



A Solution-Finding Report

Title: *Online Learning on a Broad Scale*

Date: August 18, 2015

This Solution-Finding Report provides information, requested by the Northeast Comprehensive Center/RMC Research on behalf of one of the states in its region, for any information on “the experience of other states, in particular Maine and New Hampshire, in using online learning, including competency-based education, on a broad scale. The experiences of other states, especially larger ones, would also be of interest.” Among other things, the request asked for guidance for use of state online and blended learning network, best practices and model school district policies to inform implementation of online and blended learning program, academic programming for online and blended learning, partnerships with institutions of higher education and other relevant stakeholders for workforce opportunities using online and blended learning, and review of teaching and professional development policies and practices. It asked for answers to such questions as: “What has been the impact of this change in the learning and achievement of students? What have been the successes and challenges of this introduction? What kind of pushback has there been? What can New York learn from their experiences?”

At the state level, there has not been much hard data concerning impact, as most of the statewide initiatives on online and blended learning and competency-based education are relatively new. This report presents information on online/blended learning and competency-based education in the two states mentioned – Maine and New Hampshire – followed by a brief report on online learning in New York State (the state has yet to launch any major statewide competency-based education initiatives). Then, because there is such overlap concerning what has been done in the areas of online/blended learning and competency-based education, what the successes and challenges have been, what the impact has been, and what the pushback has been, the online publications we were able to locate are presented here under two categories: Online/Blended Learning and Competency-based Education.

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.

Table of Contents

Online Learning in Maine	3
Competency-based Education in Maine	5
Online Learning in New Hampshire	6
Competency-based Education in New Hampshire	7
Online Learning in New York State	9
Online/Blended Learning.....	11
Competency-based Education.....	17

Online Learning in Maine

At this time, Maine has two charter schools (<http://www.maine.gov/doe/charterschools/approved.html>) that use online learning:

- Maine Connections Academy (MCA) (<http://www.connectionsacademy.com/maine-virtual-school>), a tuition-free public virtual school. According to its website, “MCA gives students the flexibility to learn at home with a curriculum that meets rigorous Maine state education standards. We tailor our virtual learning approach for online students of all abilities—preparing students to succeed in school and in life. MCA helps each student maximize his or her potential and meet the highest performance standards through a uniquely individualized virtual school program featuring: A challenging online school curriculum developed by leading education experts; Instruction from state-certified teachers experienced in online instruction; Support from trained counselors, principals, and administrative staff; Curriculum materials needed to participate in a dynamic online learning environment.”
- Maine Virtual Academy (<http://meva.k12.com/>) is an online public charter school authorized by the Maine Charter School Commission. According to its website, Maine Virtual Academy “will work in partnership with you to awaken the joy of learning in your child. The result can be greater academic success, confidence, and independence, both in school and beyond. Maine Virtual Academy will give Maine kids in grades 7–12 the chance to learn in the ways that are right for them with: The award-winning curriculum from K¹², the leading online K–12 curriculum provider and a CITA-accredited company; A high-quality, tuition-free public education; An individualized approach to learning; Instruction from Maine-certified teachers; An active, supportive school community.”

Maine Connections Academy’s success rate is difficult to determine because it wasn’t approved until March 16, 2014, and didn’t begin operating until the 2014–2015 school year. The MCA website links to the story “MCA graduates its first class of high school seniors!” (<http://www.centralmaine.com/2015/06/16/first-class-of-maines-first-virtual-charter-school-graduates-in-augusta/>). This senior class, consisting of five students, graduated on June 16, 2015, with four of those students attending the graduation at the Maine Principals’ Association building in Augusta, ME, even though the association opposed the 2011 legislation to allow charter schools in Maine. This story also states, “A 2012 *Maine Sunday Telegram* investigation of Connections Education, which controls Connections Academy, and K¹², the country’s largest online education company, showed that Maine’s digital education policies benefited the two companies, that the companies recruited board members in the state and that their schools in other states had fared poorly in analyses of student achievement” (see http://www.pressherald.com/2012/09/01/virtual-schools-in-maine_2012-09-02/ for the *Maine Sunday Telegram* investigation).

On the Maine Connections Academy’s website, under the header “Proven Maine Online School Results” (<http://www.connectionsacademy.com/maine-virtual-school/results>), MCA states, “Some wonder whether a nontraditional school program like Maine Connections Academy (MCA) can truly provide a quality education. Many personal success stories and reviews from MCA graduates and parents prove that this form of nontraditional schooling provides a quality education for students. At Maine

Connections Academy, success can be measured by students' academic achievement, but that is only part of the story. Virtual school results are also measured by how students, and their families, thrive in an environment that promotes personal growth and satisfaction. MCA is dedicated to listening to families. One of the ways we hear from them is with our annual parent survey results. The survey is completely anonymous, so parents feel free to express their thoughts openly. This year, once again, parents who completed virtual school reviews gave MCA high marks for helping students succeed academically and emotionally.”

Maine Virtual Academy is even newer than Maine Connections Academy, being approved on November 13, 2014 to begin operating during the 2015–2016 school year, planning to start serving as many as 297 students from across the state in the fall of 2015. Maine Connections Academy contracted with K¹², a national virtual learning leader, but is to be governed by a local board of directors and have a physical presence in central Maine. In its opening year, the school will enroll students in Grades 7–9, but later expand to Grades 7–12. When the Maine Charter School Commission approved Maine Virtual Academy to begin serving students in Grades 7–12 for the 2015–2016 school year, it issued a press release stating in part, “Following an extensive review, the Maine Virtual Academy received a recommendation from the Commission staff and review team to approve the charter. The Commission review team issued a findings of fact report concluding that Maine Virtual Academy will create a high-quality school with high standards; increase high quality educational opportunities; provide alternative learning environments for students not thriving in traditional schools; create new professional opportunities for teachers; and encourage the use of different, high quality models of teaching” (see <http://www.maine.gov/csc/meetings/2014-meetings/MaineVirtualAcademyRecommendation.pdf> for the findings of fact report).

In 2015, K¹² Inc., which manages Maine Virtual Academy, issued its *2015 K¹² Academic Report* (<http://www.k12.com/content/dam/k12/sites/default/files/pdf/k12-Academic-Report-2015-07082015.pdf>), which states that this report provides “a detailed record of the academic performance of students in K¹²-managed public schools. We report data from state test scores and, for many of these schools, from the Scantron Performance Series[®] of adaptive assessments. The 2015 Academic Report is significantly more comprehensive than those published in 2013 or 2014. This report has expanded to include all K¹²-managed public schools with valid state test results for 2013–2014. We have also expanded our analysis of data beyond grades 3–8 to include results from key high school assessments. In 2013–2014, K¹²-managed public schools served more than 128,000 students from kindergarten to grade 12, with 5,100 students graduating from high school, and many of those focused on college and career.”

Competency-based Education in Maine

On the Maine Department of Education’s website (<http://www.maine.gov/doe/>), front and center on the homepage is the header “Getting to Proficiency” followed by the subhead “Helping Maine Graduate Every Student Prepared.” The copy below reads, “Getting to Proficiency provides technical assistance, resources and guidance for school districts to implement proficiency-based education in a way that promotes student learning and achievement of the Maine Learning Results.” Since 1997, Maine has had the Maine Learning Results as its state standards for eight content areas, constantly updating them, most recently in 2011 to include Common Core as the standards for English language arts and mathematics. And ‘proficiency-based education’ is just another term for ‘competency-based education’ – advancement based on what the student knows rather than seat time or chronological age.

The webpage “Getting to Proficiency: Helping Maine Graduate Every Student Prepared” (<http://www.maine.gov/doe/proficiency/index.html>) states it “will help educators achieve a common understanding of proficiency-based education (<http://www.maine.gov/doe/proficiency/about/proficiency-based.html>), how it works and why it matters. To ensure that your district’s transition to a proficiency-based system is successful, it is critical that all stakeholders – administrators, teachers, elected officials, parents, students and community members – achieve a shared understanding of the process and its educational goals, which includes the use of consistent, well-defined terminology. This site will also help administrators and teachers develop a practical plan of action. One of the features of this site is a self-assessment (<http://www.maine.gov/doe/proficiency/support/self-assessment.html>) that will help districts and schools determine where they are and map out what they need to do. The self-assessment addresses policies, practices and community engagement. After districts complete the self-assessment process, they may explore our collection of resources (<http://www.maine.gov/doe/proficiency/support/pbl-resources.html>) to help them create a long-term action plan for implementing a proficiency-based learning system.”

Online Learning in New Hampshire

According to the New Hampshire Department of Education website (http://education.nh.gov/program/school_approval/online.htm), “Students enrolled in public or nonpublic schools may take online courses as approved by their school administrations and governing bodies. Such courses may be used toward completion of high school graduation requirements and a regular high school diploma if approved by the administration of the school. The decision to accept online work for credit rests solely with the public or private school at which the individual student is enrolled. The Department of Education encourages schools to evaluate online programs and to consider awarding credit for participation in online programs. This information is primarily intended to address the ability of an individual to obtain a high school diploma from an online source. There are many educational activities currently offering high school diplomas online. Many of these programs are rigorous and may be recognized by various accrediting agencies. Others are suspect. The only online school currently approved by the NH Department of Education is the Virtual Learning Academy Charter School (VLACS) located in Exeter, NH. The Department currently has no process in place to approve other online schools located in or out of the state. This is not a comment on the quality of education provided by such schools. We simply do not have a means to review and approve them.”

Virtual Learning Academy Charter School (VLACS) is a nonprofit virtual charter school in Exeter, NH, the only public online high school in the state. It offers full-time and part-time admissions. The school was founded in 2007 by Steve Kossakoski, who holds a doctorate in education administration from the University of New Hampshire. VLACS is licensed by the New Hampshire Board of Education, making it free to students under 21 living in the state. Students living in other states, however, must pay to use it. In 2010, VLACS had 13,432 students enrolled in high school and middle school courses.

U.S. News & World Report (<http://www.usnews.com/education/best-high-schools/new-hampshire/districts/virtual-learning-academy-charter-school/virtual-learning-academy-h-12384>) stated that, based on 2012–2013 school year data, total enrollment at VLACS was 69 students in Grades 9–12, 33% male, 67% female, and 4% minority enrollment. Based on student performance on state exit exams and internationally available exams on college-level course work (AP[®]/IB exams), the students were 100% proficient in reading and 24% proficient in mathematics. In reading, 82% were Proficient and 18% were Proficient with Distinction. In mathematics, 29% were Substantially Below Proficient, 47% were Partially Proficient, and 24% were Proficient.

Competency-based Education in New Hampshire

On the New Hampshire Department of Education website (<http://education.nh.gov/>), on the webpage for State Model; Competencies (http://education.nh.gov/innovations/hs_redesign/competencies.htm), the site says, “Beginning in 2013, The New Hampshire Department of Education invited educators to participate in the process of creating statewide college and career ready competencies. From those many educators who expressed an interest, educators representing the K–16 education spectrum were chosen for this work based on education level served, geographical representation, central office representation, and classroom educator representation. In addition to these educators, representatives from the content-specific New Hampshire Teachers Associations and other content-specific stakeholder organizations were also invited to serve on these design committees. The New Hampshire Department of Education coordinated the project with the National Center for the Improvement of Educational Assessment and The Center for Collaborative Education. These competencies are approved by the State Board of Education for statewide use. As of May, 2014, they include the New Hampshire Board of Education approved Common Core State Standards-Aligned Competencies in Mathematics and English Language Arts and the New Hampshire K-12 Model Science Competencies. In August, 2014, The State Board of Education also approved the Work-Study Practices competencies.

On the webpage with the headline “Key Accountability Lessons Detailed in ASCD White Paper” (<http://education.nh.gov/news/ascd-pace.htm>), the site says, “ASCD, a global community dedicated to excellence in learning, teaching, and leading, has released a new white paper on multimetric accountability that details the ways in which more comprehensive education systems can be developed to support student success (<http://www.ascd.org/ASCD/pdf/siteASCD/policy/MultimetricAccountability-WhitePaper.pdf>). The report highlights five examples at the state, province, and local levels in the United States and Canada that have successfully put in place accountability models that use multiple measures to determine if they are best serving students. Included in the systems discussed in the white paper is the New Hampshire Performance Assessment for Competency Education (PACE) Pilot. This past spring, the U.S. Department of Education provided New Hampshire with an NCLB waiver that allows four of the state’s districts to pilot a first-of-its-kind locally managed performance assessment system for state and federal accountability purposes. The NH PACE pilot permits districts to give the Smarter Balanced statewide assessment once during each grade span (elementary, middle, and secondary) instead of requiring it annually in grades 3 through 8 and once in high school. For the remaining grades, districts administer locally developed performance assessments in English language arts, math, and science. These local assessments also evaluate students’ work study practices, such as communication skills, creativity, ability to collaborate, and self-direction.”

The site’s “Performance Assessment of Competency Education (PACE)” page (<http://education.nh.gov/assessment-systems/pace.htm>) invites any school district interested in participating in Year 2 of the pilot (2015–2016) to apply using an application and readiness survey (<http://education.nh.gov/assessment-systems/documents/application.pdf>). It then states, “PACE is a first-in-the-nation accountability strategy that offers a reduced level of standardized testing together with locally developed common performance assessments. These assessments are designed to support deeper learning through competency education, and to be more integrated into students’ day-to-day work than current standardized tests. Meaningful assessment is a key part of a strategy to ensure students are getting the most out of their education. This K–12 system will build on New Hampshire’s competency

work, including the development of statewide college and career ready competencies, and will be one component of the New Hampshire student assessment system. The PACE accountability option provides districts with an alternative route of demonstrating measurable progress in student outcomes in the New Hampshire competencies, the Work-Study Practices, and other important measures. It enables districts to emphasize meaningful content, high quality instruction, and deep student engagement. The PACE option will have multiple components, but performance assessment will be a central feature. In this first year, PACE districts will report on ELA, mathematics, science, and the Work-Study Practices. As New Hampshire develops further competencies, social studies, the arts, and other content areas will become a part of the PACE system.” The page also contains links to several documents and videos from the New Hampshire Department of Education’s May 11, 2015 convening on competency-based education. And it has links to other general documents about PACE, including two pilot overviews, a guide, FAQ’s, a flexibility waiver insert, the department’s November 21, 2014 proposal to the U.S. Department of Education, the U. S. Department of Education’s March 5, 2015 reply, and the press release of the Council of Chief State School Officers (CCSSO).

Online Learning in New York State

According to the website of the New York State Education Department (NYSED) (<http://www.p12.nysed.gov/technology/Online/online.html>), “NYSED has launched a statewide virtual learning initiative to support the growth of effective online and blended instruction. Through regulations and supporting policy guidance, research and surveys, webinars, and other opportunities in the Regents Reform Agenda, NYSED will support the growth of a statewide virtual learning network. This network including BOCES [Boards of Cooperative Educational Services], district, and charter school programs, will harness the capacity and needs of all school districts and BOCES, and connect with higher education and cultural education to create expanded learning opportunities.”

According to the State Commissioner of Education (<http://www.p12.nysed.gov/part100/pages/1005.html#Credit>), “A school district, a charter school, a registered nonpublic school or the chief administrator of an educational program administered by a State agency...may provide its students with an opportunity to earn units of credit towards a Regents diploma through online and/or blended course study, pursuant to the following: (a) To receive credit, the student shall successfully complete an online or blended course and demonstrate mastery of the learning outcomes for the subject, including passing the Regents examination in the subject and/or other assessment in the subject if required for earning a diploma. (b) The school district, registered nonpublic school or charter school shall ensure that: (1) courses are aligned with the applicable New York State learning standards for the subject area; (2) courses provide for documentation of student mastery of the learning outcomes for such subjects, including passing the Regents examination in the subject and/or other assessment in the subject if required for earning a diploma; (3) instruction is provided by or under the direction and/or supervision of [a certified teacher]; (4) courses include regular and substantive interaction between the student and the teacher providing direction and/or supervision...; and (5) instruction satisfies the unit of study and unit of credit requirements...”

New York State’s Virtual Advanced Placement (VAP) Program, funded through federal Race to the Top dollars, awarded grant funds to increase the successful participation of low-income students in virtual learning (online and blended instruction) Advanced Placement (AP) courses and tests. By supporting increased access to AP courses and tests, the VAP program provides greater opportunities for low-income students to demonstrate college- and career-readiness and mastery of the New York State Learning Standards. The program goals are to: enable larger and more diverse groups of students to participate and succeed in virtual learning AP programs and receive AP credits, provide enhanced professional development to teachers offering the courses, increase the number of virtual learning AP courses available to students statewide, and help build increased capacity at the district level to participate in available and expanding virtual learning opportunities.

Virtual Learning Program Rubric (<http://www.p12.nysed.gov/technology/Online/documents/VLPRubric.pdf>) is a document developed by three northeastern states (New York, Massachusetts and Rhode Island) and the Northeast Comprehensive Center (NCC), and was created to:

- Provide administrators within Local Education Agencies (LEAs) a powerful tool for evaluating virtual programs to ensure high quality and rigor in virtual programs within a school’s curriculum. Using the Guiding Definitions, VLP Standards, VLP Review Guide and VLP Rubric principles, administrators can support high-quality virtual instruction and make well-informed decisions that will help increase accountability and ensure consistency in virtual program evaluation.

- Offer criteria-based evaluation tools to evaluate State Education Agencies (SEAs) current virtual programs, as well as virtual programs developed by vendors that they may be considering including as part of their curriculum.

On June 11, 2011, the New York State Education Department and the International Association for K–12 Online Learning (iNACOL) issued an *Online Learning Needs Assessment Report* (<http://www.p12.nysed.gov/technology/Online/documents/NYBOCESFinalReportJuly2011.pdf>). The purpose of this Needs Assessment was to collect feedback from district and high school leaders from across participating BOCES and large city school districts regarding their awareness and experience in using online learning options. The survey also provided a forum for respondents to identify specific courses and academic services that they feel would be most beneficial to their students and staff if offered in an online learning environment.

On September 14, 2011, the New York State Education Department and the International Association for K–12 Online Learning (iNACOL), with support from Intel, sponsored the New York State Online and Blended Learning Summit II in Albany, NY. It included open and closing sessions by NYSED, a presentation by iNACOL on the state of online education in the United States, and panels on “Creating Educator Capacity for Online and Blended Learning” for Pre-service and In-service Teacher Education, In-service Teacher Professional Development, and Course/Instructor Evaluation in an Online Environment. The webpage for the Summit II (<http://www.nyiteez.org/AlbanySummit/>) contains videos and all files of the sessions.

On December 17, 2014, the New York State Senate passed Bill 5509, which “Directs the commissioner of education to establish an online learning advisory council to make recommendations for establishment of a statewide online and blended learning program.”

Online/Blended Learning

Alliance for Excellent Education. (2014). *West Virginia Digital Learning: Report to the Governor, Legislature, and West Virginia Board of Education*. Washington, DC: Author.

<http://all4ed.org/reports-factsheets/west-virginia-digital-learning-report-to-the-governor-legislature-and-west-virginia-board-of-education/>

This report looks at readiness for digital learning at two levels in West Virginia: the district capacity building to ready the system for digital learning and school implementation of digital learning.

Barth, P., Hull, J., & St. Andrie, R. (2012). *Searching for the Reality of Virtual Schools*. Alexandria, VA: Center for Public Education.

<http://www.centerforpubliceducation.org/Main-Menu/Organizing-a-school/Searching-for-the-reality-of-virtual-schools-at-a-glance/Searching-for-the-reality-of-virtual-schools-full-report.pdf>

This report describes various ways digital learning is offered to students, from individual online courses to full-time virtual schools, and examines current state and district policies that govern its administration, including funding and accountability.

Boser, U. (2013). *Are Schools Getting a Big Enough Bang for Their Education Technology Buck?* Washington, DC: Center for American progress.

<http://www.americanprogress.org/issues/education/report/2013/06/14/66485/are-schools-getting-a-big-enough-bang-for-their-education-technology-buck/>

This study finds states are not tracking their return on investments, technology is not being used to its potential, and “students from disadvantaged backgrounds are less likely to have access to more rigorous STEM-learning opportunities.”

Building State Capacity and Productivity Center at Edvance Research, Inc. (2015). *The SEA of the Future: How Technology Can Boost Productivity in Rural School Systems*. San Antonio, TX: Author.

<http://www.bscpcenter.org/resources/publications/HowTechnologyCanBoostProductivityinRuralSchoolSystems.pdf>

This chapter “reports on the results of a national consensus panel to evaluate the role of technology in rural education and identify opportunities for states to support the use of technology. The consensus panel includes a mix of experts in rural education and technology, technical assistance providers, and researchers.”

Center for Digital Education. (2014). *Unlocking the Potential of Student Longitudinal Data*. Folsom, CA: Author.

http://images.erepublic.com/documents/CDE14+BRIEF+Informatica_V.pdf

This issue brief discusses “how SEAs and large school districts can use longitudinal data systems to measure and improve educational outcomes. The challenges associated with longitudinal data systems will be reviewed along with the use of enterprise data management platforms to deliver the full benefits of longitudinal data systems to SEAs, large school districts, students, parents, teachers and taxpayers.”

Center for Digital Education. (2015). *Closing the Connectivity Gap*. Folsom, CA: Author.

<http://www.centerdigitaled.com/paper/Are-Your-K-12-Network-Modernization-Plans-Robust-Enough-1489.html?>

This white paper assesses network modernization plans as schools race to support online testing and growing demands for digital learning tools. It discusses the state of K-12 networks, best practices for online testing and learning, and what resources are available to fund today’s critical modernization strategies.

Center for Promise at America’s Promise Alliance. *Wired to Learn: K–12 Students in the Digital Classroom*. Washington, DC: Author.

<http://www.americaspromise.org/sites/default/files/Wired%20to%20Learn%20K-12%20Students%20in%20the%20Digital%20Classroom.pdf>

This white paper from the Center for Promise at America’s Promise Alliance discusses the benefits of digital technology when properly introduced into K–12 classrooms.

Clements, M., Stafford, E., Pazzaglia, A. M., & Jacobs, P. (2015). *Online Course Use in Iowa and Wisconsin Public High Schools: The Results of Two Statewide Surveys*. Washington, DC: National Center for Education Evaluation and Regional Assistance (NCEE), Institute of Education Sciences, U.S. Department of Education.

http://ies.ed.gov/ncee/edlabs/regions/midwest/pdf/REL_2015065.pdf

According to the key findings of this report, “The primary uses of online courses by public high schools in Iowa and Wisconsin during the 2012/13 school year were to provide students with opportunities to recover credit for failed courses and to complete core requirements in primary academic subjects. Despite widespread use of online courses, schools cited concerns about the lack of online teacher training in Iowa and online course quality in Wisconsin. Most schools provided some onsite student monitoring and some training for monitors.”

Common Sense Media. (2014). *Innovative Professional Development Helps Teachers Use Technology to Tackle CCSS*. San Francisco, CA: Author.

http://www.techlearning.com/portals/0/Graphite_WhitePaper_ProfessionalDevelopment_040214.pdf

This paper showcases three schools taking innovative approaches to professional development, including novel uses of classroom technology, to help teachers succeed at meeting Common Core State Standards.

Digital Learning Now. (2015). *Digital Learning Report Card 2014*. Tallahassee, FL: Author.

<http://digitallearningnow.com/report-card/>

This fourth annual report measures state policies on digital learning based on their alignment to the 10 Elements of High-Quality Digital Learning. In addition to the interactive map, you can read the full text of the *2014 Digital Learning Report Card*. Selecting a state on the map will also enable you to view and download that state's analysis.

District Reform Network. (2015). *Blended Learning Readiness and Progress Rubric*. (2015). Washington, DC: Author.

<https://rttd.grads360.org/services/PDCService.svc/GetPDCDocumentFile?fileId=9059>

This “rubric is a research-based tool designed to assist school, district and State leaders in planning and evaluating blended learning initiatives...to chart a strategic direction in all stages of implementation, ranging from early to advanced....at both the building and system levels....It frames five core constructs to identify and assess key actions.”

Duffey, D., Fox, C. (2012). *National Educational Technology Trends 2012: State Leadership Empowers Educators, Transforms Teaching and Learning*. Washington, DC: State Educational Technology Directors Association (SETDA).

<http://files.eric.ed.gov/fulltext/ED536746.pdf>

This 128-page report analyzes the federal technology grants awarded by the U.S. Department of Education to state educational agencies through the EETT grant program and ARRA Act funds. Extensive appendices provide examples of states' projects.

Education Commission of the States. (2014). *What State Policymakers Need to Know About Funding Virtual Charter Schools*. Denver, CO: Author.

<http://www.ecs.org/clearinghouse/01/11/11/11111.pdf>

This report outlines the key differences and explores how states can change their funding systems to address the needs of this new type of public education.

Fox, C., Waters, J., Fletcher, G., & Levin, D. (2012). *The Broadband Imperative: Recommendations to Address K–12 Education Infrastructure Needs*. Washington, DC: State Education Technology Directors Association (SETDA).

http://www.setda.org/wp-content/uploads/2013/09/The_Broadband_Imperative.pdf

In this report, the State Educational Technology Directors Association (SETDA) offers four recommendations for policymakers and school leaders committed to charting a course for the future of K–12 education enabled by broadband.

Kimmons, R. (2015). Online System Adoption and K–12 Academic Outcomes. *Journal of Computer Assisted Learning*, 31, 378–391.

<http://onlinelibrary.wiley.com/doi/10.1111/jcal.12101/epdf>

Utilizing a novel approach to data collection, “this study provides generalizable results of online system adoption on academic achievement ratings” for two school years. “Implications of this study suggest that online system adoption does not impact student academic achievement at a sufficient level to justify adoption that is not meaningfully coupled with other essential factors of school development.”

National Conference of State Legislatures. (2014). *State Broadband Task Forces, Commissions or Authorities and Other Broadband Resources*. Washington, DC: Author.

<http://www.ncsl.org/research/telecommunications-and-information-technology/state-broadband-task-forces-commissions.aspx>

This website states, “All 50 states have created either a task force, commission, or broadband project,” then lists all the current/active broadband task forces, commissions, or authorities.

Roza, M. (2014). *Building a State Information System to Support Improvements in Productivity*. San Antonio, TX: Building State Capacity and Productivity Center at Edvance Research, Inc.

<http://www.bscpcenter.org/webinars/>

This 1-hour webinar explores “how SEAs can build an information system designed to drive productivity – what data are needed, how to compile the data into useful resources for leaders at every level...to drive decision making and advance productivity.”

Roza, M. (2014). *The SEA of the Future: A State Information System to Support Improvements in Productivity*. San Antonio, TX: Building State Capacity and Productivity Center at Edvance Research, Inc.

<http://www.bscpcenter.org/resources/publications/AStateInformationSystemtoSupportImprovementsinProductivity.pdf>

According to this chapter, “SEAs hold the power to develop information infrastructures that enable administrators and systems to unlock the powerful clues they need to maximize outcomes per education dollar and to make discussions about productivity a matter of course.”

SEDL, Southeast Comprehensive Center. (2013). *State-Run Virtual Education Programs*. Cayce, SC: Author.

http://secc.sedl.org/orc/ir/ir_01143.pdf

This report was prepared in response to a request for information on state-run virtual education programs. A few resources were found which addressed the key topics related to the structure, operation, staffing, data reporting, and funding of state-run virtual programs.

Staker, H. (2012). *The Rise of K-12 Blended Learning: Profiles of Emerging Models*. San Mateo, CA: Clayton Christensen Institute for Disruptive Innovation.

<http://www.christenseninstitute.org/?publications=the-rise-of-k-12-blended-learning-profiles-of-emerging-models>

This paper profiles 40 organizations that have blended or have plans to blend online learning with brick-and-mortar classrooms, representing a range of operators, including state virtual schools, charter schools, independent schools, and districts.

State Educational Technology Directors Association (SETDA). *State Education Policy Center (SEPC)*. Glen Burnie, MD: Author.

<http://sepc.setda.org/>

State Education Policy Center (SEPC) is a database of state policies related to education and technology curated by the State Educational Technology Directors Association (SETDA).

State Educational Technology Directors Association (SETDA). (2014). *The Accessibility of Learning Content for All Students, Including Students with Disabilities, Must Be Addressed in the Shift to Digital Instructional Materials*. Glen Burnie, MD: Author.

http://www.setda.org/wp-content/uploads/2014/03/SETDA_PolicyBrief_Accessibility_FNL.5.29.pdf

This policy brief, prepared for state and district education leaders by the State Educational Technology Directors Association (SETDA) in partnership with EducationCounsel LLC, focuses on considerations and strategies regarding the accessibility of digital content for all students. It examines important legal, policy, and practice considerations regarding the accessibility of digital instructional materials.

State Educational Technology Directors Association (SETDA). (2015). *Supporting States and School Districts in Successful Digital Learning Implementation*. Glen Burnie, MD: Author.

<http://digitallearning.setda.org/>

This webpage states, "With the influx of new technology and increased connectivity, focused strategic planning is more important than ever to ensure digital learning opportunities for all students and educators. Most school districts have made investments in technology equipment, bandwidth and networking, training teachers and supporting both the technology and those using it. Many are looking at upgrading and expanding their use of technology either because of a specific initiative such as online assessment or for a broader push to a 1 to 1 program to accomplish specific school improvement goals. There are a number of factors for districts to consider as they embark upon this effort, key among them being planning, professional learning, software and digital content, broadband, devices, pedagogy and technology support." It then has links to each of these six areas.

State Educational Technology Directors Association (SETDA). (2015). *State Educational Technology Directors Association (SETDA)*. Washington, DC: Author.

<http://www.setda.org/>

This non-profit, national member association serves, supports, and represents the interests of U.S. state and territorial educational technology leadership. The website provides research, project updates, and more.

Competency-based Education

Achieve. (2013). *Advancing Competency-based Pathways to College and Career Readiness: A State Policy Framework for Graduation Requirements, Assessment and Accountability*. Washington, DC: Author.

http://www.achieve.org/files/13-195%20Achieve_CBP_07018.pdf

This state policy framework, focused on graduation requirements, assessment, and accountability, is designed to assist states in building a policy structure that contributes to statewide adoption and implementation of competency-based pathways.

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/CBPCommunicationsToolkit>

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.

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/strengtheninghsteachinglearningnh.pdf>

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.

Chuong, C., & Mead, S. (2014). *A Policy Playbook for Personalized Learning: Ideas for State and Local Policymakers*. Sudbury, MA: Bellwether Education Partners.

http://bellwethereducation.org/sites/default/files/PolicyPlays_Final.pdf

According to this report, more personalized learning experiences for students are still rare in the absence of policy changes to support their growth.

CompetencyWorks. (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.pdf>

This paper states, “While states work to ensure all students are prepared for future success in a globally competitive society, emphasizing greater rigor and deeper application of knowledge and skills, they are confronted with the fact that the traditional time-based model of education may not be up to the task.”

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

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.”

Freeland, J. (2015). *New Hampshire Testing Pilot Breaks the Federal Accountability Mold*. San Mateo, CA: Clayton Christensen Institute for Disruptive Innovation.

<http://www.christenseninstitute.org/new-hampshire-testing-pilot-breaks-the-federal-accountability-mold/>

According to this report, “This week the U.S. Department of Education made a groundbreaking decision to allow four school systems in New Hampshire to pilot a new accountability regime based on a mix of local and state assessments. This first-of-its-kind policy marks an important policy development for competency-based systems and signals a move in the right direction for federal accountability.”

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

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.

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.

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 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...[I]n 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.”

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

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.”

Legislative Services Agency. (2013). *Budget Unit: Competency-Based Education*. Des Moines, IA: Author.

<https://www.legis.iowa.gov/docs/publications/FT/17052.pdf>

This report details the history and funding of competency-based education in the State of Iowa. It includes links to numerous statutes and administrative rules, and the preliminary and final reports of the Competency-Based Instruction Task Force, which was established to, among other things, construct personal learning plans and templates, develop student-centered accountability and assessment models, develop supports and professional development for educators to transition to a competency-based system, and develop a draft strategic plan and proposed timeline for statewide implementation of competency-based learning for consideration by the General Assembly.

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

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: 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.

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

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... 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.

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.”

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

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.

Office of Innovation and Improvement, U.S. Department of Education. (2012). *Schools, Districts, and States Transform Seat-Based Requirements into Competency-Based Pathways to College- and Career-Readiness*. Washington, DC: Author.

<http://www.ed.gov/edblogs/oii/2012/03/schools-districts-and-states-transform-seat-based-requirements-into-competency-based-pathways-to-college-and-career-readiness-2/>

This USDOE article defines personalized learning and describes competency-based efforts at the state, regional, and local levels.

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.”

Patrick, S., & Sturgis, C. (2011). *Cracking the Code: Synchronizing Policy and Practice for Performance-Based Learning*. Vienna, VA: International Association for K–12 Online Learning.

<http://files.eric.ed.gov/fulltext/ED537322.pdf>

According to this report, “The following proposed policy framework, designed to expedite state policy development in performance-based learning, may be applied to all next generation learning. [T]his discussion explores how state policy can loosen the regulatory environment that is handcuffing administrators and educators who are ready to move toward student-centered, competency-based models of learning. The paper is organized to answer four questions: What is performance-based learning? What are states doing to advance performance-based learning? What type of policy framework can guide state leadership in advancing a performance-based education system? What are the emerging issues in redesigning the education system around performance-based learning?”

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

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.

Rennie Center for Education Policy & Research. (2014). *Building Multiple Pathways to a High School Diploma: A Cost Study of Non-Traditional Academic Options*. Boston, MA: Author.

<http://www.nmefoundation.org/getmedia/bc5afccd-72c7-4099-a089-0fd3be270ac7/MultiplePathways?ext=.pdf>

In this report, the Rennie Center for Education Policy & Research aims to “expand the conversation about effective practices in offering multiple pathways by documenting a menu of research-based models underway in districts across the Commonwealth [of Massachusetts]. Based on a scan of recent literature, the Rennie Center first identifies research-based, effective practices in developing multiple pathways. Then, the team describes the structure and practice of four very different district programs—focusing on practices that could be prime for inclusion in a pathway. Finally, the team compiles cost estimates for replicating program strategies across Massachusetts public school districts.”

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

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.

Roscorla, T. (2015). *How State Policies Help or Hinder Competency-Based Education*. Folsom, CA: Center for Digital Education.

<http://www.centerdigitaled.com/k-12/State-Policies-Competency-Based-Education.html>

According to this article, a shift to learning by mastery can really go far with policy support at the state level. Many states trying to innovate to personalized learning run into state regulations of a more traditional system, but there are a few ways to tackle this challenge.

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

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.”

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

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). *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

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 Failure Is Not an Option: Designing Competency-based Pathways for Next Generation Learning*. Vienna, VA: International Association for K–12 Online Learning.

http://depts.washington.edu/uwcel/inacol_failurenotoption.pdf

This paper says there are four forces that are driving interest in competency-based approaches: online learning, multiple pathways to graduation, state and district budget deficits, and low-performing schools and districts. Under state and district budget deficits, the paper states, “Given the economic downturn, across the country leaders are questioning the costs built into the time-based systems such as remediation, summer school, and developmental education at the college level. Thus, reforms that offer greater cost-effectiveness are gaining more attention.”

Twyman, J. (2014). *Connect: Making Learning Personal*. Philadelphia, PA: Center on Innovations in Learning, Temple University.

http://www.centeril.org/connect/resources/Connect_CB_Education_Twyman-2014_11.12.pdf

This issue brief overviews the complexities of implementing competency-based education, a component of personalization that has received growing attention.

U.S. Department of Education. (2010). *Competency-Based Learning or Personalized Learning*. Washington, DC: Author.

<http://www.ed.gov/oii-news/competency-based-learning-or-personalized-learning>

This webpage provides links to three state efforts, four district efforts, two alternative/credit recovery schools and programs, and additional resources.

Utah State Office of Education. (2013). *Competency-based Education Funding Report*. Salt Lake City, UT: Author.

<http://www.schools.utah.gov/legislativematerials/2013/Nov/CompetencyBasedEducationFundingReport2013.aspx>

This report begins with a paragraph headed “Competency Based Funding Options,” then states, “The legislature through H.B. 393 directed the State Board of Education to provide to the Education Appropriations Subcommittee a recommendation concerning how the public school finance formula could be amended to include competency based funding. This statute includes two sections including developing a competency based funding unit and providing the ability for LEAs to develop competency based programs which are funded on the course level and are not dependent on seat time. Course level funding would be provided when a student has shown competency in the subject matter associated with the course or courses included in the program.” The enrolled copy of H.B. 393 as introduced is available at <http://le.utah.gov/~2013/bills/hbillenr/hb0393.pdf> The amended version is available at <http://le.utah.gov/~2013/pamend/hb0393.hfap.01.pdf> and a fiscal note is available at <http://le.utah.gov/lfa/fnotes/2013/hb0393.fn.pdf>

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. (2015). *A Blueprint for a New Ohio: Competency Education Pilots Proposed in Ohio*. Cincinnati, OH: KnowledgeWorks Foundation.

<http://knowledgeworks.org/worldoflearning/competency-ohio/>

According to this article, when Governor John Kasich of Ohio released his budget recommendations to the General Assembly, one highlight in the Department of Education budget was, “Engage students in learning by funding ten sites to pilot competency-based education programs that advance students when they master course content.” The governor's complete budget recommendations are available at

http://www.blueprint.ohio.gov/doc/budget/State_of_Ohio_Budget_Recommendations_FY-16-17.pdf

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.”