



## **A Solution-Finding Report**

**Title:** *High School Competency-based Education and Post-secondary Success*

**Date:** February 4, 2015

This solution-finding report provides information, requested by the Great Lakes Comprehensive Center, for a summary of the research or case studies connecting competency-based education (CBE, also referred to as “proficiency-based learning”) at the high school level with success at the post-secondary level. The person requesting the information wrote, “I suspect it is too early in the implementation, monitoring, and evaluation of CBE to produce that kind of research” and, to a great extent, this suspicion was borne out by an extensive search of the literature.

However there is some evidence linking CBE (and personalized learning) with better high school grades, graduation rates, and other markers, which one could reasonably infer would have some bearing on college success. For that reason, we have included research and case studies showing these linkages, plus research on factors that maximize the effectiveness of CBE.

Readers interested in CBE are also encouraged to access CIL’s “Connect: Making Learning Personal” inaugural issue: *Competency-based Education: Supporting Personalized Learning* ([http://www.centeril.org/connect/resources/Connect\\_CB\\_Education\\_Twyman-2014\\_11.12.pdf](http://www.centeril.org/connect/resources/Connect_CB_Education_Twyman-2014_11.12.pdf)).

*Solution-finding Reports* are intended to provide a quick response to the request for information; they are not intended to be a definitive literature survey or synthesis of the topic.

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## Case Studies and Research on the Effectiveness of Competency-based Education

Alliance for Excellent Education. (2013). *Strengthening High School Teaching and Learning in New Hampshire's Competency-based System*. Washington, DC: Author.

<http://heartland.org/sites/default/files/strengtheningsteachinglearningnh.pdf>

Sanborn Regional School District in New Hampshire switched to a competency-based model after years of poor performance on state assessments. Sanford Regional High School, which serves 754 students in Grades 9 through 12, saw a significant drop in discipline issues after the state moved to a competency-based system in 2005; the number of freshmen reported for discipline issues fell from 433 during the 2007–2008 school year to just 84 in 2011–2012. Course failures among the freshman class dropped from 53 students to just 2 students during the same time frame. Additionally, according to this report, the New Hampshire Department of Education's "support of policies that encourage competency-based learning and different approaches to professional development spurred substantial innovation across the state....Local high school redesign initiatives yielded positive results at specific sites and demonstrated that a competency-based model is possible and can produce increased student learning and graduation rates."

Big Picture Learning. (2014). *Big Picture Learning Brochure*. Providence, RI: Author.

<http://www.bigpicture.org/wp-content/uploads/2011/10/Big-Picture-Brochure.pdf>

Big Picture Learning (BPL) was founded in 1995, and is a nonprofit with the stated mission of "the education of a nation, one student at a time," and a vision of "catalyzing vital changes in K–Adult education by generating and sustaining innovative, personalized learning environments that work in tandem with the real world of their greater community." According to its brochure: "Evidence of Success: Big Picture Learning schools consistently outperform regular schools, yet they cost no more, because we achieve our superior performance with no added financial or human resources. But don't take our word for it. Here are comparisons pitting the results of Big Picture Learning schools against regular schools in major cities across the country." A number of charts then compare BPL schools with regular schools, with an on-time graduation rate of 90% as opposed to 69.5% for regular schools. Other charts show Graduation Rate, College Acceptance Rate, Passing English, and Passing Math percentages for Detroit, Los Angeles, Oakland, Providence, and San Diego, with the BPL schools far outperforming the local schools. For example, in Detroit, the Graduation Rate is 95.5% for BPL schools vs. 25% for local schools, the College Acceptance Rate is 100% vs. 27%, the Passing English Rate is 81.2% vs. 46.9%, and the Passing Math Rate is 54.7% vs. 39.1%.

Crumley, B. (2014). *How Alaska's Chugach District Changed Education Through Performance-based Learning*. Vienna, VA: The International Association for K–12 Online Learning.

<http://www.competencyworks.org/resources/how-alaskas-chugach-district-changed-education-through-performance-based-learning/>

This CompetencyWorks issue brief begins, “Chugach, Alaska isn’t just known for the Exxon Valdez Oil Spill and 1964’s tragic 9.2 magnitude earthquake anymore. The Chugach School District has become recognized as an innovator in grassroots school reform, especially when it comes to performance-based learning. And for good reason. Within the first five years of starting to rebuild its education system, Chugach leapt from the bottom quartile to an average 72nd percentile on Alaska’s required state assessments. The Chugach School District performance-based education system was honored by President Bush as the first education organization to earn the prestigious Malcolm Baldrige National Quality Award, and again by Alaska’s own quality award program by being the first recipient of the APEX award.”

Digital Promise. (2013). *Competency-based Education at Work: An In-depth Look*. Washington, DC: Author.

[http://www.digitalpromise.org/page/-/dpdocuments/league/CBEatWork\\_InDepthLook.pdf](http://www.digitalpromise.org/page/-/dpdocuments/league/CBEatWork_InDepthLook.pdf)

According to this report, teachers who use competency-based education in their classrooms “are quick to point out that empowering students to move at their own pace increases student engagement and performance. There are measurable outcomes to support this. Below are stories from districts across the country that have garnered results from competency-based education.”

Edwards, L. (2014). *Young Women’s Leadership Charter School Recognized by City Hall*. Chicago, IL: *Citizenship Weekly*.

<http://thechicagocitizen.com/news/2014/aug/06/young-womens-leadership-charter-school-recognized-/>

Chicago’s only all-girls public school, Young Women’s Leadership Charter School (YWLCS), has moved away from tying credit to seat time and instead awards credit for specific competencies demonstrated at any point in a student’s high school career. Students earn credit for classes in which they demonstrate proficiency on at least 70 percent of academic course outcomes. In August 2014, YWLCS was recognized by the Chicago City Council, via a resolution for its academic excellence – most notably for producing a Gates Millennium Scholar for the second consecutive year. After receiving the resolution, YWLCS’ Chief Academic Officer, Dr. Ruanda Garth McCullough stated, “This resolution is in honor of our 100 percent graduation rate of all of our Class of 2014. What this means for our school is that this is business as usual, this is not the first year that we’ve had 100 percent graduation rate, but we wanted to take time to celebrate the students for their continued effort.”

Iowa Department of Education. (2013). *Competency-based Education: Task Force Final Report*. Des Moines, IA: Author.

<https://www.educateiowa.gov/sites/files/ed/documents/CompBasedTaskForceFinalReport.pdf>

Several school districts in Iowa have begun to work toward competency-based pathways for students. Muscatine Community School District began this work with its first cohort of teachers after attending a December 2011 Competency-based Education Forum. A third cohort is currently investigating and learning about competency-based education. Each cohort includes teachers from elementary through high school and from a variety of disciplines. Students, who are randomly placed, have a competency-based education experience in some classes and a traditional experience in others. During the 2012–2013 school year, nearly all students in competency-based education courses earned at least one C or better, while less than two-thirds of students in non-competency-based education courses earned at least one C or better. Additionally, students in competency-based courses must demonstrate proficiency on the specific learning objective to earn credit, while students in non-competency-based courses may earn credit in ways other than demonstrating competency, such as extra credit, bonus questions, or points on one section of a test that counterbalance another section on a different standard.

Jones, R. (2012). *No More “Turnaround” Labels for Adams 50*. Denver, Colorado: Chalkbeat.

<http://co.chalkbeat.org/2012/08/27/no-more-turnaround-labels-for-westminster/#.VMqWkUoo5oI>

This report – alluded to in the Sturgis (2012) article “Yes, This Is Definitely Evidence” (see below) – begins, “This Adams County school district’s 10,000 students went back to class Monday with at least one major blemish removed from their reputations: Not one of them returned to a school that fared so poorly on the state’s performance indicators that it got slapped with the stigmatizing label of ‘turnaround.’ Three years ago, seven of the district’s 18 schools were in that ignoble category, reserved for roughly 3 percent of the worst-performing schools in Colorado. The district itself had been placed on academic watch in 2006, a precursor to possible loss of state accreditation, and deemed a ‘turnaround’ district in need of state supervision, one of seven in the state. Then, in 2009, Westminster district leaders responded to a dramatic problem with a radical solution – scrap tradition, including grade levels and letter grades, and allow students to progress based on showing they know the required content. The plan, which had never been tried in a sizable urban district, drew international attention. And yes, district leaders admit, mistakes were made in its implementation. But as of this fall, all district schools and the district itself had moved out of the ‘turnaround’ performance cellar.”

Marzano Research Laboratory. (2010). Re-Inventing Schools Coalition (RISC) vs. Non-RISC Schools. Bloomington, IN: Author.

[http://www.reinventingschools.org/wp-content/uploads/2014/10/RISC-vs.-Non-RISC\\_final-May-2010.pdf](http://www.reinventingschools.org/wp-content/uploads/2014/10/RISC-vs.-Non-RISC_final-May-2010.pdf)

This comparison of student proficiencies for Reading, Writing, and Mathematics, was prepared by the Marzano Research Laboratory for the Re-Inventing Schools Coalition (RISC), which has a “framework that provides a competency-based environment where learning is owned at developmental levels with transparent learning goals/standards.” Researchers compared seven RISC districts and eight non-RISC districts in three states. Study findings included: (1) the odds of a student in a RISC school scoring proficient or above on state tests are 2.3 times greater for reading, 2.5 times greater for writing, and 2.4 times greater for mathematics than the odds of a student scoring proficient or above on state tests at a non-RISC School; (2) compared to students in non-RISC schools, students in RISC schools are 37% more likely to score proficient or above on state tests for reading, 54% more likely to score proficient or above on state tests for writing, and 55% more likely to score proficient or above on state tests for mathematics; and (3) the degree of RISC model implementation was found to relate to the number of students scoring proficient or above on state tests in reading and writing (the odds of a student in a High-RISC School scoring proficient or above in reading and writing were found to be about two times larger than the odds of a student in a Medium-RISC School scoring proficient or above).

Meyer, J. P. (2014). Meyer: Is Westminster 50 On to Something? Denver, CO: *The Denver Post*.

[http://www.denverpost.com/opinion/ci\\_25732755/is-westminster-50-something](http://www.denverpost.com/opinion/ci_25732755/is-westminster-50-something)

In this article, the author mentions that, before Adams County School District 50 took on its competency-based system, it had only been tried in a small Alaskan school district. After describing the district’s rocky start at implementation, he writes, “In 2012, the state pulled the district off turnaround status. Then, last week, news came that third-grade reading scores had increased by 6 percentage points over the previous year. Those third-graders started in the system when they were kindergartners. That’s good news for a district in a state where the average score dropped by a point. [Deputy Superintendent Pam] Swanson proudly points out the number of unsatisfactory readers also declined, dropping to 16 percent this year from 20 percent in 2013. ‘We are not done yet,’ she said. ‘I am excited that after a decade, we are back to having a majority of our third-graders advanced or proficient in reading.’ The district is challenged by trying to fit its teaching model into the state assessment that still is based on grade levels. So for the district, assigning its students to the proper state test is a complex task. ‘We’re serving two masters,’ Swanson said.”

National Collaborative on Workforce and Disability for Youth. (2011). *Personalized Learning: Policy Insights from Four States*. Washington, DC: Author.

<http://www.newd-youth.info/sites/default/files/policy-brief-03.pdf>

This state-level policy analysis case study, drawn from 22 states presently using individual learning plans (ILPs), offers a glimpse of the progress of four states (Louisiana, New Mexico, South Carolina, and Washington) in implementing student-centered learning innovations. According to this study, student-centered innovations, such as policies and practices in support of individual learning plans, are cited increasingly as central to raising student achievement, and are more powerful than other innovations (including curriculum innovations designed to improve cognitive outcomes) in increasing student learning. Each of the four states launched ILP initiatives with the overriding purpose of redesigning high schools to address the challenge of youth exiting high school unprepared for post-secondary education and employment. According to the study, “To date, only limited evidence is available documenting the implementation and effectiveness of the four state ILP initiatives.”

National Institute of Standards and Technology (NIST). (2001). *Malcolm Baldrige National Quality Award 2001 Award Recipient, Education Category: Chugach School District*. Washington, DC: Author.

<http://www.nist.gov/baldrige/chugach.cfm>

Chugach School District (CSD) encompasses 22,000 square miles in south central Alaska, including much of the Prince William Sound coastline. Most of its 214 students live in remote areas, accessible only by aircraft. After securing a waiver from the Alaska Department of Education, the district replaced credit hours and grade levels with an individualized, student-centered approach. Since 1994, when it began its comprehensive restructuring effort, CSD has progressed from a school district in crisis to one in which student performance exceeds state and national norms. Between 1995 and 1999, results on the California Achievement Test rose dramatically: in reading, from the 28th percentile to the 71st percentile; in math, from 54th to 78th; and in language arts from 26th to 72nd. Between 1994 and 2001, 14 of 17 CSD graduates began attending post-secondary institutions, as compared with one between 1975 and 1994. In the four subject areas tested in Alaska’s High School Graduation Qualifying Examination, CSD topped the state average. By 2000, the percentage of students taking college entrance exams rose from 0% to more than 70%. And CSD led the formation of the Alaska Quality Schools Coalition, with 12 school districts, in and out of Alaska, replicating the Chugach model.

Nellie Mae Education Foundation. (2014). *Nellie Mae Education Foundation Awards \$16M to Continue Implementation of Student-Centered Learning*. Quincy, MA: Author.

<http://www.nmefoundation.org/news/press-releases/nellie-mae-education-foundation-awards-16m>

This story names recipients of awards for districts and schools so that they may continue implementation of student-centered learning, including Revere High School, which was recently named the best urban high school in the nation by the National Center for Urban School Transformation. According to this news item, “Revere High School is looking to build on its tremendous success in raising achievement with competency-based learning. This grant will also support the district’s goal that 100 percent of its high school students be college and career ready by 2025 by helping to build internal capacity for implementing student-centered learning, more community engagement and piloting new strategies in a measured way at specific schools.” As of 2014, 80% of the school’s graduates go on to universities and colleges, and the school has a 3% dropout rate, as opposed to 2008, when the percentage of the school’s graduates going on to universities and colleges was 67%, with a 9% dropout rate.

New Hampshire Department of Education. (2012). *Innovations: New Hampshire High School Transformation*. Concord, NH: Author.

[http://www.education.nh.gov/innovations/hs\\_redesign/index.htm](http://www.education.nh.gov/innovations/hs_redesign/index.htm)

This webpage states, “All students deserve a rigorous secondary education that prepares them for post-secondary education and meaningful careers.” Under Background & History there are documents on Course-Level Competencies and Clarification 306.27 Competencies/Grading, and under Project Successes there are corresponding documents on Reports & Documents and Support for High School Redesign.

Next Generation Learning Challenges. (2014). *Personalized Learning at Scale: Case Studies of Leading Cities*. Washington, DC: Author.

[http://nextgenlearning.org/sites/default/files/grants\\_download/PersonalizedLearningCaseStudyNewOrleans.pdf](http://nextgenlearning.org/sites/default/files/grants_download/PersonalizedLearningCaseStudyNewOrleans.pdf)

According to this report, “Leaders of urban school systems are faced with a daunting fact: some individual schools are achieving incredible results for students from low-income communities, but no urban school systems are achieving those results for all – or even most – children in an entire city....We tell the story of ten cities in the case studies below, with a focus on how technology and great teaching, with the right system-level conditions, can personalize learning for all students and drive sustained achievement growth....We have drafted profiles of these leading cities, telling the stories of how they have dealt with their thorny issues, and where they are having successes and setbacks.”



Quattrocchi, C. (2014). *How Lindsay Unified Redesigned Itself From The Ground Up*. Burlington, CA: edSurge Inc.

<https://www.edsurge.com/n/2014-06-17-how-lindsay-unified-redesigned-itself-from-the-ground-up>

This story reports that Lindsay Unified School District in California's Central Valley has 4,100 K–12 students, all of whom qualify for free and reduced lunch and 52% of whom are English language learners. The implementation of their performance-based system began at Lindsay High School in 2009, and went district-wide in 2011. Since 2009, scores have risen incrementally. The district has seen a 9% increase in the number of students (Grades 2 to 11) rated “proficient” in English language arts (from 25% to 34%), a 4% increase in math (from 28% to 32%), and a 14% rise in science (from 27% to 41%). Scores on the state's Academic Performance Index (API) have also made modest gains, rising from 644 in 2009 to 691 in 2013. While the gain on the API outperforms the state average increase of 35-points, Lindsay's overall proficiency scores are still well below the state average. In California in 2013, average proficiency was 51% in math and 56% in English language arts. But test scores might not be the best metric by which to measure Lindsay's success. Because the state requires districts to test students at the level associated with their age, and not their abilities, the scores on state tests don't entirely reflect the level a student is working at. For instance, a 13-year-old student might have completed 80% of the content in 6th grade. However, she must still take the test for 8th graders. According to Washington Elementary School Principal Cinnamon Scheufele, “I had a hard time giving students content at a fourth-grade level and testing for sixth grade. It doesn't feel right.” The district has been advised to apply for a waiver from the state, but has yet to do so because, according to John Caesar, Director of Technology and 21st Century Learning, “We wanted to show how you can reform a district and its practices within the regulatory environment that everybody is within.” However, the district is seeing gains in other areas of school culture. Since implementation of the new model, suspension rates have dropped by 41% and gang membership has fallen from 18% to 3%. District officials see these metrics as indicators that students see school as a place for opportunity, support, and hope.

Robles, Y. (2012). Innovative Framework Showing Results 3 Years in at Adams 50 Schools. Denver, CO: *The Denver Post*.

[http://www.denverpost.com/news/ci\\_21406731/innovative-framework-showing-results-3-years-at-adams](http://www.denverpost.com/news/ci_21406731/innovative-framework-showing-results-3-years-at-adams)

This news report concerns Adams County School District 50 in southwestern Adams County, Colorado. After trying various kinds of school reform, the district finally stayed the course with what it calls its “competency-based system,” implemented districtwide in the 2009-2010 school year, and has been getting positive results. Preliminary reports show the district has moved from a “turnaround” district to one with “priority improvement.” Instead of traditional grade-level placement, students are grouped based on proficiency per subject and are allowed to advance to the next level as quickly as they can within the school year.

Steele, J. L., Lewis, M. W., Santibanez, L., Faxon-Mills, S., Rudnick, M., Stecher, B. M., & Hamilton, L. S. (2014). *Competency-based Education in Three Pilot Programs: Examining Implementation and Outcomes*. Santa Monica, CA: RAND Corporation.

[http://www.rand.org/content/dam/rand/pubs/research\\_reports/RR700/RR732/RAND\\_RR732.pdf](http://www.rand.org/content/dam/rand/pubs/research_reports/RR700/RR732/RAND_RR732.pdf)

In 2011, the Bill & Melinda Gates Foundation created the Project Mastery grant program to support competency-based education initiatives in large school systems that serve a high proportion of disadvantaged youth. The three recipient organizations – which included two large school districts and one intermediary organization – carried out their pilot programs in a total of 12 public secondary schools distributed across five districts in four states. The Foundation asked RAND to evaluate these efforts in terms of implementation, students’ experiences, and student performance, and this report represents the final results from that evaluation. Those conducting the study found that “we can describe the patterns observed, but our observational research design does not permit us to conclude that differences in the competency-based approaches at each site were entirely responsible for differences in student outcomes in each site.”

Sturgis, C. (2012). *Evidence?* Vienna, VA: The International Association for K–12 Online Learning.

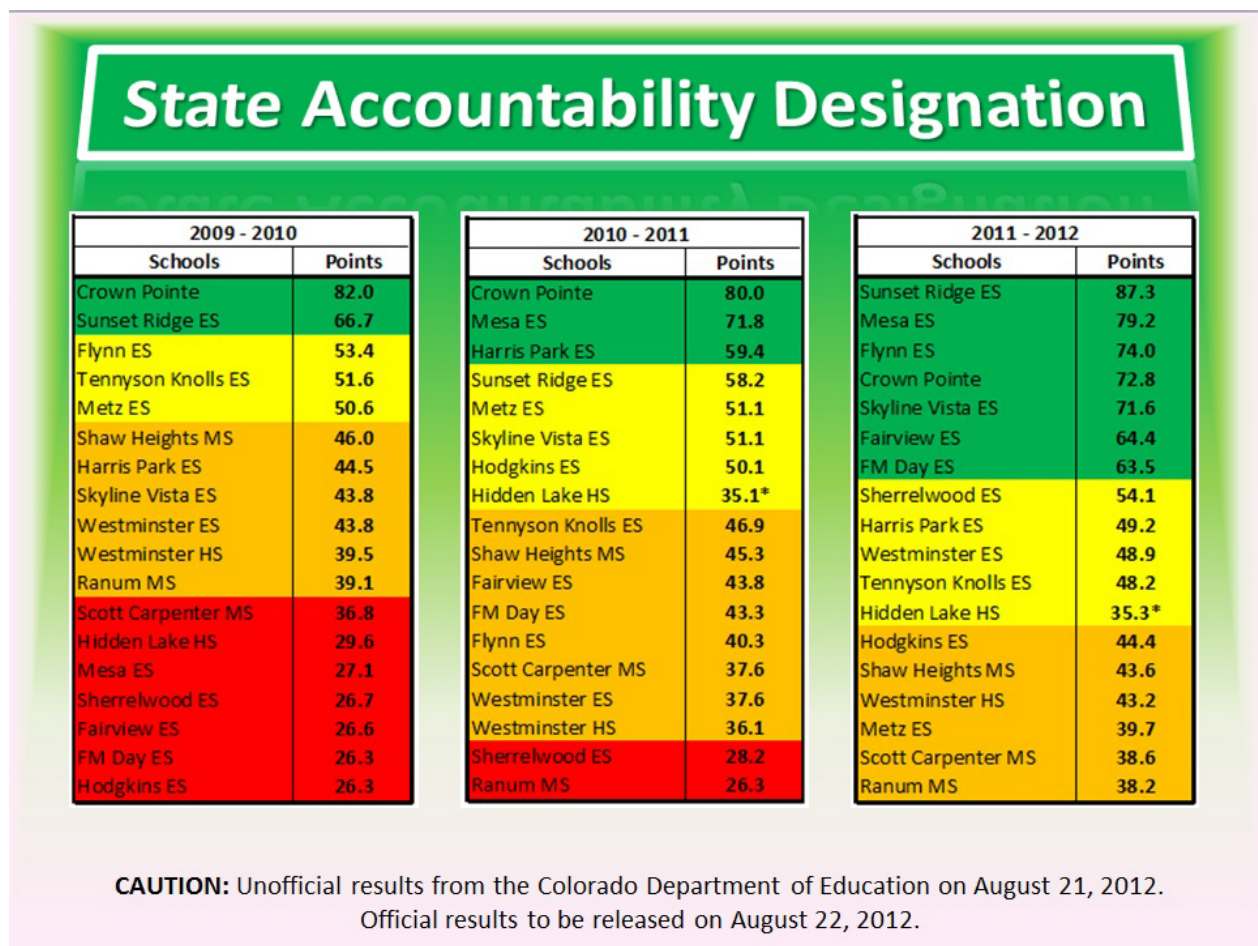
<http://www.competencyworks.org/resources/evidence/>

Chris Sturgis begins this CompetencyWorks article: “I have received three requests over the past week asking for evidence of success from competency education models. The truth of the matter is that we are not swimming in proof points. And it is very, very important for our continued work to advance competency education that we generate them. They do have to be more than anecdotal. They don’t have to be a third party random assignment evaluation.” He says a further complicating matter is that the current approaches to accountability are not designed to easily pick up the fact that students may be getting the help they need to fill academic gaps; an eleventh-grade student working to strengthen elementary-school-level math skills may have moved up three grade levels over the year, yet still be evaluated as “not proficient” in state tests.

Sturgis, C. (2012). *Yes, This Is Definitely Evidence*. Vienna, VA: The International Association for K–12 Online Learning.

<http://www.competencyworks.org/analysis/yes-this-is-definitely-evidence/>

In a follow-up to Chris Sturgis’s article “Evidence?” (see above), this article begins, “In a previous post I summarized the evidence of competency education making a difference in student achievement and school performance. Sometimes a picture says a thousand words. Below is a snapshot of Adams 50 transformation from having seven schools identified as lowest-performing to having zero. ZERO. Notice the schools in green – those are the highest performing schools that expanded from two to seven schools in three years.” The link to the “snapshot” no longer works, but we have been able to obtain a copy:



## Case Studies and Research on Maximizing Competency-based Education's Effectiveness

Achieve. (2013). *Advancing Competency-based Pathways to College and Career Readiness Series: The Imperative for State Leadership*. Washington, DC: Author.

<http://www.achieve.org/files/AchieveCBPTheImperativeforStateLeadership.pdf>

Across states, what a competency-based system looks like, and how states transition to it, will vary based on state priorities and context — which only reinforces the value of state leadership to find the route that fits best. The journey to change from a traditional system to a competency-based system that succeeds in helping far more students be prepared for college and career will require strong and steady leadership. This work is complicated and challenging, but worthwhile. This paper is designed to provide guidance to state leaders to ensure that their efforts translate into the right actions in districts and schools, and then into solid results for students.

Achieve. (2015). *Competency-based Pathways Communications Toolkit*. Washington, DC: Author.

<http://www.achieve.org/CBPCCommunicationsToolkit>

This toolkit was specifically designed for the needs of states, but can be adapted for use by districts, advocates and others involved in similar discussions. The tools include resources on how to message competency-based pathways, exemplars of powerful messages and stories, frequently asked questions, and detailed how-to-guides on getting the message right.

Glowa, L. (2013). *Re-Engineering Information Technology: Design Considerations for Competency Education*. Vienna, VA: The International Association for K–12 Online Learning.

[http://www.competencyworks.org/wp-content/uploads/2013/02/iNACOL\\_CW\\_IssueBrief\\_ReEngineeringCompEd\\_final.pdf](http://www.competencyworks.org/wp-content/uploads/2013/02/iNACOL_CW_IssueBrief_ReEngineeringCompEd_final.pdf)

This CompetencyWorks issue brief analyzes and examines components and elements of effective competency-based information systems. Based on interviews and research, the ideas in the brief build upon the lessons learned in analyzing information systems developed by competency education innovators, best practices of systemic approaches to information management, and emerging opportunities. The paper is designed for readers to find those issues that are of most interest to them in their role and be used to catalyze strategies, support new competency-based instructional models, and inform decision making for continuous improvement.

International Association for K–12 Online Learning. (2014). *Aligning K–12 State Policies with Competency Education*. Vienna, VA: Author.

<http://www.competencyworks.org/wp-content/uploads/2014/09/CWorks-Aligning-State-Policy-Print.pdf>

This CompetencyWorks brief includes sections on How States are Advancing Competency Education, and Eight Ways to Upgrade State policy.

International Association for K–12 Online Learning. (2014). *Understanding Competency Education in K–12*. Vienna, VA: Author.

<http://www.competencyworks.org/wp-content/uploads/2014/11/CWorks-Understanding-Competency-Education-Print.pdf>

This CompetencyWorks brief includes sections on Six Ways Competency Education Improves Learning, and Getting Results.

Kenkel, M. (2015). *Federal ESEA Conversations Support Shift to Competency Education*. Cincinnati, OH: KnowledgeWorks Foundation.

<http://www.knowledgeworks.org/federal-esea-conversations-support-shift-competency-education>

In this article distributed by the KnowledgeWorks Foundation, KnowledgeWorks commended Sen. Lamar Alexander (R-Tenn.) for recognizing the growing interest in a competency-based education system in his discussion draft of the Elementary and Secondary Education Act reauthorization. Lillian Pace, KnowledgeWorks Senior Director of National Policy, said, “Competency education will require a new approach to assessment, enabling states to build systems that ensure all students master the knowledge and skills needed to be successful in college and career.” And according to Matt Williams, KnowledgeWorks Vice President Policy and Advocacy, “There’s proof around the country that competency education can be an effective option in creating a highly personalized environment focused on driving student success. We look forward to working with Sen. Alexander and Sen. Patty Murray (D-Wash.), as well as all members of the Senate Health, Education, Labor, and Pensions Committee and all stakeholders to advance an ESEA reauthorization that upholds rigorous accountability while supporting states in the design of next-generation competency-based education systems.”

Kentucky Department of Education. (2013). *Competency-based Education: Helping All Kentucky Students Succeed*. Frankfort, KY: Author.

[http://education.ky.gov/school/innov/documents/ky\\_cbe\\_final\\_hr1-10-13.pdf](http://education.ky.gov/school/innov/documents/ky_cbe_final_hr1-10-13.pdf)

According to this report, the National Governors Association awarded the Kentucky Department of Education a technical assistance grant on “Awarding Credit to Support Student Learning” for the purpose of providing support for the exploration of educational policies and practices related to the awarding of credit based on competency or mastery of a subject rather than for “seat time.” Kentucky is interested in encouraging competency-based education efforts because “education experts across the country have provided research-based evidence that traditional classrooms are not meeting the needs of all students. Competency-based education provides greater flexibility for teachers to deliver content to address the learning styles of all students and provides ways in which districts can more efficiently maximize resources to meet the needs of individual students.”

KnowledgeWorks Foundation & The International Association for K–12 Online Learning. (2015). *Recommendations to Support Competency Education in Reauthorization of the Elementary and Secondary Education Act (ESEA)*. Cincinnati, OH and Vienna, VA: Authors.

<http://www.knowledgeworks.org/sites/default/files/KW-iNACOL-ESEA-Recommendations-2015.pdf>

These are recommendations from the KnowledgeWorks Foundation & The International Association for K–12 Online Learning, support competency education in the reauthorization of the Elementary and Secondary Education Act (ESEA). The first recommendation is: “Pilot Competency-based Accountability and Systems of Assessments in up to Five States,” including “Establish[ing] a system of assessments that includes the following characteristics: A. Emphasizes mastery of standards, aligned competencies, and social and emotional skills based on evidence-based learning progressions toward college and career readiness. B. Provides annual summative student performance data gathered in one of the following ways: . . .iii. A combination of a statewide summative assessment and/or local summative assessment administered at least once annually in each of grades 3–8 and once in high school, so long as: . . . III. The assessment items are aligned to college- and career-ready state academic standards.”

Le, C., Wolfe, R. E., & Steinberg, A. *The Past and the Promise: Today's Competency Education Movement*. Washington, DC: Jobs for the Future.

<http://www.jff.org/sites/default/files/publications/materials/The-Past-The-Promise-091514.pdf>

This paper is intended to lay a foundation for assessing the potential of competency-based education approaches, as they currently exist and as they could eventually evolve. One section is devoted to The Research: Implications for Competency Education. Rather than citing any studies indicating a link between competency-based education and post-secondary success, it cites neuroscience research, research in motivation and learning, the malleability of motivation, student agency, the social aspects of learning, and research on assessment – all in an attempt to call attention to lessons learned about effective education strategies and to show how these lessons can be integrated into competency-based models that result in deeper learning outcomes for all students. This paper is the first in the Students at the Center's new Competency Education Research Series.

Lewis, M. W., Eden, R., Garber, C., Rudnick, M., Santibañez, L., & Tsai, T. (2014). *Equity in Competency Education: Realizing the Potential, Overcoming the Obstacles*. Washington, DC: Jobs for the Future.

<http://www.jff.org/sites/default/files/publications/materials/Equity-in-Competency-Education-103014.pdf>

This paper examines equity concerns in competency education through the lens of family income, exploring the effects and implications, as well as proposing potential mitigations. It states, in part, “There is little research literature on the competency education models in place today, in part because they are so new; most have been established over the past few years. But the potential for problems is clear. In a system where students have to demonstrate skills and knowledge to move forward, there might as well be a ‘rich get richer’ and ‘poor get poorer’ effect: those whose backgrounds afford them a richer array of learning environments and who begin school already having acquired more skills may keep increasing the distance between themselves and their less fortunate peers....Recent research by the authors of this paper found that educators on the ground in competency-based schools share these concerns.” The paper pays particular attention to research on metacognitive strategies, self-regulated learning, and academic perseverance. This paper is the second in the Students at the Center's new Competency Education Research Series.

Pace, L., & Worthen, M. (2014). *Laying the Foundation for Competency Education: A Policy Guide for the Next Generation Educator Workforce*. Cincinnati, OH: KnowledgeWorks Foundation; & Vienna, VA: The International Association for K–12 Online Learning.

<http://www.knowledgeworks.org/sites/default/files/laying-foundation-competency-education-policy-guide.pdf>

This report begins, “Growing numbers of states and districts are embracing competency education, focusing on student mastery of critical competencies instead of seat-time requirements that communicate little about the quality of learning. This approach provides students with highly personalized learning pathways to ensure mastery of the academic knowledge and skills they will need to succeed in college and careers. While competency education continues to spread to schools across the country, the current system is not structured to provide educators with the preparation and training required to excel in these new environments. Our nation’s educator preparation and development systems must keep pace, aligning to create a profession that benefits from the same level of personalization that defines competency-based schools.” When listing what new skills educators will need, the first listed is: “1. Provide timely, differentiated support to students based on individual learning needs, moving each student along an individual learning trajectory at a sufficient pace to achieve college and career readiness in time for graduation.”

Patrick, S., Kennedy, K., & Powell, A. (2013). *Mean What You Say: Defining and Integrating Personalized, Blended and Competency Education*. Vienna, VA: The International Association for K–12 Online Learning.

<http://www.inacol.org/cms/wp-content/uploads/2013/10/iNACOL-Mean-What-You-Say-October-2013.pdf>

This paper likens the guidance a student receives as he navigates his way through school to a GPS system. “Just as a car’s GPS system provides an immediate alert when a wrong turn is made or the driver gets stopped in a traffic jam, a learning system can provide immediate feedback to keep a student aware of the pacing and progress toward their learning goals — and advise them when they need help. Effective blended learning environments provide this GPS for students and teachers, allowing them to navigate with flexibility along individual pathways for truly personalized learning. A next generation education system would offer each student their own GPS-like dashboard for learning so that each student would know if they were on track toward their destination — graduation, college and career-readiness — every moment of every day and every point along the way.”



Patrick, S., & Sturgis, C. (2013). *Necessary for Success: Building Mastery of World-Class Skills – A State Policymakers Guide to Competency Education*. Vienna, VA: The International Association for K–12 Online Learning.

[http://www.competencyworks.org/wp-content/uploads/2013/02/inacol\\_cw\\_issuebrief\\_building\\_mastery\\_final.pdf](http://www.competencyworks.org/wp-content/uploads/2013/02/inacol_cw_issuebrief_building_mastery_final.pdf)

An opportunity for state leaders to reflect upon the efforts of contemporaries around the country, this issue brief shares insights into re-engineering the policy and practices of our K–12 systems; introduces the main concepts behind competency-based learning; studies important initial steps taken by states in introducing this emerging model; and considers creating a culture of competency within state agencies.

Shubilla, L., & Sturgis, C. (2012). *The Learning Edge: Supporting Student Success in a Competency-based Learning Environment*. Vienna, VA: The International Association for K–12 Online Learning.

[http://www.competencyworks.org/wp-content/uploads/2012/12/iNACOL\\_CW\\_IssueBrief\\_LearningEdge\\_full.pdf](http://www.competencyworks.org/wp-content/uploads/2012/12/iNACOL_CW_IssueBrief_LearningEdge_full.pdf)

This CompetencyWorks issue brief begins, “State by state, our country is revamping our education system to ensure that each and every one of our young people is college and career ready. Over two-thirds of our states have adopted policies that enable credits to be awarded based on proficiency in a subject, rather than the one-size-fits-all seat-time in a classroom. Now states such as Maine and New Hampshire are taking the next step in establishing competency-based diplomas in which students are expected to demonstrate that they can apply their skills and knowledge.”

Sturgis, C. (2012). *The Art and Science of Designing Competencies*. Vienna, VA: The International Association for K–12 Online Learning.

[http://www.competencyworks.org/wp-content/uploads/2012/08/CompetencyWorks\\_IssueBrief\\_DesignCompetencies-Aug-2012.pdf](http://www.competencyworks.org/wp-content/uploads/2012/08/CompetencyWorks_IssueBrief_DesignCompetencies-Aug-2012.pdf)

This CompetencyWorks issue brief brings together insights from a number of leading practitioners from around the country. Listen to the voices of innovators as they share their insights and lessons learned on how to build powerful competencies, engage teachers, and integrate lifelong learning competencies.

Sturgis, C., & Patrick, S. (2010). *When Success Is the Only Option: Designing Competency-based Pathways for Next Generation Learning*. Vienna, VA: The International Association for K–12 Online Learning.

[http://www.competencyworks.org/wp-content/uploads/2012/04/iNACOL\\_SuccessOnlyOptn.pdf](http://www.competencyworks.org/wp-content/uploads/2012/04/iNACOL_SuccessOnlyOptn.pdf)

This paper draws on interviews and site visits with innovators and the limited literature that has been developed on the topic of competency-based approaches. It includes a section highlighting a number of challenges facing states and districts as they explore competency-based approaches.

Weisstein, E. (2013). *Our Piece of the Pie and Competency-based Education*. Vienna, VA: The International Association for K–12 Online Learning.

<http://www.competencyworks.org/analysis/our-piece-of-the-pie-and-competency-based-education/>

This report concerns Our Piece of the Pie (OPP), which is dedicated to helping Connecticut youth become economically independent adults. All of OPP’s strategies and services are structured to lead at-risk or disadvantaged youth, ages 14–24, toward the goals of achieving a college degree or vocational credentials and obtaining rewarding employment. This report focuses on OPP’s journey in building its signature competency-based high school model.

Williams, M., Moyer, J., & Jenkins, S. (2014). *District Conditions for Scale: A Practical Guide to Scaling Personalized Learning*. Cincinnati, OH: KnowledgeWorks Foundation.

<http://w3w.futureofed.org/sites/default/files/district-conditions-scaling-personalized-learning.pdf>

In this guide to help district leadership and the school board to scale personalized learning, KnowledgeWorks defines personalized learning by listing the elements that personalized learning requires, the first being: “Instruction that is aligned to rigorous college-and-career ready standards and the social and emotional skills students need to be successful in college and career.”

Wolfe, R. E. (2012). *Aligning Competencies to Rigorous Standards for Off-track Youth: A Case Study of Boston Day and Evening Academy*. Washington, DC: Jobs for the Future.

[http://www.jff.org/sites/default/files/publications/AligningCompetencies\\_112812.pdf](http://www.jff.org/sites/default/files/publications/AligningCompetencies_112812.pdf)

According to this report, “For over 17 years, Boston Day and Evening Academy has served a population of young people often left behind: those who are off track to high school graduation or who have dropped out altogether. Throughout its history, BDEA has used a competency-based approach as a way to accelerate student progress toward graduation and postsecondary success and foster deep learning and critical thinking.”