to Opportunity*, the nature and quality of tasks that teachers ask students to do in relation to subject-area texts powerfully influences students' beliefs about their capacities and identities as learners.[22] The aim is to make students active in the learning process and thereby increase their awareness and self-confidence in understanding and responding to disciplinary text as per the ELA standards.

During the first year of KtO implementation, thousands of teachers and administrators attended baseline training from PDE-approved providers who participated in the train-the-trainer certification process. In subsequent years, the PDE will design online learning paths to provide this foundational content to all of Pennsylvania's 500 school districts and 149 charter schools.[23] In addition, sub-grantees will be asked to identify strategies for disseminating the knowledge and skills to other instructional leaders and teachers not directly involved in the KtO grant program.
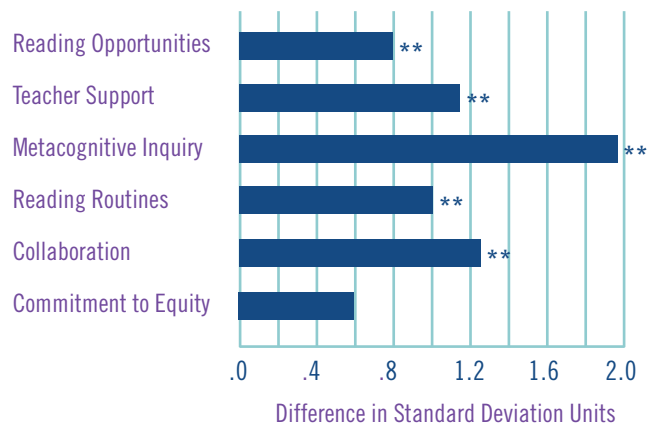
1. Reading Apprenticeship®

Created by the Strategic Literacy Initiative at WestEd in partnership with secondary subject-area teachers, Reading Apprenticeship® (RA) combines affective and cognitive aspects of literacy support to promote students' engagement and achievement in reading and writing in subject-area classes.[24] RA draws on teachers' subject-area expertise to help students develop reading comprehension and problem-solving strategies as part of content-area learning. Students receive extensive support to connect what they read to the background knowledge they already have and to engage in extended opportunities to read, write, and discuss with their peers.

Three federally funded randomized controlled studies tested the effectiveness of the RA teacher professional development with a focus on literacy instruction aligned to the ELA CCSS in history and science.[25] RA produced significant gains on standardized assessments of literacy and disciplinary knowledge. Survey and interview data also indicates the development of more positive academic identities for students as independent readers, writers, and thinkers.

In addition, the findings show significant effects of RA on teacher knowledge and skills, instructional practices, and student achievement. Through RA, teachers

- increase the effectiveness of teaching their subject area by focusing on the use of the literacy and reasoning practices within the content areas;

- provide more and varied opportunities to read in class;

- increase their use of formative assessment, which has been shown to produce substantial learning gains, particularly for low-achieving students;[26] and

- provide support for students practicing new literacy skills while developing their ability to direct and monitor their own learning.

Teacher Interviews—History Cohort 1 (Treatment/Control Differences)

Difference in Standard Deviation Units

**Statistically significant at .01 level; figure is available at http://careers.wested.org/cs/ra/view/rstudy/35.

Source: "Reading Apprenticeship Professional Development in High School History and Biology," in C. Greenleaf et al., *Grant Title: A Study of the Efficacy of Reading Apprenticeship Professional Development for High School History and Science Teaching and Learning* (Washington, DC: WestEd, June 2011), http://www.wested.org/wp-content/uploads/IES-TQRW-FINAL-REPORT.pdf (accessed March 27, 2014).

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According to researcher Cynthia Greenleaf, codirector of the Strategic Literacy Initiative at WestEd, "By design, Reading Apprenticeship professional development activities confront many deeply held beliefs and commonly accepted practices in traditional secondary education, among them simplistic views of reading, misperceptions about the capabilities of diverse students, and little appreciation of the role of reading and texts in content learning."[27]

Teachers learn how to use metacognitive inquiry—instruction that teaches students to become aware of how they understand while they read.[28] They integrate routine, strategic ways of engaging with reading as part of subject-area instruction. Students' ability to direct their own learning is enhanced by creating a climate of collaborative inquiry and deeply reframing the way students talk about what they know, what they find confusing, and what they can do to understand and move forward.

2. Literacy Design Collaborative

Pennsylvania works in tandem with other states and districts as part of the Literacy Design Collaborative (LDC), supported by the Bill and Melinda Gates Foundation.[29] Educator networks create learning tasks for implementation of the ELA CCSS within content areas. The intent of the LDC is to create high-quality modules for systematizing instruction and making literacy instruction foundational to core subjects. As Richard Elmore, professor at the Harvard Graduate School of Education, contends, "The real accountability system is in the tasks that students are asked to do. They must know what they are expected to do, how they are expected to do it, and what knowledge and skills they need in order to learn the tasks."[30] The design and use of the LDC framework creates a structure for sharing responsibility for effective use of content-based literacy practices among secondary content teachers.

Teachers lead the design of LDC tasks for use in their subject area, combining reading, reasoning, and writing activities to support literacy development and content acquisition. The LDC task requires students to produce a culminating essay. Students are guided through a sequence of activities in which they are asked to acquire content knowledge through reading, construct an argument backed by textual evidence, and respond to feedback from teachers and peers. The tasks are designed to include evidence-based instructional support for students: explicit instruction and modeling of task requirements, opportunities for feedback and revision, and clear guidelines for evaluating written products.

Teachers learn how to structure step-by-step instruction, moving from teacher modeling and demonstrations to small-group work and, finally, to individual work. The LDC modules serve as good formative assessment by including frequent checks on student understanding. Teachers report that the LDC tasks enable them to identify gaps in their students' knowledge as well as gaps in their own instruction.[31] In addition, ongoing collaboration among teachers is essential to calibrate scoring of student work using analytic rubrics and to share effective practices for helping students engage the full range of reading and writing skills in learning subject matter.

3. Universal Design for Learning (UDL)

In conjunction with Pennsylvania's expanding digital infrastructure, the KtO grant program provides professional learning and support for teachers in the use of Universal Design for Learning (UDL), a scientifically valid framework for using technology based on cognitive and learning sciences.[32] Pennsylvania supports the broad use of UDL through its ambitious $200 million Classrooms for the Future program, a three-year initiative to create technology-enriched instructional settings in schools statewide.[33] Coupling a high-speed network with UDL can provide students with assistive technology such as built-in

> STUDENTS CAN EXERCISE GREATER CONTROL OVER THEIR OWN LEARNING BY DEMONSTRATING THEIR KNOWLEDGE AND SKILLS USING A RANGE OF MULTIMEDIA SOFTWARE.

text to speech, voice command, video chat, and enlarged print. The baseline module provides all sub-grantees with core training, an understanding of the cognitive science and underlying principles of universal design for learning, and its application to digital technology.

UDL provides a blueprint for customizing digital learning and integrating a number of features that allow students to access content in a variety of forms and then express what they know through different means. These design features can guide the development of flexible learning environments that accommodate individual learning differences and increase students' engagement and motivation. In addition, the access to information collected in real time supports ongoing diagnosis and feedback to tailor the nature and pace of instruction. Moreover, students can exercise greater control over their own learning by demonstrating their knowledge and skills using a range of multimedia software.

The PDE considers the use of UDL paramount in leveling the playing field for students with disabilities, ELLs, and other students with diverse language and literacy needs. UDL provides flexibility in the ways information is presented and in the ways students respond or

demonstrate competencies. By reducing barriers to learning and increasing access to content depending on each student's need rather than how the student is labeled, more students can benefit from these robust technologies. Over the past five years, several studies have tested the delivery of content using different means to accommodate learners' needs.[34] In addition to increased performance, students report a desire to use UDL-designed systems.[35]

## 4. Navigating Content for English Language Learners (ELLs)

Pennsylvania classrooms have experienced exponential growth in the numbers of ELLs.[36] These learners must attain two key objectives in school: language proficiency in English, and achievement in grade-level subject matter across the curriculum. The baseline module introduces teachers to English language proficiency (ELP) standards, language acquisition theory, and concrete research-based strategies to help English language learners navigate secondary content.[37]

The state participates in the World-Class Instructional Design and Assessment (WIDA) consortium, which developed ELP standards that outline the underlying English language practices and use found in the CCSS. The module asks participants to develop unit plans that identify challenges and roadblocks to comprehension for ELLs in a text, activate and build background knowledge, and develop content and language objectives using ELP standards and lesson plans available on the Pennsylvania Standards Aligned System online portal.[38]

Evaluations show that ELLs benefit from extended opportunities for discourse and collaborative learning with peers within meaningful content-rich activities.[39] This module focuses on the instructional practices that build bridges between the student's native language knowledge,

cultural assets, prior knowledge, and evolving acquisition of English in an academic context.[40] Upon completion of the module, teachers will be able to compare and contrast first- and second-language literacy development, use culturally responsive practices, and explicitly teach vocabulary and academic language as part of content-area learning.

Teachers also review ELLs' scores on the WIDA English language proficiency assessment, Assessing Comprehension and Communication in English State to State for English Language Learners (ACCESS).[41] This is administered to ELLs annually to monitor students' progress in acquiring academic English. To adjust instruction, teachers review ACCESS scoring and related tools for using language learning progressions to set and evaluate short-term language goals that correspond to content-area learning targets. Participants learn to use selective tools for formatively assessing ELLs' language and literacy development. These include varying combinations of rubrics, checklists, rating scales, and disaggregated data that can highlight the gaps in student learning and provide directions for addressing those gaps.[42]
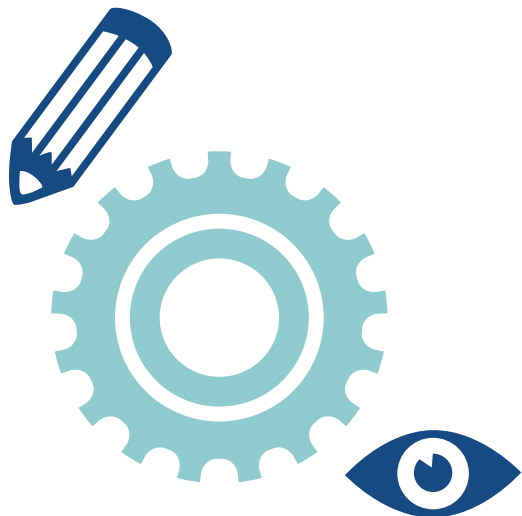
5. Supporting Learners with Special Needs

The KtO baseline model introduces participants to Pennsylvania's Response to Instruction and Intervention (RtII) framework, which can offer a comprehensive approach to help students with reading difficulties increase their ability to read and comprehend text. RtII refers to a standards-aligned, multitier system that delivers instruction to students based on the nature and severity of a student's difficulties.[43] In general, the system includes three tiers: regular classroom core instruction (Tier I); group interventions for students not making adequate progress in the core curriculum (Tier II); and individualized, intensive interventions (Tier III).

The baseline module introduces educators to the RtII framework and the use of a continuum of student performance data to continuously inform, monitor, and improve students' access and response to high-quality core and supplemental instruction and intervention. Upon completion of the module, teachers will be able to

- understand the least restrictive environment, where special education students can be successfully educated in settings with their nonhandicapped peers to the maximum extent possible in accordance with students' individualized education programs, or IEPs;

- understand the nature of various reading difficulties;

- develop the ability to use simple diagnostic flowcharts to help determine instructional focus based on data; and

- acquire knowledge of general assistive technology, supports, and accommodations for consideration in reading instruction for various student needs.[44]

The intent of RtII is to improve learning for all students, including students with disabilities, through the use of a continuum of student performance data, and by providing high-quality, research-based instruction and interventions in accordance with students' literacy needs. This problem-solving approach integrates general and special education based on routine progress monitoring to assess students' reading and writing within core instruction and to adjust the frequency and intensity of interventions as needed to enhance their performance.

ASSESSING AND SCALING EFFECTIVE LITERACY PRACTICES

In addition to the baseline modules, the PDE designed a number of other mechanisms to extend the reach of the KtO grant program. To expand effective literacy practices across secondary-level course work, sub-grantees are expected to assess the degree to which classroom learning environments foster twenty-first-century skills using an observational protocol called H.E.A.T.®—Higher-Order Thinking, Engagement, Authenticity, and Technology.[45] This protocol measures the student outputs of a classroom learning experience based on a framework that integrates high-leverage, research-based strategies associated with increasing the depth of student learning and performance. The National Research Council defines this deeper learning "not as a product but as processing—both within individual minds and through social interactions in a community—and twenty-first century competencies as the learning outcomes of this processing in the form of transferable knowledge and skills that result."[46]

H.E.A.T. includes indicators for student-centered learning; outcomes requiring complex thinking processes, problem-solving, and sustained inquiry; adjustments to content,

process, and product based on learner profiles and needs; and the use of digital-age tools and resources for student learning, formative assessment, and feedback. Districts and schools are expected to use information about learning environments to expand students' opportunities to apply or transfer critical content in ways that are challenging and meaningful to students.[47]

In the second year of the KtO grant, the PDE developed a literacy-focused adaptation of H.E.A.T., which emphasizes how speaking, listening, reading, and writing relate to the four areas assessed—higher-order thinking, engaged learners, authentic connections, and technology use.[48] There are four online courses for teachers to complete. Also, by means of an online professional learning module, administrators learn how to assess classroom learning environments in relation to students' engagement in discussion, reading, and writing as part of inquiry-based, content learning. The use of a standardized protocol provides a cognitive framework and consistent language for leading change in literacy practices, signals priorities for improvement, and ensures that authorities have coherent goals across all levels of the system.

> DISTRICTS AND SCHOOLS ARE EXPECTED TO USE INFORMATION ABOUT LEARNING ENVIRONMENTS TO EXPAND STUDENTS' OPPORTUNITIES TO APPLY OR TRANSFER CRITICAL CONTENT IN WAYS THAT ARE CHALLENGING AND MEANINGFUL TO STUDENTS.

assessed in the Bernhardt logic model, employs a mixed method to triangulate data and test for consistency in effects. Throughout the grant period, local districts submit demographic data and measures of student learning, the percentage of participating students who demonstrate adequate growth, and data from classroom learning environments.

In addition to compiling impact data, the evaluation team will develop case studies including questionnaires, interviews, and site visits to examine the fidelity of implementation within districts and schools and the connections among specific practices and strategies and increased literacy achievement. Following initial implementation, the PDE will invite the top 10 percent of sub-grantees achieving the greatest growth to apply for innovation incentive awards. The awards will support sub-grantees in identifying and disseminating innovative strategies associated with substantial growth in literacy achievement.

Positive results from the first year of KtO implementation are beginning to emerge. Based on preliminary measures, the CEAC evaluation team reported the following positive findings:

- Norm-referenced reading tests, a measure of individual performance relative to other test takers, are administered for all grades through high school in the fall and spring. The results show greater percentages of students across grade levels scoring in the upper quartile and a reduction in the percentage of students scoring in the lowest quartile. For example, for middle school students in KtO districts, the proportion that scored in the highest quartile increased by 17 percent. These changes in scores for sub-grantees over the school year reveal improvements in listening comprehension, vocabulary, and sentence and passage comprehension.[51]

Evaluation of KtO

Spreading effective literacy practices depends on a rigorous evaluation of the KtO grant program. Improving literacy achievement statewide is an immense challenge and requires disciplined investigation into what programs and practices are working and for whom and how well they are working. The KtO team invested state leadership dollars in a rigorous project evaluation using the Bernhardt model. This would provide important information to improve the grant program as well as model data-driven decisionmaking for continuous improvement. "State leadership involves more than setting and monitoring requirements for local educational agencies; it requires a willingness to collaborate with district and school leaders and teachers in collecting and analyzing data to identify and enact solutions," says Cindy Rhoads.[49]

The Collaborative for Evaluation and Assessment Capacity (CEAC) at the University of Pittsburgh and SAS EVAAS for K–12 are the statewide evaluators for this project.[50] The evaluation, using the four dimensions

- Classroom observations using the H.E.A.T. protocol to assess higher-order thinking, engaged learning, authentic connections, and technology at all levels through high school indicate improvement in the quality of learning environments and show that the use of research-based strategies associated with attaining deeper learning competencies is becoming more common.[52]

- Sub-grantees report substantial changes in educators' knowledge of literacy and evidence-based strategies, resulting in improved classroom-level literacy instruction and interventions for students.[53]

The participating districts also reported on the effectiveness of expanded professional learning opportunities to help teachers and administrators support students' literacy achievement, making specific mention of using data to make instructional decisions, leveraging technology, and building students' competencies as critical thinkers and collaborative problem-solvers.

For example, one district notes, "The most powerful impact that the grant has made is the significant changes due to high-quality professional development. In order to meet high accountability and rigorous standards, teachers are equipping themselves with research-based instructional strategies designed to promote literacy and twenty-first century skills."[54] Other districts comment on increased access to technology that expands schools' capacity to differentiate instruction and builds students' language and literacy competencies in accordance with their individual needs and interests.

Districts also report that principals are now better able to identify, support, and articulate the use of effective instructional strategies that mesh well with the states' move to rigorous standards and a new state teacher effectiveness system. KtO districts provide implementation support by scheduling time for teachers to develop standards-aligned curricula, establishing professional learning communities in schools, and providing instructional support through teacher leaders and instructional coaches.

PRINCIPALS ARE NOW BETTER ABLE TO IDENTIFY, SUPPORT, AND ARTICULATE THE USE OF EFFECTIVE INSTRUCTIONAL STRATEGIES THAT MESH WELL WITH THE STATES' MOVE TO RIGOROUS STANDARDS AND A NEW STATE TEACHER EFFECTIVENESS SYSTEM.

POLICY RECOMMENDATIONS

During the past two decades of standards-based reform, policymakers anticipated that state standards not only would define what students needed to learn but also would improve how teachers taught. Unfortunately, years of almost-stagnant reading and writing proficiency levels show that these assumptions have not been realized for all young people graduating from high school. A broad consensus exists among researchers and educational leaders that "under-developed literacy skills are the number one reason why students are retained, assigned to special education, given long-term remedial services, and why they fail to graduate from high school." [55]

- Federal policy should sustain its investment in student literacy by continuing to fund the SRCL grant program. SRCL implementation results in improvements in educators' capacity to connect data with evidence-based literacy practices associated with advancing students' language and literacy competencies in accord with the ELA standards. Positive effects from the first year of implementation show an increase in the quality of classroom instructional environments along with gains on achievement tests in students' language development and reading comprehension.

- Federal education policy should expand its support for comprehensive state literacy initiatives to all states. The next reauthorization of the Elementary and Secondary Education Act should incorporate the Literacy Education for All, Results for the Nation Act (LEARN Act, S. 758 and H.R. 2706), to ensure that all U.S. students graduate with the advanced literacy competencies essential for success in college and careers. Because the LEARN Act includes key tenets of the SRCL grant program, an alternate discretionary grant program could be designed to expand and develop innovative and best practices associated with substantial growth in literacy achievement, particularly for students with the greatest needs.

- The federal government should expand its investments in a research agenda to increase knowledge of literacy development and instruction for students in pre-K through grade twelve. The Institute of Education Sciences funds the Reading for Understanding Research Initiative, the National Center for Education Research's Reading and Writing program, and the National Center for Special Education Research's Reading, Writing, and Language Development program.[58] Additional

Closely linked to the nation's poor literacy achievement is the variation among teachers in the actual curriculum an average student learns in the same course and in the same school—with few teachers engaging students in extended reading and writing activities.[56] In contrast, high-performing systems around the world produce the greatest gains in student learning by reducing the variation in classroom instruction by creating norms for collaborative planning, reflection on student learning, and peer coaching.[57] Significant improvement has resulted from changing not just the content and pedagogical approaches but also how teachers think about teaching, and refocusing instructional improvement from adults to students—from *what's taught* to *what's learned*.

More deliberate attention is needed to identifying students' specific literacy and learning needs and developing high-leverage practices to address them. The federal investment in comprehensive literacy initiatives through the SRCL program affords an enormous opportunity to work toward a shared conception of effective literacy instruction, to establish points of focus for training and support, and to build a common language and repertoire of tools and practices to develop students' literacy achievement.

research and development dollars would enhance the value of the funds that are already being expended by applying knowledge for particular grade levels and student subgroups, such as English language learners and students with disabilities, to improve classroom literacy practices, curricula, digital resources, and teacher effectiveness in advancing literacy achievement.

State Policy

- Every state should review its current literacy plan and develop one that vigorously implements a comprehensive birth-through-grade-twelve literacy initiative that will ensure that students have the literacy competencies to succeed in college, careers, and life.

- State plans should incorporate the latest research on effective literacy education, including innovations in technology and resources to support diverse learners. The plan should focus on improving educator capacity to ensure strong implementation and include an evaluation component for purposes of continuous improvement.

Local Education Systems

For middle and high schools, districts and schools should create enabling conditions to do the following:

- Create supportive teaching and learning conditions for robust implementation of literacy plans that reflect the instructional shifts in the ELA college- and career-ready standards by

  - supporting schools in building a collaborative culture of inquiry and data use to design high-leverage instruction and interventions to address the specific learning needs of struggling readers and writers, including English language learners and students with disabilities;

  - ensuring that all core content teachers share responsibility for advancing literacy within rigorous course work and provide high-quality professional learning and adequate time for instructional staff to use data and connect it to practice; and

  - creating student-centered learning environments that integrate research-based strategies to deepen students' conceptual understanding by connecting critical thinking and problem-solving with strategic reading and effective writing.

- Ensure that educators provide extended time and opportunities for students to read, write, and discuss academic content using multiple approaches and strategies by

  - increasing students' motivation and engagement by drawing on their background knowledge and experiences and by connecting conceptual understanding to students' language, cultural assets, interests, and post-secondary goals;

  - employing multiple ways to help students access content and perform tasks, by using digital media and principles of universal design for learning along with graphic organizers and visuals such as models, diagrams, and charts; and

  - using formative assessment to continually assess learning, by monitoring students' progress, guiding the design of learning opportunities, providing specific feedback about how to improve performance, and encouraging students to reflect on their own learning and thinking. Particularly for low-achieving students, formative assessment has been proven to have one of the greatest positive impacts of any educational intervention.[59]

CONCLUSION

The problem of low levels of literacy among the nation's young adults is enormous, and the situation is becoming worse as literacy demands increase and change through the expansion of technological capabilities. Policy leaders must confront the enormity of the college- and career-readiness gap and envision what improvements will be necessary to prepare literate citizens for the challenges they will face in the future. Fortunately, states are developing a powerful array of tools through the design of comprehensive birth-through-grade-twelve literacy programs. It is time to build on these initial efforts to ensure that all young people graduate with the literacy competencies they will need to pursue their education and career aspirations well beyond high school.

ENDNOTES

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