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Competency-Based Education: Educational Reform. A Primer

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Competency-Based Education: Educational Reform. A Primer

NOTE: Competency-based education (CBE) is not only a growing systemic educational reform in New Hampshire, it is an emerging national reform effort. New Hampshire is considered a leader in the CBE reform effort. Carla M. Evans and Jonathan Vander Els research and consult on CBE implementation and outcomes. Dr. Evans' research on New Hampshire's Performance Assessment of Competency Education pilot innovative assessment and accountability system was recognized by the American Educational Research Association with her selection as Division H's Outstanding Dissertation Award. Mr. Vander Els consults locally, regionally, and nationally on school reform issues including CBE. He is currently finishing his Doctor of Philosophy (Ph.D.) in Education at the University of New Hampshire. They discuss CBE by responding to four questions designed to provide an overview of CBE. They also provide a short practical discussion about initiating change. We thank them for accepting our invitation to write this Policy Brief engaging the New Hampshire educational community about this important reform.

—Todd A. DeMitchell, John & H. Irene Peters Professor of Education, Professor, Justice Studies Program, University of New Hampshire.

Discussion Questions

What is Competency-Based Education?

Carla M. Evans:

Competency-based education (CBE) is an education reform with a long history in the United States and at multiple levels (Le, Wolfe, & Steinberg, 2014). For example, competency-based teacher certifications, as well as K-12 and postsecondary competency-based learning were both common in the 1960s to 1980s. What I deem the first-wave CBE movement (late 1960s to early 1980s) tried to upend the traditional educational system that sorts and ranks large numbers of students into college or career-ready tracks. The idea was that all students can master appropriate learning targets if given the appropriate time and instructional supports. The first-wave movement lost steam after the accountability movement took hold in the late 1980s, but there has been a resurgence in competency-based approaches to education within the last 15 years.

The second-wave CBE movement (~2000 to present) builds upon the earlier movement with arguments for the reform often invoking the policy values of educational excellence and equity. CBE proponents argue that competency-based approaches to education are needed because not all students are being adequately prepared for career or college and achievement gaps remain despite decades of reform efforts (Lewis et al., 2014). Instead, the traditional school system perpetuates patterns of inequality and lackluster performance because learning is not personalized and teachers often do not

leverage students as active participants in their own learning (Patrick, Worthen, Truong, & Frost, 2018).

Although both the first- and second-wave CBE movements have suffered from a lack of conceptual clarity and definition, I would argue that there are at least four defining features that are consistent across the literature. These features operationalize the 5-part working definition of CBE developed by a group of practitioners and policymakers in 2011 (Sturgis, Patrick, & Pittenger, 2011) through interweaving how CBE is intended to be a systems-level redesign of a school's structure, culture, and vision of teaching and learning (Patrick et al., 2018).

- 1) *Students advance in the curriculum upon demonstration of mastery not effort, participation, behavior, or time.* This is a fundamental element in all competency-based approaches because it addresses what system designers agree is perhaps the fatal flaw in the traditional model of education—namely, that students move from one grade to another with their age-based cohort without having to demonstrate mastery of grade level content standards.
- 2) *Students receive support and progress monitoring based on their individual learning needs.* Sophisticated support structures are critical in a competency-based system because of the need to accurately identify when a student has learned the material and is ready to move on, as well as when a student has not learned the material and needs additional support. In a traditional education system students who are not yet proficient may receive additional supports, but what differentiates CBE approaches is the dual emphasis on supporting students who have demonstrated proficiency in the material and would benefit from a different pathway.
- 3) *The content, instruction, and assessment of student learning is student-centered.* This means that students have voice and choice in what they learn, how they learn, and how they demonstrate their learning. Students are also encouraged to develop a range of skills and dispositions sometimes referred to as 21st century skills or work-study practices (e.g., problem solving, communication, collaboration, creativity, and self-direction) and these are reported to parents separately from competency-based grades (National Research Council, 2012).
- 4) *School policies and operating structures cohere with and facilitate implementation.* For example, fully competency-based systems do not place restrictions on when and where students can earn credit towards graduation for participating in internships or other out-of-school learning experiences.

Jonathan Vander Els:

In a competency-based system, learning is intended to be a more accurate measure of what a student knows and is able to do. Teachers work collaboratively in an environment that is both personalized and student-centered. The Nellie Mae Education Foundation (NMEF) defines personalized learning as a learning system that “*recognizes that students engage in different ways and in different places. Students benefit from individually-paced, targeted learning tasks that start from where the student is, formatively assess existing skills and knowledge, and address the student’s needs and interests.*” NMEF defines student-centered approaches as learning that “*engages students in their own success—and incorporates their interests and skills into the learning process.*”

Rather than having educators hand down information, students can engage with teachers and their peers in real-time—preparing them to participate in a skilled workforce later in life.” (<https://www.nmefoundation.org/our-vision>)

Chris Sturgis, from CompetencyWorks, defines competency education using a five-part definition (2011). In a competency-based learning system:

- Students advance upon demonstrated mastery.
 - Competencies include explicit, measurable, transferable learning objectives that empower students.
 - Assessment is meaningful and a positive learning experience for students.
 - Students receive timely, differentiated support based on their individual learning needs.
 - Learning outcomes emphasize competencies that include application and creation of knowledge, along with the development of important skills and dispositions.
- (<https://www.competencyworks.org/about/competency-education/>)

In this model, educators affect change and leverage opportunities for students to have choice and voice in their learning and push back against the traditional structures that may constrict these opportunities for student agency.

There is a growing recognition that our world is changing rapidly, and we need to do everything possible in our schools to ensure that students are prepared for their career, college, and most importantly, life. Our schools are responding to this reality by providing opportunities for students to demonstrate their learning in ways that haven't always been provided. This includes Extended Learning Opportunities (ELOs), apprenticeships, on-line courses (VLACS, for example), and structuring multi-age grade bands to provide increased opportunities for students to “move on when ready”—just to name a few. The intent is to prepare students to think critically and apply problem-solving skills to real-world problems so that they are prepared for the world they will enter, whether they are moving on to college or entering the workforce.

This last point is critical (aligned to the fifth tenet of a competency-based system). The world that we are sending our students into today is very different than it has been over the past century, changing drastically even within the last decade. The World Economic Forum, in a recent *Future of Jobs Report*, citing McLeod and Fisch noted that it is surmised that 65% of our current primary students will move into jobs one day that currently don't exist.

(<http://reports.weforum.org/future-of-jobs-2016/chapter-1-the-future-of-jobs-and-skills/#view/fn-1>)

It is therefore imperative to highlight both academic content knowledge AND the necessary skills and dispositions that are being identified as critical by employers and colleges. Employers are clearly articulating that they are looking for different skills than they did even ten years ago. NACE (National Association of Colleges and Employers), in a survey in this vein, outlined the top four skills employers are looking for in an employee. Susan Adams (2013) referenced them as follows:

1. *Ability to work in a team*

2. *Ability to make decisions and solve problems*
3. *Ability to plan, organize and prioritize work*
4. *Ability to communicate verbally with people inside and outside an organization*

The critical competencies of communicating, collaborating, creatively problem solving, and being a self-directed learner are integral for success in today's world, and are also highlighted within a competency-based system.

What Do Teachers Need to Know to Implement CBE in Their Classrooms?

Jonathan Vander Els:

Reflecting on my time as a principal and the eight-year period I was involved in transitioning to a competency-based system in our school, teachers first and foremost need to understand “the why” of the change. Our school started with, and returned many times to, the conversations we had related to why we were engaged in this work in the first place. This honest dialogue centered around what we wanted for ALL students and engaging in some frank conversations about whether our current reality was in line with this mindset.

Once the “why” is clear, teachers need to better understand the various components of deeper learning. This includes re-thinking assessment. Competency is the transfer of learning in and across subject areas (Colby & Bramante, 2015), therefore it is critical to understand that we must provide opportunities for assessment that allow for students to demonstrate their application of knowledge in a meaningful way. Teachers' understanding of assessment literacy expands as they engage in the development of units of study that provide opportunities for this deeper learning through their development of essential questions that are at deeper levels of rigor. These changes guide shifts in instruction as teachers recognize the need to provide students with opportunities to “practice” at this deeper level prior to the assessment.

And importantly, teachers need to understand the role student agency plays in a competency-based system of learning. Often, teachers recognized this impact by allowing students more ownership in decision-making within the classroom. The teacher's role in CBE becomes more about “guiding learning” in the classroom than directing learning. Identifying the competencies (the what) that students must demonstrate proficiency in is critical (Backwards Design), but allowing students the space to be agents within how that demonstration of competency will occur is imperative. Students must know where they are within their learning (through feedback and self-reflection), and then develop goals in determining their own pathway to achieving growth and success. This metacognition, the self-awareness to know where they are in their learning, and the ability to monitor and adapt based upon this understanding, is critical.

Carla M. Evans:

I think teachers need to understand how to assess what students know and can do and at what depth of knowledge. For example, it is impossible to allow students to “move on when ready,” an oft-cited phrase in the competency-based world, if the teacher does not understand where a student is starting from, what the next step is in the content area

learning progression, and the different ways of allowing students to learn the material and demonstrate their understanding. It is also important for teachers to understand the benefits and limitations of different types of assessments (summative state tests, formative assessments, performance-based assessments, unit tests, etc.) and how those assessments support (or do not support) the inferences they are making from them about student mastery and proficiency. This challenge of 'assessment literacy' is not unique to CBE reforms and is necessary for teachers writ large.

A second challenge for teachers is how to differentiate instruction and personalize learning in such a way that they are not creating twenty different lesson plans each day. Teachers need training, coaching and exemplars that demonstrate how they can flexibly group students, structure the learning environment, and create learning experiences for students that meet students where they are at in their learning progressions and help them to advance in a given content area. Again, as with assessment, I don't think these practices are unique to CBE but they are highlighted in that reform because of the emphasis on flexible pacing and personalization.

What Do Administrators Need to Know to Implement CBE in Their Schools?

Carla M. Evans:

Administrators need to know how to implement the reform in their school/district in a coherent way that privileges the buy-in of key stakeholders such as teachers, parents, students, and the community. This entails a strategic public relations and communications endeavor, as well as a thoughtful and logical pre-planned progression of how to "roll out" CBE reforms in their socio-political context. While there is likely not one approach that will work in all settings and contexts, we know enough from others' experiences at this point that starting with competency-based grading practices, which is typically very controversial particularly at the high school level, can slow/derail the implementation of CBE reforms. Administrators need to spend a lot of time discussing first with teachers and then with parents, students, and the community why CBE reforms are necessary for their students' college and/or career success while also providing a roadmap for implementation that solicits and uses feedback from these key stakeholders at every critical juncture.

Re-structuring the school schedule to allow common planning time is another challenge critical to the implementation of CBE reforms. Teachers need time within the school day to talk about student progress, group problem solve how to support students above and below proficiency, design common instructional units and assessments, analyze student work together, and come to shared understandings of student proficiency. How to find that time will test the administrators' creativity in problem solving skills and will likely involve adjusting many moving parts in the rhythm of the school day and school week.

Jonathan Vander Els:

Administrators need a deep understanding of the change process and recognition of the importance a strong culture of learning plays in determining success of implementing such reforms as CBE. In many cases, the perceived "punitive" aspects of

No Child Left Behind have eaten away at the cultural fabric that may have existed in schools. Building trust within the community, as well as the community of learners (students, teachers, and administration) in the school is a critical need that cannot be overlooked. Identifying what it is you want students to be (the people we wish for our learners to become) becomes the “North Star” for action; a reminder of why we are all doing what we’re doing.

Administrators must also recognize and embrace the role instructional leadership plays within this process. Identifying the steps in supporting staff members, then actually helping to provide that support allows the culture of learning to deepen within a faculty and builds a foundation of trust. Leaders cannot pretend to know all of the answers, but they can be explicit about the fact that they will seek solutions to the problems that arise.

Listening to students and keeping student learning at the forefront of planning are necessary strategies of reform. Students are great barometers of how things are really going in a school. In the early stages and throughout the reform by asking students, “What are you learning today?”, administrators can gain great insight into just how engaged students are in the process and how well the process of implementation is proceeding.

What Are Challenges Associated with CBE?

Jonathan Vander Els:

There are numerous challenges associated with CBE. I will relay specific challenges I have encountered, both as a principal in a school transitioning to a competency-based model, but also as someone who is working in many schools across the country.

The first challenge I experienced (and still do working with many schools today) is that the structure of schools may not be conducive to engaging in this type of work. Many schools and school leaders hope for a “magic bullet” that will transform their school into this oasis of deeper learning. For example, for a competency-based system to be successful, many of the “traditional” systems that are in place must be turned on their head. As was mentioned previously, providing time for collaboration is critical. A school’s schedule must embed time for collaboration within the school day. Teachers are asked to work collaboratively to determine essential learning targets, build both formative and summative performance assessments, analyze student work, determine next steps for individual students to ensure learning, as well as determine the teacher with the appropriate background to work with any students who are not making adequate progress. This cannot occur at the end of a full day of teaching with any great hope of success—it has to be embedded. The level of communication, collaboration, creativity, and self-direction this requires is significant, so we must not only be clear about the expectations we have of everyone but also provide the time and autonomy to allow teachers to do what they do best in supporting students. If we want them to embrace this reform and make it work, resources such as time must be provided for them. Teachers should expect nothing less.

Leadership is critical. It is not necessarily the leaders deep understanding of everything that competency-based education requires, but rather their recognition of the integral supporting role that administrators can and should play. Teachers in their

classrooms engaging in this work will recognize the pain points, and leaders must listen to them, providing support in the way of resources but also in encouraging teachers to continue to innovate, as this is what moves everyone forward. It is imperative that the learning that happens through these innovations is shared in a way that allows all within the school to benefit.

Lastly, there are many misconceptions in both the field and within communities about what competency-based education is. It is important to address these and to transparently share with the greater community the challenges you are facing. In the places where I have seen this transition occur most successfully, the community was an integral partner in developing the vision to define the why, and then continued to be engaged as schools deepened their practices around competency-based education. Transparency is key, and engaged stakeholders become problem solvers rather than antagonists based upon their own misconceptions and misunderstandings.

Carla M. Evans:

As in any reform that aims to re-structure school systems and operating procedures, there are many challenges associated with CBE. I will highlight three challenges.

First, the lack of conceptual clarity and definition at present in the second-wave CBE movement is problematic at best. While I recognize that new reforms take time to solidify and congeal around common ideas and frameworks, I think it is important that CBE reformers recognize the importance of focusing on what is truly unique about CBE from a systems perspective. For example, some have questioned whether CBE is truly a system-level reform or just a mix of instructional practices already in use in K-12 schools, but with varied emphases. I think this confusion stems from the broad way CBE is sometimes talked about and defined. In other words, what is truly distinctive about CBE and how is it a systems-level reform? The answer to this question is what could be used to provide conceptual clarity.

The second challenge is that reforms that aim to change the structures and practices of schooling have often failed historically because teachers tend to adopt a hybrid approach. For example, the child-centered movement in the early 1900s, which is conceptually very similar to competency-based education, failed to gain adherence because it attempted to reconfigure teaching and learning, amend school structures, and change the locus of control within classrooms. Teachers, however, did not want to make all these changes and adopted a hybrid approach. In other words, teachers adopted some child-centered teaching practices, but did not adopt the reform *in toto*. From one perspective, the hybridization of school reform is seen as positive. Teachers re-make and adapt policies and practices to fit within their local context “preserving what is valuable and reworking what is not” (Tyack & Cuban, 1995, p. 5). From another perspective, the hybridization of school reform is seen as negative because it leaves the intended reform in a watered down, diluted state that cannot truly reform teaching and learning. Successfully implementing CBE is more than tinkering at the edges; it is working from the core to the edges while recognizing the importance of finding the right mix of fidelity and adaptation (Durlak & DuPre, 2008).

The third and final challenge is that there is a dearth of research on implementation and outcomes of CBE at present. The lack of research impedes the flow

of information available to policymakers and practitioners that could assist them in understanding 1) the extent to which marginalized populations of students benefit from this approach, 2) how reforms are re-made and adapted in local school systems, as well as 3) best practices that lead to improved student outcomes (to name a few). Part of the challenge researchers (like myself) face when trying to investigate and explore CBE implementation and outcomes is that it is hard to operationalize and measure a reform that is still ill-defined. This under-representation of the intended construct (or reform) creates measurement error and complicates the interpretations that can be made from analyses.

Concluding Statements

Carla M. Evans:

I conclude with two thoughts. The first is a reminder to myself and to the readers of what Michael Fullan (2011) describes as the wrong drivers for whole system reform. These include: 1) focusing on accountability (vs capacity building); 2) focusing on individual quality (vs group quality); 3) focusing on technology (vs instruction); and 4) focusing on fragmented aspects (vs systemic aspects). I think it is important for CBE reformers to keep these in mind and to resist falling prey to the pendulum swings that so often happen in educational policy discussions. I will give an example. Technology is often touted in CBE circles above pedagogy. However, as Michael Fullan would support, if CBE reformers focus on technological solutions as the panacea that will allow competency-based reforms to permeate school systems, they are focusing on the wrong driver. Technology can definitely support and even accelerate school reform, but it should not be used to drive reform because technology is “intrinsically aimless” and “pedagogically vapid” (Fullan, 2011, p. 15-16). Smart pedagogy must be infused in technology and teachers must act as smart consumers and promoters of technological solutions to teaching and learning issues.

My second concluding thought is that it is also important to address where CBE implementation could go wrong for students. There is a long history in the United States of tracking students into separate classrooms and programs of instruction. Tracking has significant implications on students' opportunity to learn and the continuation of achievement gaps along socio-economic and racial/ethnic lines (Oakes et al., 2014). CBE has the potential to perpetuate the sorting and tracking students, but under the guise of “move on when ready” and personalized learning. In addition, recent research on Maine's high school proficiency-based diploma system highlights concerns about raising the bar for graduation and denying students a high school diploma because they have not demonstrated proficiency (or competency) (Stump, Doykos, & Brache, 2018). If more and more states pass legislation requiring that students must demonstrate proficiency (or competency) as a graduation requirement, what populations of students will likely be disadvantaged? What are the implications of adding additional barriers to earning a high school diploma as high school diplomas in the United States are often viewed as a cultural rite of passage into adulthood and gainful employment? We do not have the answers to these questions, but they are crucial to attend to if social justice and equity are at the heart of CBE reform efforts.

Jonathan Vander Els:

I would reiterate that this is not a systems reform that will happen overnight. Recognizing that change involves a process is an understatement. The important thing to remember is that it is about a constant cycle of reflection, iterating/refining, implementing, and starting all over again. We engage in this cycle to get better at what we are doing so that we may allow ALL students the opportunities to learn at high levels, preparing them to be successful in their careers, college, and most importantly, in life.

Lastly, I believe strongly that a competency-based and personalized system has the opportunity to (and should be) the lever for achieving equity in our schools. The National Equity Project defines educational equity as each child receiving “what he or she needs to develop his or her full academic and social potential” (<http://nationalequityproject.org/about/equity>). In my experience, this is precisely why we moved to a competency-based system. Sturgis and Casey (2018) expand upon this by noting that “educational equity promises that every student will reach their potential by designing an educational system that responds to students to ensure they are building the skills they will need in the future.” If we truly are intent on allowing each and every learner within our schools the opportunities to develop the requisite knowledge, skills, and dispositions to be successful, then a competency-based and personalized model of education implemented with fidelity should be the lever to do just that.

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