



CLEARING THE PATH

Creating Innovation Space for Serving Over-Age, Under-Credited Students in Competency-Based Pathways

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ABOUT THE AUTHORS

Chris Sturgis is the principal of MetisNet, a consulting firm working with foundations, government, and individuals to shape effective investments that build communities, benefit children and families, and brighten our future. The mission stems from the very roots of our name—metis—a Greek word for local knowledge and wisdom. Drawing on multiple perspectives, MetisNet works with clients to develop vibrant, asset-based investment strategies.



Bob Rath is the president and CEO at Our Piece of the Pie®, Inc. (OPP®), based in Hartford, Connecticut. With more than thirty years experience in organizational leadership, Bob led the transformation of OPP into a youth development organization intently focused on helping urban youth 14-24 become successful adults. OPP's signature program, Pathways to Success, has been successfully implemented in the community at large, as well as inside Opportunity High School—a partnership school for over-aged and under-credited youth—launched in August 2009 by Hartford Public Schools and OPP.



Susan Patrick is president and CEO of the International Association for K-12 Online Learning (iNACOL), a nonprofit 501(c)(3) membership association based in the Washington, D.C., area with more than 3,700 members. INACOL is unique in that its members represent a diverse cross section of K-12 education from school districts, charter schools, state education agencies, nonprofit organizations, colleges, universities and research institutions, corporate entities, and other content and technology providers. iNACOL's mission is to ensure all students have access to a world-class education and quality online learning opportunities that prepare them for a lifetime of success (www.inacol.org).



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Clearing the Path

Creating Innovation Space for Serving Over-Age, Under-Credited Students in Competency-Based Pathways

An exciting opportunity is emerging for state education agencies (SEA) and districts to dramatically increase graduation rates for students that are falling off the track toward a diploma. SEA leaders with the commitment and skill to pursue an innovative policy agenda can take advantage of three dynamic forces: (1) the creation of national overarching standards via the Common Core State Standards; 2) an ever-increasing knowledge of how to reengage over-age and under-credited students (OU students); and 3) competency-based learning models enabled by advancements in technology. Although it will require substantial leadership to provide the required policy flexibility, the possible rewards hold great promise for our children and communities.

This paper provides guidance on creating competency-based approaches (CBAs) for students that have fallen off the track toward graduation. Alternative school models that use aspects of competency-based approaches (e.g., Diploma Plus, Performance Learning Center, and AdvancePath Academics) are severely constrained by policies that rely on the Carnegie unit and other time-based system elements. The full benefit of competency-based alternative schools will remain unknown until enabling state policy conditions are in place.

In their paper “When Success Is the Only Option: Designing Competency-Based Pathways for Next Generation Learning,”¹ Sturgis and Patrick explain that the traditional time-based system

reproduces low achievement, disengagement from school, and inequity. Competency-based approaches offer an alternative by re-engineering the education system around learning and student success. A three-part working definition of competency-based approaches is provided in the paper:

- Students advance upon mastery;
- Explicit and measurable learning objectives empower students; and,
- Assessment is meaningful and a positive learning experience for students.

Sturgis and Patrick argue that given the early stage of the innovation cycle, it is best if states create space for the organic expansion of competency-based approaches. States can nurture innovation by increasing flexibility in the policy environment, providing technical assistance, supporting peer networks, and evaluating innovative models. As innovative practices develop in classrooms, schools, and districts, they can further inform policy reforms and investment decisions. Drawing on a wide range of expertise, this paper explores how states can create space for innovation, including design principles, minimum policy conditions, and options for moving forward.

Competency-Based Approaches Respond to the Needs of Over-Age, Under-Credited Students

It is essential to design policies and programs based on customer needs. Some OU students may continue to go to school, while others may decide or be encouraged to leave. Many will have taken on adult responsibilities such as financially supporting or caring for their families. The majority will have academic skills two or more years below grade level, gaps in basic literacy and mathematics, and disproportionately special education issues. Given that most OU students have grown up in low-income communities, they are highly motivated to earn money but have limited experiences or relationships with organizations in the real world beyond the secondary labor market. Finally, many of these students will have endured traumatic experiences, which can create social or emotional issues that shape their learning experiences.

Competency-based approaches (CBAs) intersect in powerful ways with the needs of students who are unlikely to graduate because they are over-age and under-credited.

Increase Likelihood of Graduation: Depending on state policy, many OU students are at risk of “aging out” of the K-12 system. Seat-time requirements are an insurmountable barrier for older students with elementary-level skills or few credits. CBAs allow for the necessary acceleration of skill development and credit accumulation.

Ensure Mastery of Skills: Students receive the help they need to address specific learning deficiencies while working on other

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competencies. Students progress, even if it takes a bit longer for some, rather than being trapped taking the same course over and over.

Motivate Students: Students are motivated by explicit, measurable learning objectives as well as just-in-time formative assessments. By taking on responsibility for their own education, students can take advantage of a full-range of learning opportunities outside of the classroom.

Provide Educational Continuity: Students with complex lives, high mobility or interrupted education continue to progress without having to repeat courses. If designed effectively, students can continue to progress on discrete learning objectives while taking care of family members, during transitions between detention and disciplinary schools, or during changes in foster care placement.

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Design Principles for Competency-Based Pilots for Over-Age, Under-Credited Students

ENSURING THAT STUDENTS HAVE THE SKILLS TO SUCCEED

As described in the paper “When Success is the Only Option,” CBA innovators develop holistic competencies that are much broader than simply academics. Given the experiences of OU students, alternative schools use CBAs to focus on a broad set of competencies to ensure that students have the skills to succeed.

- **Academic competencies** that recognize progress in recuperation, closing gaps in basic literacy and math, as well as the full range of skills to prepare students for college and careers.
- **Efficacy competencies** that include 21st century skills such as critical thinking, problem solving, communication, collaboration, and creativity; learning how to navigate new environments; social-emotional literacy; and, the competencies to make the transition to college and careers.

Essentially, schools designed for OU students are interdisciplinary, integrating best practices from education, youth development, mental health, and college and career readiness.

The following design principles are based on integrating what has been learned from CBA innovators with that of serving OU students. These principles, or design specifications, can guide discussions as policymakers, district leaders, and educators shape policies and pilots.

ROBUST COMPETENCIES

- Includes academic and efficacy standards
- Aligns with standards benchmarked for success after high school, such as Common Core State Standards, college entrance requirements, or global standards
- Structures learning objectives so that they are explicit and measurable
- Offers explicit requirements for granting of diploma or other certification

STUDENT-CENTERED

- Approaches students holistically
- Provides personalized learning maps that include academic and efficacy competencies
- Organizes services and supports varied in intensity based on student learning needs
- Structures simultaneously recuperative and accelerated learning
- Focuses on student preferences in considering high school certification, college, and career choices

DESIGNED AROUND LEARNING

- Advances students to more challenging coursework upon mastery, not age
- Offers students work at levels that are appropriately challenging
- Provides multiple methods of instruction (context, content, and instructional methodology) to ensure that students from different cultures and life experiences have the opportunity to succeed
- Uses valid and reliable assessments in ways that are meaningful to students
- Assesses students on their performance in multiple ways and multiple times to ensure that proficiency has been reached
- Integrates student information and learning management systems designed around competency-based approaches, providing data to support students, teachers, and schools for improving performance
- Employs standards-based grading that focuses on a demonstration of learning rather than on attendance, participation, or behaviors

EXPANDED LEARNING OPPORTUNITIES

- Maximizes learning that can occur anytime, anyplace, with minimal restrictions based on attendance, school day, or calendar
- Offers online and/or computer-based instructional software that is competency-based
- Constructs expanded learning opportunities around specific learning objectives

FLEXIBILITY IN STAFFING

- Broadens school staffing around student needs including youth development specialists, learning coaches, and multiple methods of instruction, such as traditional school-based teachers, online courses, computer-based instruction, and dual enrollment at community college

LEARNING MAPS EMPOWER STUDENTS

Competency-based approaches require transparency about education goals and how students can demonstrate proficiency in and outside of the school walls and beyond the traditional school day. Individualized learning maps are an essential instrument to facilitate transparency. Learning maps include academic standards plus holistic competencies for each level that show what students need to know and be able to do to graduate.

Learning maps show progress as students master academic and efficacy competencies. As competency-based approaches expand, student learning maps will be portable, allowing students with high mobility to continue to progress as they move from school to school.

Learning maps provide the basis for establishing an alternative structure to the traditional time-based system in which high school students move together by cohort through the 180 day school year over a fixed four year schedule. Instead of retaining those students that are unable to “keep up”, learning maps build knowledge so that educators can customize how, where, when students learn with adjustments for pace so that students have adequate time to master skills.

- Revises human resources policies to include a team approach to educating students, revised expectations for teaching staff to have greater expertise in instruction and assessment, and greater flexibility in hiring teachers
- Provides adequate support for educators including integrated student information and learning management systems, coaching in instruction and assessment, and opportunities for educators to build a common understanding of proficiency

ENGAGED COMMUNITY AND STAKEHOLDERS

- Engages students, parents, and teachers in early stages of decisions to move forward on CBA strategy
- Facilitates community-wide discussions, including employers and colleges, on the competencies needed for graduation and success after high school
- Seeks engagement with OU students on outreach strategies and co-design efficacy competencies
- Engages students and teachers on how the competencies would be assessed; in other words, what does proficient work look like?

USING TECHNOLOGY TO EXPAND LEARNING: COMPETENCY-BASED ONLINE COURSES AND COMPUTER-BASED INSTRUCTION

It is imperative that state policy clearly requires that online and computer-based instruction (CBI) designed for OU students, such as those designated as credit recovery, adheres to the same quality in instruction and assessment of student knowledge that are used for the most advanced students. In addition, in selecting technology-enabled instruction schools should consider how it will best meet the needs of OU students.

Online courses expand OU student options in meaningful ways; students benefit from personalized instruction, digital content with embedded assessments, and access to high quality instructors at any time and place. Many online course providers offer online tutoring 24 hours a day, offering the immediate feedback and encouragement needed so that students continue to master challenging material. Yet OU students are likely to need the support from an advisor or teacher in a blended learning environment.

On the other hand, computer-based instruction is not instructor-led. Variations in quality need to be considered when selecting providers or products. Moreover, educators need to be responsible for ensuring effective implementation of CBI as a content delivery system, including providing adequate supplemental supports to students.

State Policy Conditions for Competency-Based Approaches for Over-Age, Under-Credited Students

State policymakers need to address two related challenges: policy conditions and development of operational innovations. Given that there are dispersed pockets of innovation, knowledge of best practices has yet to be adequately documented. Foundations are investing in research that will help to fill this gap. In addition, leading states are already beginning to revise their policies as they are informed by the experiences of districts and schools. The Council of Chief State School Officers' Next Generation Learning Innovation Lab Network will disseminate information on effective state policies.

For state education agencies to realize the full benefit of CBAs in schools, a set of policy conditions must be in place. Districts and schools developing CBAs require the flexibility to reorganize functions and staffing, expand high-quality content and instructional systems, and incorporate new tools, technologies, and supports. Given this complexity, policy reforms will require a multi-pronged process. Partial implementation will always seem the path of least resistance. While the easier elements such as standards-based grading and seat-time waivers are valuable, they are inadequate in enabling the full impact of competency-based learning approaches.

Working together, policymakers and practitioners can create a policy environment to replace the current time-based system with a learning-based system. Collaborative efforts, requiring leadership and creativity, are essential in revising bureaucratic regulatory codes, untangling the unintended consequences of a time-based system and, when necessary, addressing legislative barriers. The policy conditions described below are a starting point for creating competency-based innovations.

RELEASE FROM TIME-BASED REGULATIONS

- Students are granted credits based on demonstrated proficiency, not seat-time. States establish policy conditions for districts and schools to award credits based on mastery.
- Students can pursue learning objectives in the classroom, during out-of-school time, in the evening with online courses, and throughout the summer. States remove barriers related to time-based policies, including mandatory in-school hours for students and the traditional school calendar.
- Students will progress upon mastery with open enrollment and open exit. States eliminate barriers that limit student progression.
- Students can take additional time to master competencies, including temporary leave of absence when family or community responsibilities increase. States adjust accountability systems so that schools are rewarded for keeping students engaged.

ANYTIME, ANYPLACE LEARNING OPPORTUNITIES

- Students can enroll in competency-based online courses as needed, even those offered by other districts and states. States remove policy barriers that limit access to courses needed for graduation.
- Students are recognized for proficiency in learning objectives developed outside of the traditional school day and year (including jobs, participation in clubs, and community service). State policy broadens the definition of teacher to educator so that more adults can engage in supporting student learning.
- Students can transfer competencies across schools, including jail and disciplinary schools. States recognize learning maps as valid "transcript" for portability of competencies.

FUNDING AND ACCOUNTABILITY

- Students are able to reenroll in school with minimal delay. States align financial incentives to support rapid reenrollment of students.
- Student progress in learning is based on academic and efficacy competencies that include discrete learning objectives. States work with schools and districts to create data warehouses for individual learning maps.

- Schools are able to innovate with clear focus on student learning with performance metrics that include learning outcomes, affordability, and rates of acceleration. States protect integrity of innovation process from reporting requirements that may cause harmful effects.

ANTICIPATING THE IMPLEMENTATION CHALLENGE

A real-life example highlights the implementation challenges for serving OU students to move beyond time-based constraints. Schools for the Future (SFF) and Our Piece of the Pie (OPP) are partnering in the development of a pilot of a comprehensive competency-based approach in Connecticut. In so doing, SFF/OPP expects to encounter the following implementation challenges:

Modularized Curriculum Relevant to Students: SFF/OPP will draw from the Common Core and prioritized state learning standards to establish clear targets for students to progress. It will use these to articulate a multi-year learning map for how students move from entry to the finish line — success in college and career. Every identified standard will be located in at least one class or expanded learning activity, with supporting curriculum modules. The first major challenge is to identify sufficient high-quality and differentiated curriculum so that educators can move students across modules based on their evolving learning needs.

Reliable and Valid Assessment System: The next challenge is implementing an assessment system that is reliable and valid. In other words, if five educators were to examine evidence that a student is proficient in solving multi-step algebraic equations,

would they all come up with the same judgment? Keep in mind that this is arguably the greatest challenge to CBAs. Schools are organized by time partly because it provides the appearance that students are being promoted based on some reasonable benchmark.

Educator Focus on Assessment and Instruction: In the untimed and differentiated “classroom,” educators will need to be familiar with multiple curriculum modules that can engage individuals and groups of students. The key will be to help educators become better at quickly assessing how students are progressing, the challenges they are facing in moving to the next level, and what assistance to provide.

Sophisticated Information Management System: User-friendly and efficient Learning Management System (LMS) and Student Information Systems (SIS) are needed to communicate among multiple educators who may be located at different sites, with students, and with their parents. The SIS needs to be transparent to students, so that there are no surprises about progress. The LMS must be able to make curriculum and learning activities easily accessible to students and educators alike, 24/7, in multiple locations such as at work sites and community-based organizations.

The State Role in Creating Innovation Space

The first strategic decision that needs to be made by SEA leaders is the degree to which innovation space will be established for schools and districts. Grants for pilots are often too limited in time and scope to fulfill the research and development functions. Thus, chief state school officers should consider the following questions:

How can the innovation space be designed to

- Generate adequate innovation capital² including financial resources, time for effective development, opportunities for experimentation and refinement of new practices, access to social capital such as networks of innovators, and intellectual support to address specific challenges?
- Supply adequate time and support for the stages of development, including concept development and testing, beta testing, and technical implementation such as process improvements and continuous improvement feedback loops, and replication (i.e., commercialization or scaling)?
- Provide for appropriate use of evaluation to inform innovation?

Philanthropic or corporate partnerships can be helpful in providing the funds for a full-fledged research and development capacity as well as creating political cover necessary for sustainability.

State education leaders will need to devise the scope of innovation based on the mix of policies in place and the ease in revising them. In the following discussion, three options are considered.

RESEARCH AND DEVELOPMENT PROGRAM

States can create protected space for innovation by developing a five- to seven-year program in which the grantees have full flexibility to test out new ideas, design the specific tools and practices needed to support CBAs, and fully bring the innovative school model “to market.” For example, the Florida Virtual School performance-based model was created by being given a “blank page” within a well-protected innovation space. It is important that adequate funding is provided for evaluation or continuous improvement so that practices can be quickly tested and refined. This option is likely to require a philanthropic partner. In addition, it will be easier to test our new ideas with start-ups or new schools.

COMPETENCY-BASED PATHWAY PILOT

A five-year pilot program can be designed to fully develop the architecture to support competency-based approaches, including:

- Reliable and valid assessment system
- Robust competencies and learning objectives aligned with college and career-ready standards
- Personalized student learning maps that go beyond traditional check-off lists to reflect learning progressions
- Professional development that supports educator collaboration in tuning protocols and rubrics to support high-quality standards
- Integrated student information and learning management systems customized to the needs of OU students
- Community outreach and communications on implications of competency-based approaches and community input on competencies
- Partnerships that provide supports and opportunities for students

² Andrew Hargadon, the founder of the Center for Entrepreneurship at the University of California Davis, describes the need for multiple forms of capital to support innovation. http://andrewhargadon.typepad.com/my_weblog/on_managing_innovation/.

Grantees should commit to some degree of transparency so that other schools and districts can directly benefit from innovations developed with state funds.

EXPEDITED WAIVER PROCESS

States can enable more innovation by establishing credit flexibility (seat-time waivers) for schools developing CBAs. Although a waiver to grant credits based on demonstrated proficiency rather than seat-time is the initial condition required for CBAs, schools will find that they will want to remove other bureaucratic and regulatory barriers as well. States will need to work closely with innovators to expedite waivers or regulatory changes when time-based policies create misalignment and barriers.

As Sturgis and Patrick highlighted, there is a risk that poorly implemented CBAs can result in lowered standards. Thus, states will need to establish a mechanism to ensure that schools requesting waivers have a quality control system in place that maintains academic rigor.

Concluding Remarks

The investment in competency-based innovations will provide invaluable knowledge and products to inform efforts to move beyond the time-based system, improve services for students at risk of not graduating, and create greater customization across the full spectrum of students. By states creating local “laboratories,” the essential elements of the CBA architecture will be tested and fine-tuned. Working together, innovators and state leaders can construct appropriate state policies to guide high-quality CBAs in schools.

Most importantly for our young people and our future, alternative schools that develop dynamic competency-based approaches will serve as lighthouses, illuminating the path for all districts so that each and every student can proudly claim a diploma that certifies that they are prepared for college and career.