

## Transitioning from a Traditional Educational Model to a Competency-Based Educational Model: Lessons Learned from Administrators

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### Abstract

This study examined why schools and districts transitioned from traditional education systems to competency-based, the challenges and benefits school experienced, and characteristics needed in a leader for the shift in education. The study used a quantitative approach informed by survey and correlational research. The participants in this study included 39 K-12 administrators from across the United States. Based on the results of this study, superintendents should transition their districts and schools from traditional based education to CBE for three reasons. First and foremost, we are struggling to meet the needs of our students. Second, student achievement is low in our schools. Finally, we must prepare our students for their future, not the future we prepared for when we were students.

### Keywords

traditional education system, competency-based education, personalized learning, transformational leadership, Carnegie Unit, pedagogy

**K**-12 schools have looked nearly the same for decades, and “a growing number of teachers and leaders recognize that the one-size-fits-all industrial model of teaching and learning has not met the needs of their students” (Colby, 2017, p. ix). A need to transform our schools and prepare our students for tomorrow’s world is evident. Competency-Based Education (CBE) has been increasing in popularity as a style of education that replaces the traditional model where students advance based on seat time.

Prominent organizations that have invested in CBE include the Council on Adults and Experiential Learning (CAEL), the Bill and Melinda Gates Foundation, and the Lumina Foundation (Burnette, 2016). CBE promotes students to a *next* course of study or grade level in each subject after demonstrating mastery of identified learning targets aligned to standards (Wolfe, 2012). Contrarily, traditional education allows students to earn credit for a course after spending a required amount of time in that course and meeting minimum course criteria.

### **Flaws in Traditional Education System**

The traditional education system has worked well for many students over the last 100 years; however, evidence suggests the industrial era factory-based system of traditional education is failing to meet the needs of students in our 21<sup>st</sup> century society (Berrett, 2012). The Carnegie Foundation created something called a Carnegie Unit, “also known as the credit hour” (Silva, White, & Toch, 2015, p. 3) over a century ago to gauge student readiness for college-level academics (Silva et al., 2015). Its purpose was to standardize students’ exposure to subject material by ensuring consistent amounts of instructional time.

However, it was never intended to be a measure of what students learned (Silva et al., 2015). The Carnegie Foundation issued a report following a two-year study that acknowledged a need to revisit the Carnegie Unit (Silva et al., 2015) with a focus on more transparent and flexible ways to deliver education. The study found the Carnegie Unit remains the focal point of American Education which spans from elementary school to graduate school, and they cited CBE as an effective education approach that provides needed flexibility and transparency in delivery of education (Silva et al., 2015).

### **Transformational Leadership Theory**

Burns (1978) first introduced transformational leadership as a leadership paradigm that relied on contractual relationships between leaders and subordinates. Burns believed that transformational leaders were different and did more than create an exchange of perks in relationships between leaders and subordinates. Burns (1978) argued that transformational leaders motivated followers to seek higher-order needs, to look beyond their self-interest to organizational goals, and to enhance their sense of morality to “more principled levels of judgement” (p. 455).

Bass and Avolio (1994) extended Burn’s work and designed a systematic model of transformational leadership. Their work labeled four dimensions of transformational leadership that included: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. Transformational Leadership Theory provides leaders with an understanding that leadership can motivate subordinates “to do more than they originally expected to do” (Bass, 1997, p. 133). Transformational leaders change culture in a manner that reflects their vision (Bass, 1985). This type of leader fosters

collaboration by communicating shared visions, constructing mutual respect and trust, and providing opportunities for cooperation between employees (Demir, 2008).

### **Competency-Based Education**

Competency-based education is also referred to as mastery-based, proficiency-based, and performance-based education. Marzano et al. (2017) stated:

One of the most prominent issues in a traditional classroom is the struggle to meet the learning needs and maintain the engagement of all students in a class. Often the hardest students to reach are those on the periphery of the learning continuum; for example, the quick learners who rapidly grasp the material then disengage from learning, or the struggling students who avoid asking questions or trying their best because they know they don't understand.

A solution to help educators reach these students is a shift to competency-based education and personalized learning, an educational reform growing rapidly in prominence within K-12 classrooms. (p. 206)

There has been an increase in state and federal attempts to foster school reform

through legislation requiring all students demonstrate grade level proficiency in the core subjects of math, science, and reading (Moran, 2009).

As of 2012, there have been 36 states with policies that allow students to earn credits based on competencies that demonstrate academic proficiency instead of earning the credits via traditional Carnegie units (Cavanagh, 2012). CBE is designed to equitably ensure all students develop success skills they will need for college, career, and life. The Foundation for Excellence in Education (n.d.) defined competency-based education as:

A system of instruction where students advance to higher levels of learning when they demonstrate mastery of concepts and skills regardless of time, place or pace. In a traditional system, time is the constant and learning is the variable, meaning students spend a set amount of time on certain subjects and advance at predetermined intervals (course units and grade levels) regardless of whether or not they have mastered the material. (Para.1)

The field of competency-based education is evolving and therefore does not have a one-size-fits-all explanation. The reason for this is threefold and is based on the following:

1. "Competency-based education is a paradigm shift" (Casey & Sturgis, 2018, p. 2).
2. "Building capacity for competency-based education—supporting teachers, leaders and students to develop the knowledge, skills and competencies required of this new paradigm" (Casey & Sturgis, 2018, p. 2) to cope in a new system takes time.

3. “Districts and schools are operating under state and national policies that uphold the traditional system” (Casey & Sturgis, 2018, p. 2).

According to Casey and Sturgis, one hundred innovators in competency education came together in 2011 for the first time and worked up a definition of high-quality competency-based education that included five elements. The innovators included leading teachers, principals, district, and state leaders.

The knowledge from these innovators has evolved since 2011 and now includes 10 distinguishing features of CBE. These features help leaders and teachers as they transition from traditional based education to competency-based education. The updated 10 features, as identified by Casey and Sturgis (2018) are as follows:

1. “Student success outcomes are designed around preparation for college, career and lifelong learning” (Casey & Sturgis, 2018, p. 5);
2. “Districts and schools make a commitment to be responsible for all students mastering learning expectations” (Casey & Sturgis, 2018, p. 5);
3. “Districts and schools nurture empowering, inclusive cultures of learning” (Casey & Sturgis, 2018, p. 5);
4. “Students receive timely and differentiated instruction and support” (Casey & Sturgis, 2018, p. 6);
5. “Research-informed pedagogical principles emphasize meeting students where they are and building intrinsic motivation” (Casey & Sturgis, 2018, p. 6)
6. “Assessments are embedded in the personalized learning cycle and aligned to outcomes including the transfer of knowledge and skills” (Casey & Sturgis, 2018, p. 6);
7. “Mechanisms are in place to ensure consistency in expectations of what it means to master knowledge and skills” (Casey & Sturgis, 2018, p. 6);
8. “Schools and districts value transparency with clear and explicit expectations of what is to be learned, the level of performance for mastery, and how students are progressing” (Casey & Sturgis, 2018, p. 7);
9. “Strategies for communicating progress support the learning process and student success” (Casey & Sturgis, 2018, p. 7); and
10. “Learners advance based on attainment of learning expectations (mastery) through personalized pathways” (Casey & Sturgis, 2018, p. 7).

## Personalized Learning

A component of competency-based education is personalized learning. Bray and McClaskey

(2015) provided the following definition of personalized learning:

In a personalized learning environment, learners actively participate in their learning. They have a voice in what they are learning based on how they learn best. Learners have a choice in how they demonstrate what they know and provide evidence of their learning. In a learner-centered environment, learners own and co-design their learning. The teacher is their guide on their personal journey. (p. 14)

Patrick, Kennedy, and Powwel (2013) emphasized that “personalized learning is not equal to competency-based learning”; however, they said, “they are related and terms are often (mistakenly) used interchangeably” (p. 22).

The U.S. Department of Education (2013) tagged competency-based learning and personalized learning in the same title without distinction. The Department of Education views the two (competency-based learning and

personalized learning) as a way to transition away from seat time in favor of a structure that creates flexibility and allows students to progress as they demonstrate mastery of academic content. Students demonstrate mastery regardless of time, place, or pace of learning. The strategies utilized in competency-based learning and personalized learning include online and blended learning, dual enrollment and early college high schools, project-based and community-based learning, and credit recovery.

The following research questions guided this study.

1. What perceptions do K-12 administrators’ have of traditional educational systems prior to transitioning to competency-based education and to what extent and in what direction do these perceptions correlate with each other?
2. What perceptions do K-12 administrators have of why their districts chose to implement competency-based education and to what extent and in what direction do these perceptions correlate with each other?
3. How do K-12 administrators describe the various setbacks, if any, faced by administrations during implementation of a competency-based education system and to what extent do these setbacks co-occur with each other?
4. What benefits, if any, do K-12 administrators describe as a result of transitioning their schools to competency-based education and to what extent do these benefits co-occur with each other?
5. What resources, if any, do K-12 administrators perceive are needed to implement competency-based education and to what extent and in what direction do these perceptions correlate with each other?

6. What characteristics in a school leader do K-12 administrators perceive as necessary for implementing a change to CBE in a school and to what extent and in what direction do these perceptions correlate with each other?

The targeted population for this study was administrators working in schools or districts that have already made the transition from traditional based education to competency-based education. The research population was generated through collaboration with organizations including

KnowledgeWorks, Getting Smart, CompetencyWorks, Excellence in Education, and iNACOL. The list of schools recommended by KnowledgeWorks, Getting Smart, CompetencyWorks, Excellence in Education, and iNACOL are identified in Table 1.

Table 1

*Schools Recommended for Participation in This Study*

<b>Districts and Schools</b>	<b>Number of Schools or Kids</b>
Chugach School District (AK)	5 schools
Dallas Independent School District (TX)	230 schools
East Carver County Schools (MN)	18 schools
Henry County Schools (GA)	50 schools
Kettle Moraine School District (WI)	10 schools
Kenowa Hills Public Schools (MI)	6 schools
Lindsay Unified School District (CA)	9 schools
Marysville Exempted Village School District (OH)	9 schools
Mesa Public Schools (AZ)	87 schools
Mesa Valley School District 51 "D51" (CO)	46 schools
Montpelier Public Schools (VT)	3 schools
Noble Public Schools (OK)	5 schools
Pinellas County Schools (FL)	140 schools
RSU2 (ME)	9 schools
Sanborn Regional School District (NH)	4 schools
Westminster Public Schools (CO)	20 schools
Bronx Arena High School (NY)	230 students
Casco Bay High School (ME)	365 students

Cumberland High School (RI)	1,280 students
Deer Isle-Stonington High School (ME)	110 students
Impact Academy (MN)	450 students
Montpelier High School (VT)	275 students
New Haven Academy (CT)	250 students
Noble High School (ME)	1075 students
Nokomis Regional High School (ME)	680 students
NYC Alternative Schools (NY)	10,000 students
Purdue Polytechnic High School (IN)	160 students
Aveson Global Leadership Academy (CA)	415 students
Big Picture Learning Schools	Network of schools in 25 states
Blackstone Academy (RI)	300 students
Boston Day & Evening Academy (MA)	400 students
Brooklyn LAB Charter School (NY)	325 schools
Crosstown High (TN)	500 students
Furr Institute for Innovative Thinking (TX)	1,010 students
Level Up Academy (MN)	150 students
MC2 Charter School (NH)	2 schools
Powderhouse Studios (MA)	36 students
Summit Public Schools (CA/WA)	Network of 11 schools
Urban Assembly Maker Academy (NY)	100 students
Washington Leadership Academy (DC)	110 students

The demographic data collected from the survey of 40 superintendents and their K-12 administrators received 39 responses. Six superintendents responded which represented (15.38%), one assistant superintendent responded which represented (2.56%), 18 principals responded which represented (46.15%), seven assistant principals responded

which represented (17.95%), and seven other responses were recorded which represented (17.95%) of the total responses. The other category of administrators included one director of 21<sup>st</sup> century learning, four directors, one district administrator, and one chief executive officer.

## Methods

The authors used statistical means, standard deviation, and Spearman's correlation coefficient to understand the administrator responses and identify correlations between the responses.

Findings from peer-reviewed journals indicate that negative perceptions of traditional based education led to reasons why schools chose to move to competency-based education.

Additionally, the literature review identified that reasons why schools chose CBE included statewide initiatives, low student achievement, and a push from district accreditation agencies. The benefits included personalization, meaningful assessment, better prepared students for life, and educators job satisfaction.

The literature review stated that the main administration. Findings from peer-reviewed journals indicate that setbacks included resistance from staff, community, students and resources needed to implement CBE were professional development, flexible seating, additional staff, and curriculum.

Last but not least, the characteristics identified as necessary in a school leader to implement CBE included mentorship mindset, creativity, strong role model, and being collaborative.

In total, the authors conducted six Spearman's correlation coefficient analysis on the responses of the administrators. Triangulation was achieved by collecting data utilizing Likert Scales as well as collection of open-ended questions that allowed the respondents to produce their own responses without having to choose from a list of responses.

## Results

Assumptions for survey and correlational research design were met. These assumptions were (a) the participants will answer the questions in an honest and candid manner, (b) the inclusion criteria of the sample are appropriate. Criteria assured participants have all experienced: (a) a same or similar phenomenon as described in the study, and (b) participants have a genuine interest in participating in the research and do not have ulterior motives for being in the study.



### Negative perceptions of traditional educational systems

The mean of perceptions ranged from 4.58 to 5.42 with all responses being in the agree or strongly agree category. The mean and standard deviation of the responses for this question are identified in Table 2.

Table 2

#### *Mean and Standard Deviation of K-12 Administrator Perceptions of Traditional Based Education*

<b>Perceptions</b>	<b>Mean</b>	<b>SD</b>
Failing to prepare students for life	4.58	1.18
Time based	5.42	.63
Grading practices not aligned to what is learned	5.32	.92
Resembles a fixed mindset	5.03	.96
Ranks and sorts students	5.29	.82
High variability in how teacher determines proficiency	5.24	.70

The results indicated a positive relationship between all perceptions ranging from  $r_s = .35$  to  $.65$ . The largest correlation was a large, statistically significant correlation between the K-12 administrators' perception that the traditional educational system grading practices do not accurately identify what the student has learned and the perception that the traditional system resembles a fixed mindset ( $r_s = .648$ ,  $p < .01$ ). According to Cohen (1998) this coefficient would be considered a large effect.

### Why districts and schools chose to implement competency-based education

The mean of responses ranged from 2.55 to 5.21. This represented responses from *Somewhat Disagree* to *Agree* of why schools moved to competency-based education. The mean and standard deviation of the responses are identified in Table 3.

Table 3

*Mean and Standard Deviation of K-12 Administrators' Perception of the Why*

<b>Why</b>	<b>Mean</b>	<b>SD</b>
Struggling to meet the needs of the students	5.21	.83
Statewide initiative	2.55	1.83
District administration promoted and built capacity	4.87	1.40
Student achievement was low	3.92	1.63

The results indicated positive and negative relationships between the perceptions of why ranging from  $r_s = -.17$  to  $.61$ . The largest correlation was a positive, large effect, statistically significant correlation between the

why of student achievement being low and struggling to meet the needs of the students  $r_s = .61$ ,  $p < .01$ . According to Cohen (1988), this coefficient would be considered a large effect.

### Setbacks faced by K-12 administrators during implementation of competency-based education

The mean of responses ranged from 1.92 to 3.41. This represented responses from *Rarely* to *A Moderate Amount* of setbacks faced by K-12 administrators. The mean and standard deviation of the responses for this question are identified in Table 4.

Table 4

#### *Mean and Standard Deviation of K-12 Administrator Setbacks*

<b>Setbacks</b>	<b>Mean</b>	<b>SD</b>
Resistance from staff	3.41	.98
Resistance from community	3.10	1.06
Resistance from students	2.59	1.03
Resistance from accreditation agencies	1.92	.81

The results indicated positive and negative relationships between setbacks ranging from  $r_s = -.08$  to  $.62$ . The largest correlation was a positive, large, statistically significant correlation between the setback of resistance from community and the resistance from students ( $r_s = .62$ ,  $p < .001$ ). According to Cohen (1988), this coefficient would be considered a large effect.

### Benefits described by K-12 administrators as a result of transition their schools to competency-based education

The mean of responses ranged from 2.82 to 3.67. This represented responses ranging from *Moderate Benefit* to *Major Benefit* as a result of transition to competency-based education. The mean and standard deviation of responses for this question are identified in Table 5.

Table 5

#### *Mean and Standard Deviation of K-12 Administrator Benefits*

<b>Benefits</b>	<b>Mean</b>	<b>SD</b>
Personalization	3.67	.57
Meaningful assessment	3.46	.63
Better prepared for life	3.46	.81
Educators job satisfaction	2.82	.87

The results indicated positive relationships between benefits ranging from  $r_s = .40$  to  $.61$ . The largest correlation was a positive, large, statistically significant correlation between the benefit of students being better prepared for life after high school and the benefit of personalization of education for every student ( $r_s = .61$ ,  $p < .001$ ). According to Cohen (1988), this coefficient would be considered a large effect.

### Resources needed as perceived by K-12 administrators to implement competency-based education

The mean of responses ranged from 2.18 to 3.79. This represented responses ranging from *Minimal* to *Extensive* resources needed to implement competency-based education. The mean and standard deviation of responses for this question are identified in Table 6.

Table 6

*Mean and Standard Deviation of K-12 Administrator Perceptions of Resources Needed*

<b>Resources</b>	<b>Mean</b>	<b>SD</b>
Professional development	3.79	.41
Flexible seating	2.45	.82
Additional staff	2.18	.79
Curriculum	3.21	.80

The results indicated positive relationships between resources ranging from  $r_s = .09$  to  $.34$ . The largest correlation was a positive, moderate, statistically significant correlation between the resource of additional staff and the resource of curriculum and standards resources ( $r_s = .34$ ,  $p < .05$ ). According to Cohen (1988), this coefficient would be considered a moderate effect.

### Characteristics in a school leader perceived by K-12 administrators necessary for implementing a change to competency-based education

The mean of responses ranged from 5.05 to 5.79. This represented responses ranging from *Moderately Important* to *Extremely Important* characteristics of administrators needed to implement competency-based education. The mean and standard deviation of responses for this question are identified in Table 7.

Table 7

#### *Mean and Standard Deviation of K-12 Administrator Perceptions of Leadership Characteristics*

<b>Characteristics</b>	<b>Mean</b>	<b>SD</b>
Mentorship mindset	5.31	.82
Creativity	5.05	.81
Strong role model	5.38	.74
Collaborative	5.79	.40

The results indicated positive and negative relationships between characteristics ranging from  $r_s = -.04$  to  $.34$ . The largest correlation was a positive, moderate, statistically significant correlation between the characteristic of strong role model and the characteristic of mentorship mindset ( $r_s = .34$   $p < .05$ ) According to Cohen (1988), this coefficient would be considered a moderate effect.

## Discussion

Empirical research on competency-based education is extremely limited regarding implementation and student outcomes (Scheopner, Brett, Cox, & Greller, 2018). However, the results of this study help to strengthen the understanding of why administrators chose to transition to CBE. The administrators in this study either agreed or strongly agreed with the following perceptions of traditional based education.

Traditional based education is failing to prepare students for life, is time based, has grading practices not aligned to what is learned, resembles a fixed mindset, ranks and sorts students, and has high variability in how teachers determine proficiency.

All of these perceptions indicated a positive correlation with each other with the largest being between the perception that grading practices not accurately identifying what the student has learned and the perception that traditional based education resembles a fixed mindset.

The administrator's responses to why their schools moved to CBE varied. The findings support the work of Casey and Sturgis (2018) that the field of competency-based education is evolving and is not one size-fits all transition from the traditional based education model.

For example, the administrators did not agree that a statewide initiative was a reason they moved to CBE. The strongest agreement was from their schools struggling to meet the needs of their students. A strong, large, statistically significant correlation existed between the why of student achievement being low and struggling to meet the needs of the students.

The findings of setbacks showed that the administrators in this study rarely had resistance from accreditation agencies. Their strongest resistance came from staff. Correlations among setbacks were both positive and negative. The largest correlation was a positive, large, statistically significant correlation between resistance from the community and the resistance from students.

The results indicated that the administrator's perceptions of benefits from the literature review ranged from a moderate benefit to a major benefit. The benefit of personalization received the highest mean and was considered a major benefit. All of the benefits indicated a positive relationship with each other with the largest being between the benefit of the students being better prepared for life after high school and the benefit of personalization of education for every student.

The findings showed that resources needed to implement CBE varied from minimal to extensive. The administrators perceived adding staff to be a minimal resource needed.

The largest need came from professional development. All of the resources indicated a positive relationship with each other with the largest being between additional staff and the resource of curriculum and standards.

The results indicated that the characteristics perceived by K-12 administrators as necessary for implementing a change to CBE ranged from moderately important to extremely important. The greatest identified characteristic was collaborative. Several open-ended responses included "leadership development," "shared leadership" and "warm demeanor."

There are several limitations to this study. Two of the limitations are trust and developing and maintain a mutually constructive relationship that is characterized by caring, respectfulness, and equality of voice.

It is recommended that a future qualitative study be concluded to expand the results of this study and include the additional schools that made the transition to CBE since this study began.

Change is occurring within K-12 schools across the nation as they transition to competency-based education (CBE). According to Freeland Fisher and Arnett (2017), “Driving innovation will require more than simply modifying school performance goals or tweaking the tools used to drive school improvement” (p. 2).

## Conclusions

As superintendents transition their schools to competency-based education, they should take it slow, seek guidance from fellow colleagues and organizations, and be prepared to face challenges and setbacks along the way. According to Colby (2017), “The transformation of schools and districts to CBE requires strong leadership.” (p.13). One of the researchers in this study is transitioning his district to competency-based education and therefore can relate to the findings of this study

through first-hand experience of the shift from traditional based education.

Based on the results of this study, superintendents should transition their districts and schools from traditional based education to CBE for three reasons. First and foremost, we are struggling to meet the needs of our students. Second, student achievement is low in our schools. Finally, we must prepare our students for their future in time, space, and pace, and not the future we prepared for when we were students. CBE is the future of education. It is our moral imperative to be bold and fearless in the pursuit of competency-based education as we strive to incorporate social emotional learning and reduce the gap between underserved and gifted and talented students.

We recommend that future researchers consider qualitative studies to expand on our results and include additional schools that have made the transition since the conclusion of this study. Several limitations impacted this study.

The number of surveys collected during this study may have impacted the accuracy and ability to generalize the results. Additionally, the schools and districts identified may not represent all of the schools and districts that have previously made the transition nor those that were making the transition to CBE during the course of the study.



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