COMPETENCY-BASED EDUCATION SYSTEMS

A Guide to Implementation

Abstract

The successful implementation of competency-based education systems can be described in three sequential phases:
EXPLORE. DESIGN. LAUNCH.

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Context

The Oklahoma Public School Resource Center (OPSRC) wrote an implementation guide for schools that may choose to adopt competency-based education systems.

After reviewing several articles and books on the subject, OPSRC synthesized some of the most relevant resources concerning school design to create a three-phased implementation process.
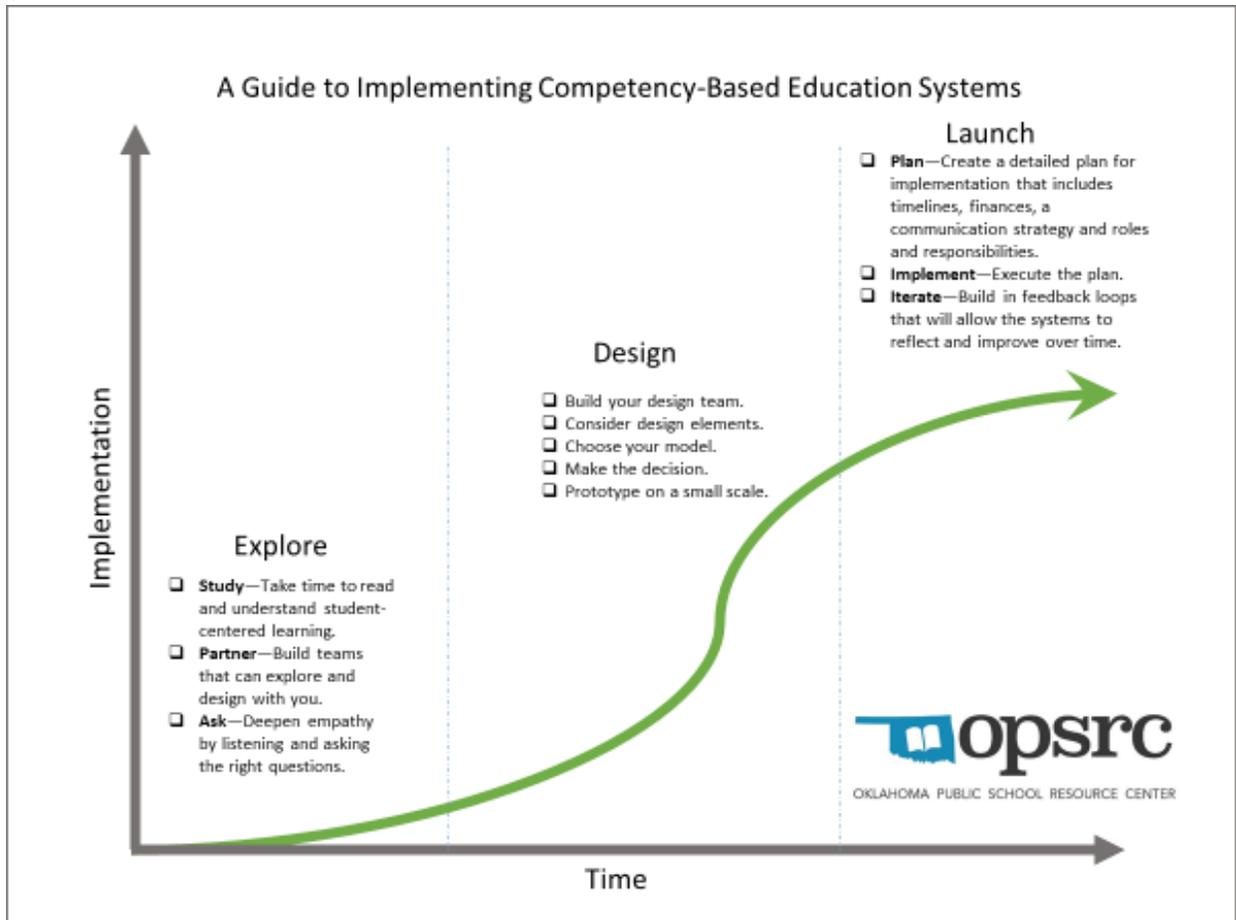
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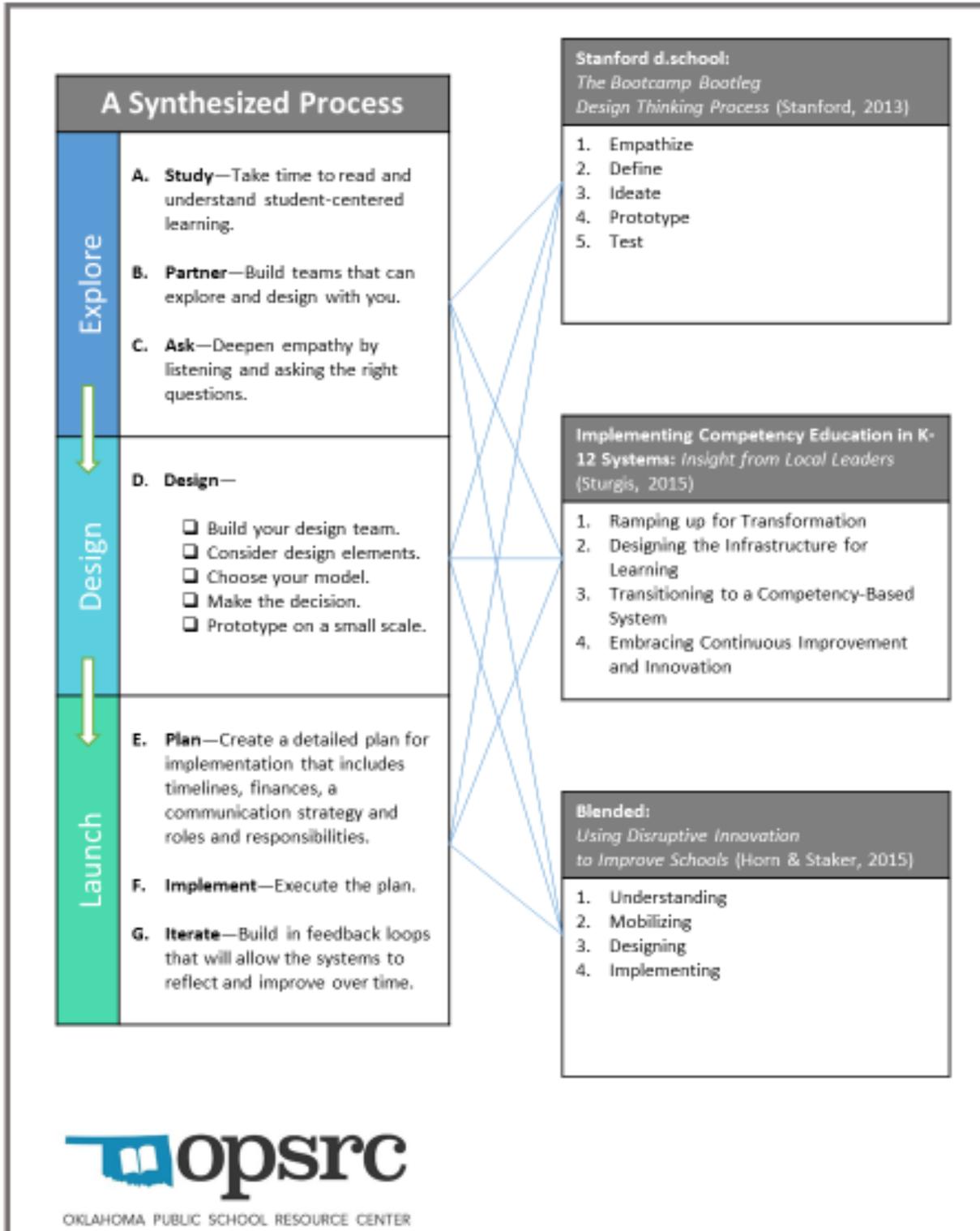
1 Executive Summary

We believe the successful implementation of competency-based education (CBE) systems can be described in three phases:

- first, an **exploration and discovery phase,** when leaders and small teams take time to read, discuss and ask several questions;

- followed by the **design phase,** when questions identify and clarify problems, when brief statements can describe potential solutions and when teams try out ideas on a small scale;

- and finally the **launch phase,** when teams form detailed plans, execute them and build feedback loops to reflect and improve over time.

This guide synthesizes and borrows heavily from three distinct processes to inform the adoption of competency-based education systems.

- The Stanford d.school (Hasso Plattner Institute of Design at Stanford) has published a document called "The Bootcamp Bootleg" (Stanford, 2013) that outlines a framework and sequence for what they describe as a human-centered design process.

- Chris Sturgis of CompetencyWorks has written an 80-page guide on implementing CBE systems called "Implementing Competency Education in K-12 Systems: Insights from Local Leaders" (Sturgis, 2015). Sturgis takes five years of visits and interviews with education leaders and combines them into advice on the adoption of CBE.

- Michael B. Horn and Heather Staker of the Clay Christensen Institute for Disruptive Innovation wrote an entire book on the adoption of student-centered education called *Blended: Using Disruptive Innovation to Improve Schools* (Horn & Staker, 2015). Filled with links to videos and examples, the book can be used as an informative exploration of student-centered learning, personalized learning, competency-based learning and blended learning, all of which they define and describe in detail.

All three processes are described in detail later in the guide.

A Synthesized Process

Explore

A. **Study**—Take time to read and understand student-centered learning.

B. **Partner**—Build teams that can explore and design with you.

C. **Ask**—Deepen empathy by listening and asking the right questions.

Design

D. **Design**—
- ❑ Build your design team.
- ❑ Consider design elements.
- ❑ Choose your model.
- ❑ Make the decision.
- ❑ Prototype on a small scale.

Launch

E. **Plan**—Create a detailed plan for implementation that includes timelines, finances, a communication strategy and roles and responsibilities.

F. **Implement**—Execute the plan.

G. **Iterate**—Build in feedback loops that will allow the systems to reflect and improve over time.

Stanford d.school:
The Bootcamp Bootleg
Design Thinking Process (Stanford, 2013)

1. Empathize
2. Define
3. Ideate
4. Prototype
5. Test

Implementing Competency Education in K-12 Systems: *Insight from Local Leaders* (Sturgis, 2015)

1. Ramping up for Transformation
2. Designing the Infrastructure for Learning
3. Transitioning to a Competency-Based System
4. Embracing Continuous Improvement and Innovation

Blended:
Using Disruptive Innovation to Improve Schools (Horn & Staker, 2015)

1. Understanding
2. Mobilizing
3. Designing
4. Implementing

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2 What is Competency-Based Education?

A group composed of educators, government leaders, parents and nonprofits in Oklahoma adopted the following definition in the Spring of 2016:

> *Competency-Based Education (or mastery learning) allows students to progress through a class(es) or course(s) of study to demonstrate mastery of knowledge and skills regardless of time, place or pace of learning. This model moves students away from the current time-based system to a mastery-based system allowing for more personalized and differentiated learning experiences.*

For the purposes of this guide, we used the Oklahoma definition. However, three more definitions exist that we have found instructive.

The National Governors Association Center for Best Practices explained CBE in this way:
"In the traditional model of education, student advancement is closely tied to time spent in a classroom where all students are typically taught as a group and expected to move ahead at more or less the same pace. In contrast, a model based on CBE starts by assessing what a student knows and then allows that student to advance at a pace that reflects his or her knowledge and skills. In the process, CBE encourages student success by providing targeted learning support, thereby creating a more personalized educational experience." (Laine, R. et. al., 2015)

Similarly, in their book *Blended: Using Disruptive Innovation to Improve Schools* (2015), Michael B. Horn and Heather Staker define competency-based learning as:
"…the idea that students must demonstrate mastery of a given subject…before moving on to the next one. Students don't move on from a concept based on the average pace of the class or within a preset, fixed amount of time." (Horn & Staker, 2015, p. 9)

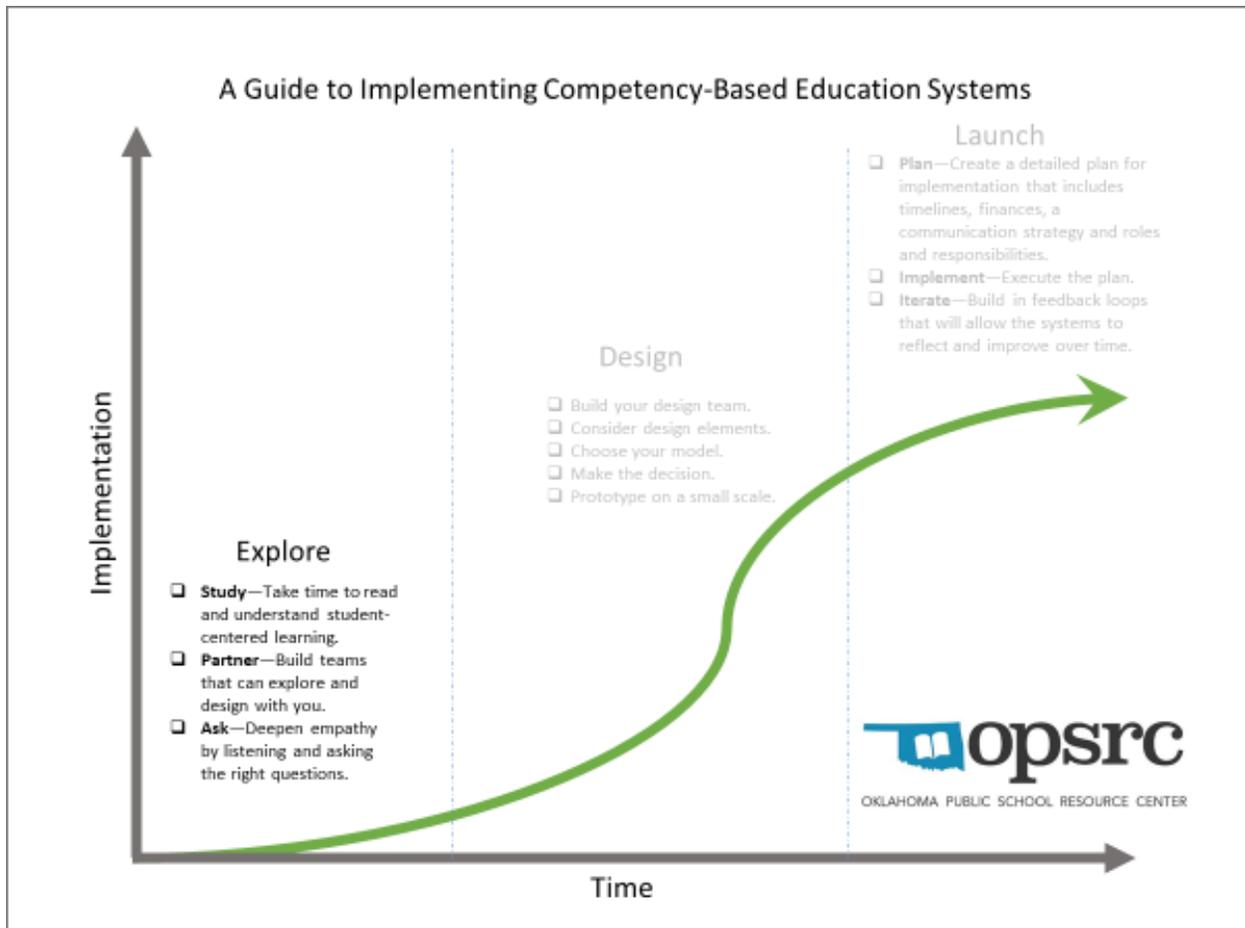| In her paper, "Implementing Competency Education in K-12 Systems: Insights from Local Leaders" (2015), Chris Sturgis of CompetencyWorks defines competency education as having five parts: |
| --- |
| *"The five-part working definition of competency education describes the elements that need to be put into place to re-engineer the education system to reliably produce student learning:*

• *Students advance upon demonstrated mastery;*
• *Competencies include explicit, measurable, transferable learning objectives that empower students;*
• *Assessment is a meaningful and positive learning experience for students;*
• *Students receive timely, differentiated support based on their individual learning needs; and*
• *Learning outcomes emphasize competencies that include application and creation of knowledge, along with the development of important skills and dispositions.*

(Sturgis, 2015, p. 8) |

3 Implementation in Three Phases

3.1 Explore—During the Exploration phase, leaders form a team to study the possibilities of competency-based education systems, and they ask deep questions of those who may be most affected by this change.

During the Exploration phase you:

☐ **Study**
☐ **Partner**
☐ **Ask**

A Guide to Implementing Competency-Based Education Systems

Launch

☐ Plan—Create a detailed plan for implementation that includes timelines, finances, a communication strategy and roles and responsibilities.
☐ Implement—Execute the plan.
☐ Iterate—Build in feedback loops that will allow the systems to reflect and improve over time.

Design

☐ Build your design team.
☐ Consider design elements.
☐ Choose your model.
☐ Make the decision.
☐ Prototype on a small scale.

Explore

☐ Study—Take time to read and understand student-centered learning.
☐ Partner—Build teams that can explore and design with you.
☐ Ask—Deepen empathy by listening and asking the right questions.

Implementation

Time

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STUDY—When considering the adoption of competency-based education systems or any educational model that may differ from the current model, you might consider creating a **reading** list, **visiting** other schools and **discussing** what you read and see with others.

1. *Look before you launch.* As *Blended* (Horn & Staker, 2015) clearly delineates, competency-based learning and personalized learning are equal parts to student-centered learning. The authors claim that the current model for education, the factory-based model (their words, not ours), has not changed for a hundred years; thus, they would suggest adopting a student-centered model of education. Student-centered systems of education are drastically different than the factory-based model, and successful implementation could require a significant degree of transformation. Therefore, before you move, you should read, seek and listen.

2. *Read intentionally.* When you develop your reading list, we recommend that you read for the big picture, the small picture and in between. Plan your reading list in advance, find a small group to read with you and create a schedule of discussion meetings. This will provide accountability to you and your team ensuring you stay on task and complete your exploration phase in a timely manner. Specific recommendations to include in your list are cited below.

3. *Write your reflections.* Writing and journaling are ways to intentionally remember and reflect on what you have read and discussed. In short, keep a journal.

4. *Visit other places.* Take this opportunity to see for yourself what others are doing. Several schools in Oklahoma have begun adopting student-centered learning, blended learning, personalized learning, competency-based learning or some combination thereof. Find them and go observe.

5. *Designate time and space for discussion.* Schedule dates, times and places to discuss both reading and site visits before you begin your journey. This will provide you with some semblance of accountability and will allow others to provoke your best thinking.

Three Strong Recommendations: These three sources are the foundation for this implementation guide.

- ☐ Horn, M. B., & Staker, H. (2015). *Blended: Using Disruptive Innovation to Improve Schools*. San Francisco, CA: Jossey-Bass.

- ☐ Sturgis, C. (2015, June). *Implementing Competency Education in K-12 Systems: Insights from Local Leaders.* Retrieved May 05, 2016, from http://www.competencyworks.org/resources/briefing-papers/.

- ☐ *The Bootcamp Bootleg.* (2013, October). Retrieved May 05, 2016, from http://dschool.stanford.edu/use-our-methods/. A publication of the Hasso Plattner Institute of Design at Stanford. Used under the Creative Commons license found here: http://creativecommons.org/licenses/by-nc-sa/3.0/.

The Big Picture List: Here is a list of recommended books that will support your exploration of student-centered learning from both general and inspirational contexts.

☐ Duckworth, A. (2016). *Grit: The power of passion and perseverance*. New York, NY: Scribner.

☐ Dweck, C. S. (2006). *Mindset: The new psychology of success.* New York: Random House.

☐ Gladwell, M. (2000). *The tipping point: How little things can make a big difference.* Boston: Little, Brown.

☐ Heath, Chip, and Dan Heath. *Switch: How to Change Things When Change Is Hard*. New York: Broadway, 2010. Print.

☐ Isaacson, W. (2011). *Steve Jobs.* New York: Simon & Schuster.

☐ Montessori, Maria. *The Absorbent Mind*. New York: Holt, Rinehart and Winston, 1967. Print.

☐ Pink, D. H. (2009). *Drive: The surprising truth about what motivates us.* New York, NY: Riverhead Books.

☐ Tough, P. (2012). *How children succeed: Grit, curiosity, and the hidden power of character.* New York, NY: Houghton Mifflin Harcourt.

☐ Wagner, Tony, and Robert A. Compton. *Creating Innovators: The Making of Young People Who Will Change the World*. New York: Scribner, 2012. Print.

The Small Picture List: This list of articles will help you think about the details or nuances of competency-based learning.

☐ *Blended Instruction: Measuring the Impact of Technology-Enhanced, Student-Centered Learning on the Achievement, Academic Engagement, and Skills Acquisition of Underserved Students.* EDUCATION CONNECTION, 2014.

☐ *An Up-Close Look at Student-Centered Math Teaching: A Study of Highly Regarded High School Teachers and Their Students*. The American Institutes of Research, 2014.

☐ *Student-Centered Schools: Closing the Opportunity Gap*. Stanford Center for Opportunity Policy in Education, 2014.

The In-between List: This list of books and articles focuses on the matter between big picture and small picture. They may help you and your team to begin connecting the dots.

☐ Buffum, Austin G., Mike Mattos, and Chris Weber. *Pyramid Response to Intervention: RTI, Professional Learning Communities, and How to Respond When Kids Don't Learn*. Bloomington, IN: Solution Tree, 2009. Print.

☐ Schwahn, Charles J., and Beatrice McGarvey. *Inevitable: Mass Customized Learning - Learning in the Age of Empowerment*. Lexington, KY: Chuck Schwahn & Bea McGarvey, 2011. Print.

☐ Elmore, R. F. (2000). *Building a new structure for school leadership.* Washington, DC: Alberta Shanker Institute.

☐ Snow, Dennis. *Lessons from the Mouse: A Guide for Applying Disney World's Secrets of Success to Your Organization, Your Career, and Your Life*. Sanford, FL: DC, 2009. Print.

PARTNER—Build teams that can explore and design *with* you. You will **not** activate all of the teams during this phase, but you should be looking to create a pool of names and stakeholders you may want to include later in the process.

6. *Exploration Team*—These teams are small, honest and thoughtful. They will help you ask the right questions, keep open minds and thoughtfully consider possibilities.

7. *Design Team*—Horn & Staker (2015) describe four kinds of teams:

> - *Functional teams* are best suited to deliver sustaining innovations for problems whose solutions do not require coordination with other teaching groups or departments (p. 121).
>
> - *Lightweight teams* suit situations in which more than one group must work together to solve a problem, but in which interdependencies between the groups are predictable (p. 123).
>
> - *Heavyweight teams* are led by a manager with significant clout and can be formed by choosing experts from different parts of the school community. The most important rule for this team is to leave behind departmental interests and instead work collectively to meet the project's goal (p. 124).
>
> - *Autonomous teams* are best suited for disruptive innovations that may replace the traditional classroom. They have the freedom to rebuild budgets, staffing plans, facilities designs and curriculum from the ground up (p. 126).

8. *Launch Team*—This team leads the implementation of the design. The Launch Team will need to clearly communicate with stakeholders, seek and procure necessary financial resources and provide appropriate training and professional development. We recommend choosing, at a minimum, a board member, a parent, school leadership and teacher leadership.

ASK—Deepen empathy with those who may be most affected by the change.

9. *Students know best.* Before Ken Grover (a respected leader in the field of school design) started Innovations Early College Mid-High School in Salt Lake City, he asked students three basic questions:
   - What do you like about school?
   - What do you not like about school?
   - If you could change anything in the school, what would you do differently?

10. *Teachers matter.* Ken Grover says teachers who connect with students personally and demonstrate compassion are often the best teachers for student-centered learning. Competency-based systems require that teachers know their students individually. Ask teachers about why they teach, how they connect and seek to understand their goals and desires.

11. *Go deeper, share the experience.* Find ways to experience what students experience and to do what teachers do. This will deepen your empathy and will ultimately help you understand them.

> The Stanford d.school Bootcamp Bootleg states you should definitely do these three things:
>
> - *Observe the user's context and behavior.*
> - *Engage, interact and interview the user.*
> - *Immerse yourself in the user's experience.*

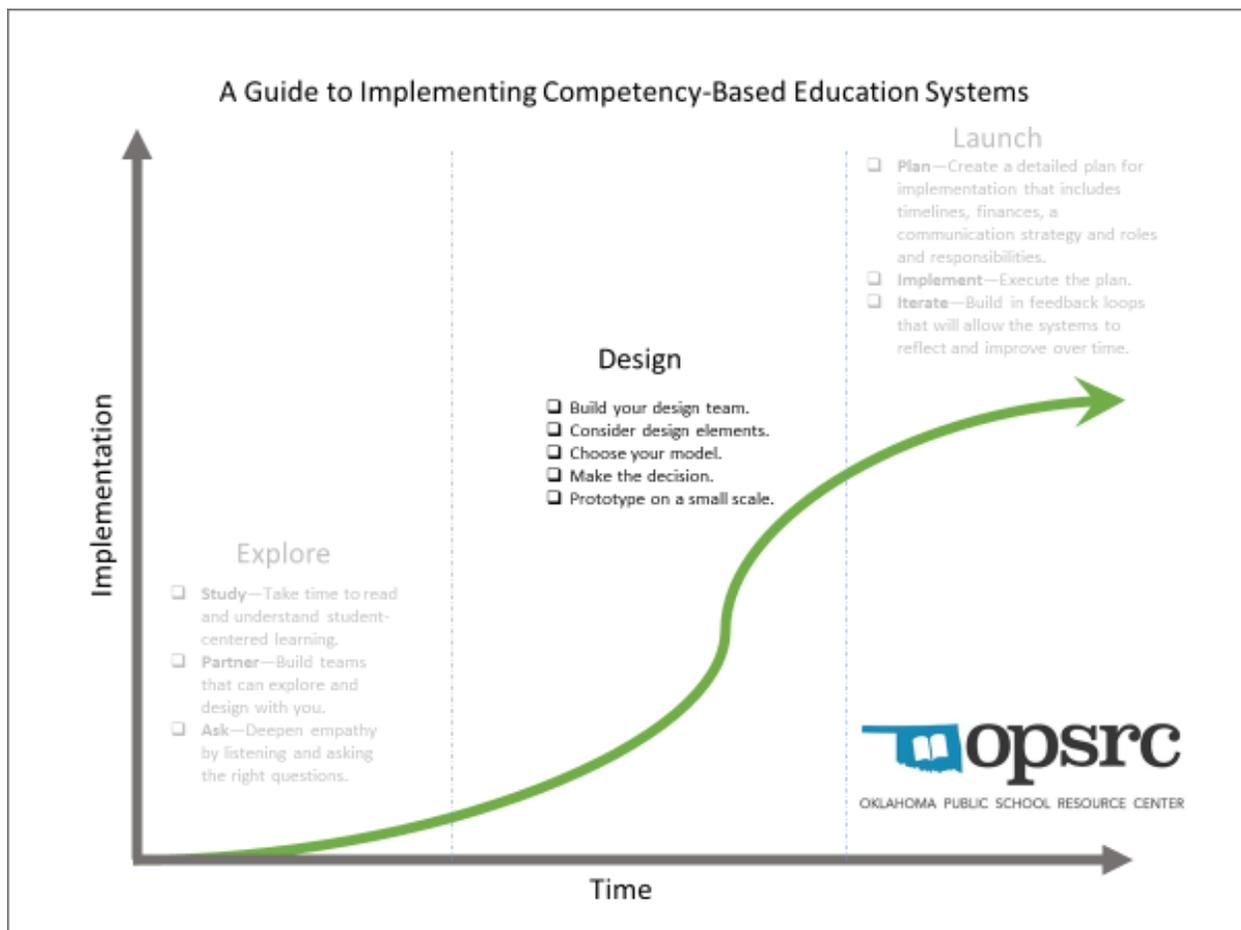12. *Reflect.* Take time to read your journal, revisit resonant texts and conversations. Know your people and as Horn and Staker (2015) state,

> "*Leaders do not need to know what model of blended learning they want to deploy or what the design of the program will be at this point. But they do need to have a sense of the scope of change that they want to realize*" (Horn & Staker, 2015, p. 132).

3.2 Design—The second phase of this process should be approached with a design team.

During the Design Phase you:

- ☐ **Build your design team.**
- ☐ **Consider these design elements.**
- ☐ **Choose your model.**
- ☐ **Make the decision.**
- ☐ **Prototype on a small scale.**

A Guide to Implementing Competency-Based Education Systems

Launch
- ☐ Plan—Create a detailed plan for implementation that includes timelines, finances, a communication strategy and roles and responsibilities.
- ☐ Implement—Execute the plan.
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- ☐ Build your design team.
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- ☐ Study—Take time to read and understand student-centered learning.
- ☐ Partner—Build teams that can explore and design with you.
- ☐ Ask—Deepen empathy by listening and asking the right questions.

Implementation

Time

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BUILD YOUR DESIGN TEAM. Since you know the scope of change you want to see, choose the appropriate type of team, then find the right people to participate on the design team. It is not expected that you employ multiple teams. One carefully selected team is often more effective than three large inclusive teams.

CONSIDER THESE DESIGN ELEMENTS.

The Education Program

1. *Curriculum and Standards*—When considering a transition to a competency-based education system, it is critical to understand what students are expected to know and what they are expected to be able to do. Ensuring that curriculum is vertically aligned in a continuum is essential, since students may be completing curriculum above or below their traditionally-assigned grade level and may progress faster or slower than in the typical time-based system. For competency-based systems, vertical alignment is more important that determining how quickly students should pace through the curriculum. *What should students know and be able to do, and in what sequence should they master skills and concepts?*

2. *Assessment*—Describing how and when students will be assessed is critical. Knowing that assessment should be meaningful, rigorous and relevant, this component of design is an opportunity to clarify why students are assessed, how they are assessed and when assessment takes place. In other words, *why will you assess students, how will they be assessed and when will you assess them?*

3. *Mastery*—In competency-based education systems, students move on to new topics and courses only when they have demonstrated mastery of their current topic or course. Defining mastery is a critical design component. In other words, *what does it mean to master a topic or course?*

The Role of the Teacher and Others

4. *Instruction*—The role of the teacher and how instruction is delivered are additional critical components of design. Not all competency-based education systems use technology or blended learning. For example, many montessori pre-schools have sets of curriculum housed in drawers through which student progress at their own pace. The teacher then instructs small groups or individual students. Other schools use online learning management systems to deliver curriculum and track content mastery, and the teacher often instructs small groups or individual students, much like many montessori programs. Since students progress at their own pace, *what is the role of the teacher, and how will instruction be delivered? How and when will teachers receive support for this transformation?*

5. *Other Staff*—*How will staff be used to facilitate student learning in a safe, healthy and productive learning environment?*

Time.

6. *Pacing*—If individual students progress only when ready, then it can be assumed that students will progress at different rates. *What happens when students do or do not progress?*

7. *Yearly, Quarterly, Weekly and Daily Schedules*—When will school be in session, and what will a typical day and week look like for students, families, teachers and staff? When will students control their time, and how will teachers structure their time?

   Time is the most precious resource you possess since it moves at a constant rate, and you can choose how to spend it.

Space.

8. There are several companies specializing in classroom furniture designed for blended learning. We would suggest that (at least in the beginning) you focus less on furniture and more on the actual spaces you will need to implement a competency-based system. This relates directly to what students will be doing and when they will be doing it. *Where will students engage the curriculum, instruction and each other?*

Resources.

9. *Estimate of Needs*—What materials and tools will you need to make this change? How many personnel would you need to launch and sustain this change?

10. *Cost*—How much will it cost over time? Will there be any cost-savings?

Governing Board Policies.

11. Public schools considering the adoption of competency-based education systems are advised to revisit local board policies. Policies may exist that should be amended or created before the new system is fully implemented. For example, the local board may need to apply for attendance mandates to be counted in hours rather than days. *What board policies should be amended or created to ensure that students and schools can effectively and efficiently implement a new system?*

Connection with Out-of-School Time Programs.

12. Consider how the implementation of competency-based education systems may integrate out-of-school time programs with the general education curriculum. Research has demonstrated that quality out-of-school time programs can boost student academic success. A helpful article might be the 2014 article, "Building Bridges: Connecting Out-of-School Time to Classroom Success Among School-Age Black Males in the District of Columbia" (Toldson & Manekin, 2014). *How can the adoption of competency-based education systems connect out-of-school time programs with the general education curriculum?*

CHOOSE YOUR MODEL. We suggest you adopt an already-existing model rather than creating your own from scratch. At the same time, you will need to adjust any model to meet the unique needs of your school and community.

Here we will borrow directly from *Blended* (Horn & Staker, 2015) that outlines four models from which to choose. Of course, there are other models that are worth investigating, but for the purpose of this guide, we will not describe all of the possible models. Instead, we will simply and briefly describe the four models of blended learning that Horn and Staker (2015) detailed in their book.

- **Rotation Model** is a course or subject in which students rotate on a fixed schedule or at the teacher's discretion between modalities, at least one of which is online learning (p. 55).

- **Flex Model** is a course or subject in which online learning is the backbone of student learning, even if it directs students to offline activities at times (p. 56).

- **À La Carte Model** is a course that a student takes entirely online to accompany other experiences that the student is having at a brick-and-mortar school or learning center (p. 57).

- **Enriched Virtual Model** is a course or subject in which students have required face-to-face learning sessions with their teacher of record and then are free to complete their remaining coursework remotely from the face-to-face teacher (p. 57).

MAKE THE DECISION. This is the point when you decide whether or not to implement the new system your team has designed. *Will you implement a competency-based education system or not?*

PROTOTYPE ON A SMALL SCALE. We suggest that after choosing a model, prototype the idea on a small scale for a brief time. This will allow you to physically interact with the potential adoption before taking the leap to full implementation. For example, you might choose to enlist a small group of students and one or two teachers for a week-long experience. Interview them. Spend time with them, and identify potential pitfalls. Then apply what you have learned when you launch on a larger scale.

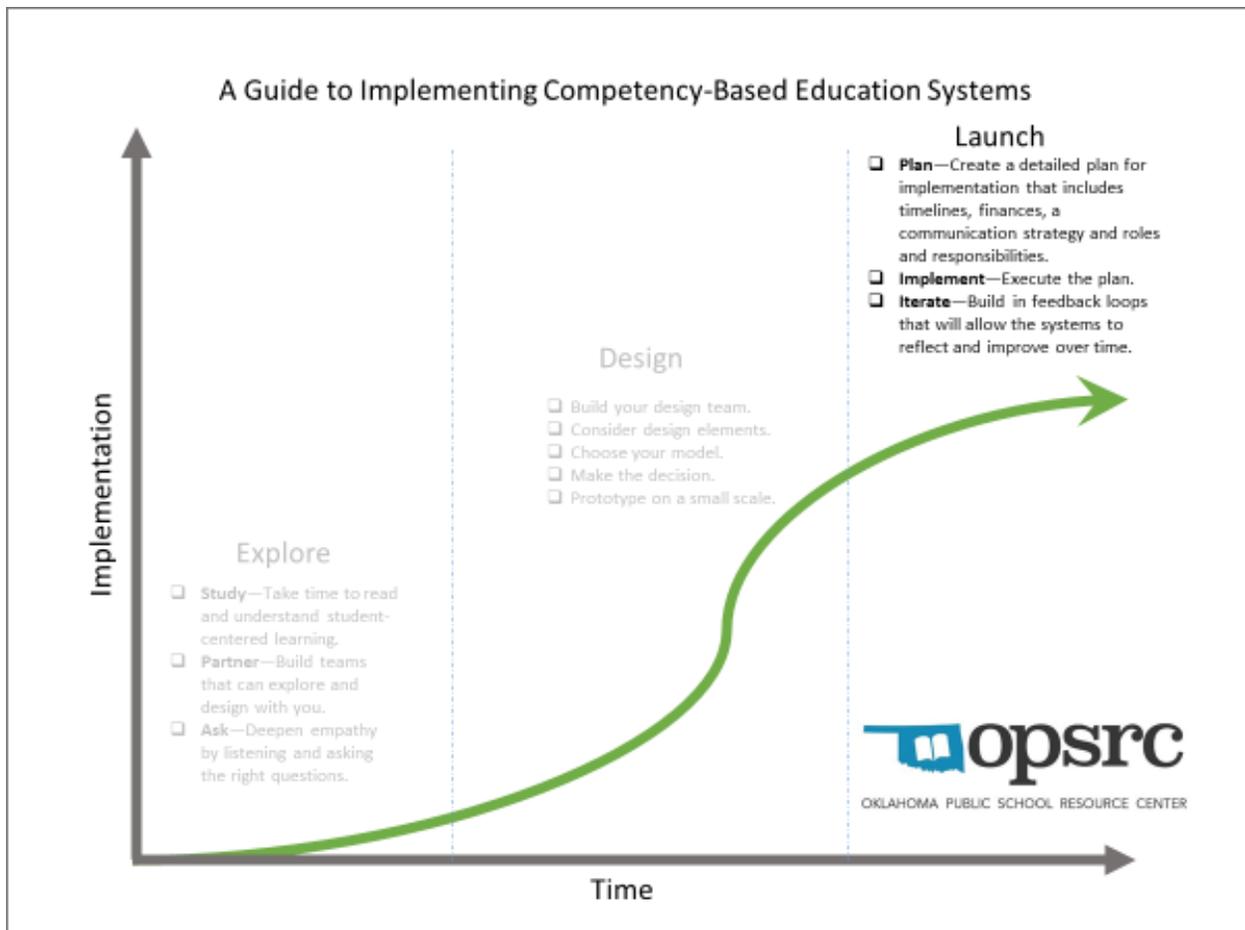## 3.3 Launch—During this phase, you act on your designs.

During the Launch phase you:

☐ **Plan**
☐ **Implement**
☐ **Iterate**

PLAN. Create a detailed plan for implementation that includes timelines, finances, a communication strategy and roles and responsibilities.

IMPLEMENT. Execute the plan.

ITERATE. Build in feedback loops that will allow the systems to reflect and improve over time.

A Guide to Implementing Competency-Based Education Systems

Launch
☐ **Plan**—Create a detailed plan for implementation that includes timelines, finances, a communication strategy and roles and responsibilities.
☐ **Implement**—Execute the plan.
☐ **Iterate**—Build in feedback loops that will allow the systems to reflect and improve over time.

Design
☐ Build your design team.
☐ Consider design elements.
☐ Choose your model.
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☐ Prototype on a small scale.

Explore
☐ **Study**—Take time to read and understand student-centered learning.
☐ **Partner**—Build teams that can explore and design with you.
☐ **Ask**—Deepen empathy by listening and asking the right questions.

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Implementation (vertical axis) / *Time* (horizontal axis)

4 Summary of Three Guides for Design and Implementation

- Stanford d.school: The Bootcamp Bootleg (Stanford, 2013)

- Implementing Competency Education in K-12 Systems: Insights from Local Leaders (Sturgis, 2015)

- Blended: Using Disruptive Innovation to Improve Schools (Horn & Staker, 2015)

4.1 Stanford d.school: The Bootcamp Bootleg (2013)

The Bootcamp Bootleg is a working document published through the Hasso Plattner Institute of Design at Stanford (also known as the d.school) that describes the Stanford Design Thinking Process. This process can be used for numerous problems that apply to several different kinds of stakeholders and industries. In other words, the Stanford Design Thinking Process applies to adopting competency-based education as well as many other non-education-related topics. Therefore, the process described below is more general than the two other processes summarized in this paper.

The Stanford Design Thinking Process follows five sequential "modes" that all build on a human-centered approach grounded in empathy.

1. *Empathize*—The Bootcamp Bootleg states that "as a human-centered designer you need to understand the people for whom you are designing…you must build empathy for who they are and what is important to them" (Stanford, 2013). During this mode of the design process, a human-centered designer does three things:

   - *Observe the user's context and behavior.*
   - *Engage the user, interact and interview him or her.*
   - *Immerse yourself in the user experience.*

2. *Define*—After you have immersed yourself in the user's experience, you analyze and synthesize your "empathy findings" to accomplish two goals:

   - *Develop a deep understanding of your users and the design space.*
   - *Write an actionable problem statement: your point of view (POV).*

   The designer's POV should provide focus and frame the problem but also fuel the design team's development of solution concepts that guide your innovation efforts.

3. *Ideate*—More focused than a typical brainstorming session, the ideation mode aims to "explore a wide solution space—both a large quantity of ideas and a diversity among those ideas" (Stanford, 2013). The Bootcamp Bootleg continues to advise design teams to be cognizant and differentiate between generating ideas and evaluating them. During this mode, you are searching for solutions that are unexpected and not altogether obvious.

4. *Prototype*—This mode takes your design team's ideas "out of your head and into the physical world" (Stanford, 2013). Here, ideas are implemented on a smaller scale with the intended purpose of working out the kinks discovered by physically interacting with the idea. Failure is expected and valued because it will help you correct issues before scaling the idea.

5. *Test*—Similar to the last stages described by Sturgis and Horn, the test mode is intended to be cyclical and iterative and designed to make the idea better as you react to how it is being implemented. The d.school recommends to "prototype as if you know you are right, but test as if you know you're wrong."

4.2 Implementing Competency Education in K-12 Systems: Insight from Local Leaders (Sturgis, 2015)

Chris Sturgis is a co-founder and leader of *CompetencyWorks*, a project of the International Association for K-12 Online Learning (iNACOL). She wrote and published an 80-page guide to the implementation of competency-based education (CBE) in June of 2015.

After visiting and studying dozens of districts that have begun implementing CBE over the last five years, Sturgis proposes four stages for implementation:

1. *Ramping Up for Transformation*—During this beginning stage, leaders invest in shared leadership, ask lots of questions and create a shared vision for the district.
2. *Designing the Infrastructure for Learning*—After distributing leadership, the school district then clarifies common pedagogical questions about time, path, pace and place while investing in student agency and reviewing local policies that might need be to amended or changed. Additionally, a central question asked here is how this adaptation might empower teachers.
3. *Transitioning to a Competency-Based System*—Leadership develops a roll-out strategy, prepares teachers and parents for personalized classrooms and builds an iterative structure that can adjust for mid-course corrections. Strategic communication and planning are key elements to this stage.
4. *Embracing Continuous Improvement and Innovation*—The last phase does not end. Rather, it is a cyclical inquisitive stage that should provide space and structure to continually improve performance and personalization through the use of "powerful data." Teams can revisit the shared vision and instructional model and use feedback loops from those closest to the students to accelerate progress and maintain course (Sturgis, 2015).

In her conclusion, Sturgis reminds us that "this journey requires a shift in paradigm from a system-centered approach to one that is learner-centered."

4.3 Blended: Using Disruptive Innovation to Improve Schools (Horn & Staker, 2015)

In their book about blended learning, Horn and Staker of the Clay Christensen Institute for Disruptive Innovation describe *student-centered learning* as having two components: *personalized learning* and *competency-based learning*. By personalized learning, Horn and Staker mean that learning is tailored to the individual, and by competency-based learning, they mean that students only move to the next subject when they have demonstrated mastery of the current subject. These two components are both required to achieve a model that is student-centered, claim Horn and Staker, and the engine the makes personalized and competency-based learning possible, or at least more feasible, is blended learning. As they put it, blended learning enables school systems to implement student-centered learning at scale.

Similar to Sturgis and her four-stage process for the adoption of competency-based systems, Horn and Staker's 300-page thesis suggests four-stages for the adoption of blended learning:

1. *Understanding*—Before adopting blended learning or any systemic change, it is incumbent on the leaders to understand exactly what they are attempting to adopt and why they are adopting it. For example, Horn and Staker clearly define blended learning as,
   > "*a formal education program in which a student learns at least in part through online learning with some element of student control over time, place, path, and/or pace and least in part at a supervised brick-and-mortar location away from hom.*" (Horn & Staker, 2015, p. 53).
   Understand that blended learning exists on a spectrum from a Rotation Model to an Enriched Virtual Model and that there are several ways to invest in models that increase student autonomy to varying degrees. Before moving on to mobilizing others towards this change, it is critical that leaders understand the lexicon of student-centered learning to effectively communicate with those they lead.

2. *Mobilizing*—Once leaders understand the complexity and variations of blended learning, it is time to get local. Consider what are the needs and opportunities for your own geography, and state the goal of the initiative as it relates to a well-defined problem statement. Horn and Staker encourage leaders to not mistake technology for effective change but to view technological enhancements and adaptations as augmentative tools school systems can use to take advantage of opportunities that already exist in the traditional system.

   Of course to enact systemic change effectively, leaders need teams. In addition to all the technical considerations involved when adopting blended learning, there are human considerations. What type of teams should leaders use, what should they do and how should they accomplish their work? Here Horn and Staker describe Functional, Lightweight, Heavyweight, and Autonomous teams and when to use them.

   Most importantly Horn and Staker advise that,
   > "*Leaders do not need to know what model of blended learning they want to deploy or what the design of the program will be at this point. But they do need to have a sense of the scope of change that they want to realize*" (Horn & Staker, 2015, p. 132).

3. *Designing*—This phase is designed to create empathy with those most affected by the change--students and teachers--and to account for their needs and strengths when considering infrastructural technical decisions, like what kind of online content your systems will adopt. Horn and Staker suggest starting with students and elevating teachers before designing the virtual and physical setup. Finally, choose the model your system will implement and clarify the roles of teacher, student, technological interfaces and physical space.

   Horn and Staker suggest leaders consider asking themselves six design questions when approaching this phase:

   - *What is the problem you are trying to solve?*
   - *What type of team do you need to solve the problem?*
   - *What do you want students to control?*
   - *What do you want the primary role of the teacher to be?*
   - *What physical space can you use?*
   - *How many internet-enabled devices are available* (Horn & Staker, 2015, p. 240)?

4. *Implementation*—Having developed a strategy and plan for the adoption of blended learning and having engaged students, teachers and several others, the next phase involves actually implementing the change. When implementing, Horn and Staker suggest to first be mindful of the system's culture and its effect on children and schools at large.

   Secondly, it is critical that the system be open to adjustments along the way. Horn and Staker call this openness "Discovery-driven Planning," and it has four steps:

   - *Start with desired outcomes or projections. Have a **SMART** goal (**S**pecific, **M**easurable, **A**ttainable, **R**ealistic, **T**imely).*
   - *List all assumptions that must be proven true for the desired outcomes to materialize.*
   - *Implement a plan to learn more and to test whether the critical assumptions are reasonable.*
   - *At predetermined checkpoints, based on the results from the tests, decide whether to implement the innovation, change the innovation, or shelve it* (Horn & Staker, 2015, p. 278).

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6 About

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Oklahoma Public School Resource Center
Founded in 2013, OPSRC is a nonprofit, 501(c)3 organization that provides service, professional development and resources to Oklahoma's public school districts. Its mission is to empower educators by removing burdensome obstacles and by building practical and innovative supports that will allow students to thrive.