

PLANNING TO CREATE A CULTURE OF CONTINUOUS IMPROVEMENT WITH THE DEPARTMENT OF DEFENSE EDUCATION ACTIVITY

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ABSTRACT

While continuous improvement is not new to education, implementing it with fidelity in various educational contexts remains difficult. This article provides a framework of the necessary components in planning for and implementing continuous improvement, based on current literature in the field of education. Key characteristics for consideration include: (a) purpose-driven; (b) change as a complex process; (c) data-based practices, structures, and systems; (d) relationships for professional collaboration; and, (e) capacity building. Utilizing a qualitative case-study design and aspects of action research, the framework is used to outline efforts of the Department of Defense Education Activity (DoDEA) in becoming a continuous improvement organization. Although implementation of continuous improvement is still in early stages, many lessons have been learned. As education researchers and policy makers continue to wrestle with best practices and strategies for continuous improvement, we encourage further investigation of successful case studies, including the potential of research-practice partnerships.

INTRODUCTION

With the advent of the new millennium, education's new age of accountability was ushered in through reauthorization of the Elementary and Secondary Education Act of 1965 (ESEA) with the No Child Left Behind Act (NCLB) (2001). This act brought about a renewed interest in leadership practices to address important aspects of leading for change and improvement in schools. The

emphasis on school leadership, as an agent for change, continued with a 2015 reauthorization of ESEA, named Every Student Succeeds Act (ESSA), which clarified the purpose of teacher collaboration and identified approaches to widely dispersed leadership (Peurach, 2016). Amidst this political environment, scholars have called for more attention to research-practice partnerships, recognizing “expanding the role of research in improving educational practice” (Coburn & Penuel, 2016, p. 48).

The Department of Defense Education Activity (DoDEA), though exempted from the mandates of NCLB and subsequent reauthorizations, strives to improve teaching and learning and has actively engaged in system-wide change and improvement efforts that draw on established best practice (Brady, 2014, 2017; DoDEA, 2011). DoDEA operates accredited primary and secondary schools worldwide for the families of active duty military and Department of Defense civilian employees with locations spanning to 11 countries in Europe and Asia, as well as 7 states, Guam, and Puerto Rico (DoDEA, 2018a). As a result of its global reach and ability to self-select best practices (without external mandate), DoDEA serves as a unique example of planning and structures for improvement with implications for comparison to other U.S. public schools, independent schools, and international schools. In fact, DoDEA regularly partners with local education agencies and has sponsored programs in approximately 3,000 non-DoDEA schools across 35 states over the last 10 years (Dailey-Perkins & Fulce, 2017). The research question for consideration is: What are the characteristics of effective planning and implementation of continuous school improvement?

CONSIDERATIONS FOR CONTINUOUS IMPROVEMENT PLANNING

In 1999, Stigler and Hiebert’s book, *The Teaching Gap*, reported on findings of an international comparative study, placing it at the forefront of the education leadership literature for continuous improvement. While the concept of continuous improvement originated in the business field as far back as the 1800s (Bhuiyan & Baghel, 2005), a variety of scholars have recently extended the work, allowing the National Association of Secondary School Principals to publish a new report aptly, titled *What the Research Shows* (Valdez, Foster, & Ikemoto, 2019). Drawing from traditions in education and business, experts and theorists have offered valuable insights on effective strategies to drive positive change and improvement in schools. A framework for exploring the case of DoDEA’s improvement planning emerged by drawing from a variety of these leadership theories and practices that focus on change and improvement. Prevalent themes from these experts include: (a) purpose-driven; (b) change as a continuous and complex process; (c) data-based practices, structures, and systems; (d) relationships for professional collaboration; and (e) capacity building.

Purpose-Driven

Successful schools across the globe are purpose-driven, focusing on providing a high standard of learning for students. Stigler and Hiebert’s (1999) “six principles for gradual, measurable improvement” (p. 131) included the principle to “maintain a constant focus on student learning goals” (p. 132). Likewise, Dufour and colleagues’ (2006) Big Ideas of Professional Learning Communities (PLCs) explicitly noted, “The purpose of our school is to ensure all students learn at high levels” (p. 14), which is a focus reiterated by Muhammad (2009) as essential to transforming school culture. The consensus among these experts is clear: the focus and overarching purpose of schools should be student success (Valdez et al., 2019).

Expanding on a student-centered focus, Fullan (2001) identified “moral purpose,” broader in scope than student learning, as one of the five components needed to effect positive change

in schools. He posited the purpose of school is to make a “difference in the lives of children,” and by extension, society as a whole. Moral purpose requires leaders to focus on both student learning and how to get there; hence, it includes the broader purpose of treating others (specifically teachers) fairly, because leaders can make a positive difference in the lives of teachers and school staff (Fullan, 2001, p 13). Similarly, Marzano, Waters, and McNulty (2005) discussed a broader focus on purpose that included “crafting a purposeful community,” which they described as “one in which the collective efficacy and capability to develop and use assets to accomplish goals that matter to all community members through agreed-upon processes” (p. 99). They noted the focus of these efforts should be on “work that has a high probability of enhancing student achievement” (Marzano et al., 2005, p. 107).

Change as a Complex Process

Continuous improvement implies continual change, which can be difficult; and experts agree that leaders interested in improvement must understand the complex nature of leading for change. In *Leading in a Culture of Change*, Fullan (2001) noted the change process is so elusive that even experts fail to come to consensus on the most appropriate and efficient way to manage it. According to Fullan, “Management books contain reams of advice, but the advice is often contradictory, general, and at the end of the day confusing and nonactionable” (p. 5). One factor contributing to this complexity is that the nature of change is both contextual and dynamic. Stigler and Hiebert (1999) contended school culture contributed to the uniqueness and complexity of change efforts and suggested a continual, gradual, and incremental approach that responds to the particular context. This approach contrasts to sudden reforms implemented with no consideration for the context and culture of the particular setting (Stigler & Hiebert, 1999). It counters the notion that change can be controlled, in favor of a belief that it can only be understood and managed (Fullan, 2001). Therefore, it is important to refine senior leaders’ understanding and approach to change, balancing complexity, ambiguity, and chaos with creativity, improvement, and clarity. According to Fullan (2001):

All this complexity keeps people on the edge of chaos. It is important to be on that edge because that is where creativity resides, but anarchy lurks there too. Therefore, effective leaders tolerate enough ambiguity to keep the creative juices flowing, but also along the way (once they and the group know enough), they seek coherence. Coherence making is a perennial pursuit. Leadership is difficult in a culture of change because disequilibrium is common (and valuable, provided that patterns of coherence can be fostered). (p. 6)

Understanding the complexity of the change process facilitates a thoughtful and rigorous approach. Park and colleagues (2013) argued that improvement work must be not only iterative and gradual, but thoughtfully planned in a transparent yet rigorous fashion. To that end, leaders should consider the degree of the disruption caused by the change. Marzano and colleagues (2005) described the importance of leaders’ ability to recognize and apply the appropriate skills and strategies. Some instances need “nurture” and “support” (Marzano et al., 2005, p. 115); higher order changes require leaders to act as “the driving force” (p. 118) and to “take a stand” (p. 118).

Data-Driven Practices, Structures, and Systems

While the core theoretical dimensions of continuous improvement include clarifying purpose and understanding the complexity of change, school leaders have sometimes turned to business literature for guidance on data-driven practices, structures, and processes. Recognizing

the need for improvement does not automatically include knowing what actions to take. Forman, Stosich, and Bocala (2017) identified that, while there is evidence to support the ‘why’ of continuous improvement in education, the ‘how’ remains the biggest obstacle.

One of the repeated problems in education involves the introduction of improvement reforms implemented with little support or adaptation to context (Farley-Ripple, May, Karpyn, Tilley, & McDonough, 2018). “That a practice, program, or service *can* work is of little value unless we discern *how to make it work* at scale in the hands of many different individuals working under diverse circumstances” (Bryk, 2009, p. 598). In response to the need to bridge the gap between setting goals and the pragmatic steps to reach those goals, Deming (2000) offered the Plan-Do-Study-Act (PDSA) model and discussed the need to focus on the methods and the system (the how) versus focusing solely on the desired result. He noted that business and education have long track records of setting specific goals, without providing information on how to get there (Deming, 2000).

The heart of continuous improvement processes is the use of data to inform the process of improvement, decision making, and professional practice. In a Carnegie white paper, Park and colleagues (2013) noted the critical role of using data in the improvement process, writing: “Indeed, almost all of the organizations we studied use data to monitor their work” (p. 24). Beyond the simple prescription to “use data,” experts have identified actions around the use of data with detailed processes, structures, and practices. An early proposal for continuous improvement in education was found in Stigler and Hiebert’s (1999) recommendation that schools implement the Japanese practice of Lesson Study in which groups of teachers critique a lesson to improve instruction one lesson at a time. One of the three big ideas of PLCs from DuFour and colleagues (2010) included the use of data to inform instructional practices. They argued that educator collaboration must focus on results by way of student learning and use the results to inform and improve professional practices.

Regardless of the overarching framework, additional processes, models, and protocols exist to support each phase of a data-driven continuous improvement process. However, it is important to identify which practices, structures, and systems will work best in a particular school or school district given the specific needs (Redding, Cannata, & Taylor Haynes, 2017).

Relationships for Professional Collaboration

Organizational improvement is a social process, and strategies for improvement and change must attend to social structures and needs. Fullan (2001) argued relationships are a cornerstone for shared data, purpose, and learning; and good relationships are a requirement for learning organizations:

In the past, if you asked someone in a successful enterprise what caused the success, the answer was “It’s the people.” But that’s only partially true. It is actually the relationships that make the difference. Schools and school districts can get tough about student learning, can use their minds to identify new and better ideas, and can establish strategies and mechanisms of development. But successful strategies always involve relationships, relationships, relationships. (Fullan, 2001, p. 51 & 70)

Specific practices and strategies that support the development of relationships in an organization include interpersonal matters, such as communication, and developing professional collaboration to strengthen engagement and shared responsibility (Park et al., 2013; Peurach, 2016). An example of a specific communication practice is celebration. In writing about the implications

for transforming school culture, Muhammad (2009) stated that meaningful and productive growth is primarily a function of the cohesion of human resources. He observed that one of the common traits among schools with a healthy school culture is celebration of the success among all stakeholders (Muhammad, 2009).

Encouraging professional collaboration to strengthen engagement and shared responsibility involves developing the necessary cultural structures. While describing cases of restructuring for PLCs, Fullan (2001) noted the broad variety of professional relationships and interactions that exist in schools to promote collaboration, support, problem solving, coaching, and fidelity monitoring. Likewise, Marzano and colleagues (2005) organized their findings and conclusions into a five-step plan of action to help school leaders articulate and bring to fruition a powerful vision for enhanced achievement of students, and the first two steps addressed structures around professional relationships. Structures to support teams of committed people with diverse knowledge of curriculum, instruction, and assessment of learning help to build professional collaboration (Thessin, 2015). Since teachers are the main contact point for students, it is crucial they are involved and committed to change efforts (DuFour et al., 2010; Stigler & Hiebert, 1999). Emerging research also highlights the potential value of research-practice partnerships (Coburn & Penuel, 2016; Wentworth, Mazzeo, & Connolly, 2017).

Capacity Building

In order to develop shared purpose, address the complexity of the change and improvement process, implement specific data-driven practices, and collaborate professionally, schools must develop the capacity of the people who make up the organization. Fullan (2001) noted:

It is ironic that school systems are late to the game of knowledge building both for their students and for their teachers. Most schools are not good at knowledge sharing within their own walls, let alone across schools in the same district. . . . School systems, in any case, would be well advised to name knowledge sharing as a core value – to label it explicitly, which they do not now do – and to begin to work on the barriers and procedures to dramatically increase its use. (p. 104-105)

While Fullan (2001) described the characteristics of “knowledge organizations,” Park and colleagues (2013) highlighted the importance of a *learning mindset*. Instilling a culture of continuous learning, a learning mindset within the system, requires building capacity through professional development. This investment must be embedded in day-to-day work to ensure success of the overall approach (Park et al., 2013).

CASE STUDY

This is a qualitative study, drawing on traditions of case study and action research as described by Creswell and Poth (2018) and Patton (2015). In focusing on DoDEA, we applied an instrumental case study design (Creswell & Poth, 2018) to look at planning for continuous improvement within this organization. The authors are part of the Virginia Tech project team, which collaborates with DoDEA toward continuous improvement goals. This collaborative, problem-solving approach is integral to action research (Patton, 2015); and our participation in this process with DoDEA uniquely situated us to provide insights about the case at hand. To assess DoDEA’s planning process and take steps to employ continuous improvement, we analyzed key procedural documents, meeting notes, and personal communications between the two organizations. The

process involved inductive coding and categorization through the constant comparative method (Freeman, 2005).

A Description of the Case of DoDEA

DoDEA serves approximately 72,000 students, with 164 schools worldwide, including a virtual high school program (DoDEA, 2018a). Prior to the implementation of the Community Strategic Plan for school years 2013/14 to 2017/18, DoDEA operated as a system of schools with three distinct regions working somewhat independently. In an effort to improve communication, consistency, and, most importantly, student achievement, DoDEA reinvigorated its efforts to shift to a culture of continuous improvement. Director Brady (2014) described this shift as changing from a system of schools to a school system.

Although DoDEA's planning process for continuous improvement is unique to its context, we can extrapolate insights by examining the approach through the previously identified aspects of effective continuous improvement planning: (a) purpose-driven; (b) a recognition of change as a complex process; (c) utilizing data-based practices, structures, and systems; (d) capitalizing on relationships for professional collaboration; and (e) capacity building.

Honing Purpose-Driven Improvement

DoDEA centered all improvement efforts around student achievement. This focus resonated throughout their planning documents, and explicitly in the community strategic plans (CSPs), most recently framed as a *Blueprint for Continuous Improvement* (DoDEA, 2018b). As described in the Blueprint, the organization's mission is to "educate, engage, and empower each student to succeed in a dynamic world," (DoDEA, 2018b, p. 3). DoDEA's core values also reiterate a student-centered focus: "Students are at the heart of all we do" (DoDEA, 2018b, p. 8). DoDEA has even coined their continuous improvement overhaul as Restructuring for Student Achievement (RSA), which emphasizes that all efforts be directed toward student success (Brady, 2104, 2017).

Since 1995, DoDEA has been using CSPs to coordinate and communicate the organization's vision, mission, goals, and intended outcomes (DoDEA, 2011; Wright, 2002). Each CSP covers a 5-year period and "forms the foundation for all other strategic and operational planning," with an aim to "strengthen organizational accountability and transparency" (DoDEA, 2013, p. 3). Fittingly, DoDEA's current CSP has been named the *Blueprint for Continuous Improvement* (DoDEA, 2018b). While retaining the student-centered focus of the earlier CSP, this updated version hints at progress made as next steps in the change process are made more explicit, specifically with respect to changes to the organization's Vision and Core Values:

- Vision: Excellence in education for every student, every day, everywhere.
- Core Values
 - Student-centered: Students are at the heart of all we do.
 - Excellence: We strive to exceed expectations in all we do.
 - Continuous Improvement: Our organization, its systems, and processes will be continually reexamined and improved.
 - Lifelong Learning: Learning is an active process of discovery where we cultivate curiosity, perseverance, and the desire to learn.
 - Diversity: We honor the uniqueness of each individual and embrace diverse beliefs

and backgrounds. We respect differences and create inclusive environments which contribute to a better society for all.

- Individual Potential: Individuals develop within an environment that nurtures intellectual, social, emotional, physical, and creative growth.
- Shared Responsibility: Partnerships among families, students, staff, and community members are characterized by mutual commitment and collaborative effort that enrich the lives of our students.
- Trust: We value relationships based on integrity, mutual respect, and open two-way communication. We cultivate a safe and risk-free culture that encourages and inspires innovation. (DoDEA, 2018, p. 8)

The Vision statement has been honed to reflect a student-centered focus, whereas the previous iteration focused more on the organization. In addition, the Core Values have been refined and more explicitly defined. These changes reflect DoDEA's flexibility with continuous improvement efforts. Within the Blueprint, each goal is defined by strategic initiatives that are broken into actionable steps referred to as critical success factors. Results are measured through key results indicators, which "are not a single measure, but represent the aggregate results of many smaller actions" (DoDEA, 2018b, p. 5).

Recognizing Change as a Complex Process

In looking at the evolution of DoDEA's strategic plans, the complexity of continuous improvement becomes evident. "The Blueprint will be flexible enough to adjust to changing education and DoD environments and enduring enough to drive DoDEA to fulfill its vision" (DoDEA, 2018b, p. 4). The Blueprint builds upon earlier CSPs, maintaining the structure of five overarching goals: (1) Student Excellence, (2) School Excellence, (3) Talent Excellence, (4) Organizational Excellence, and (5) Outreach Excellence. Rather than maintaining the status quo, though, the Blueprint noted the need to "continuously improve and refine [the] organizational direction" (DoDEA, 2018b, p. 3). This statement illustrates the organization's recognition of the complexity of the process, their readiness to the process, and their desire for transparency to stakeholders in order to enlist the whole system in this process.

Based on leadership priorities, stakeholder needs, and assessment data from previous feedback and assessments, DoDEA modified and adjusted the professional learning environment. The relationship between DoDEA and the Virginia Tech project team helped to support these changes as the organizations act as co-creators of ideas and vision for professional learning to improve instructional leadership. For example, to help ensure fidelity and alignment with the specific needs and priorities of the cooperative agreement with DoDEA, Virginia Tech convened a Leadership Advisory Board (LAB) and facilitated discussions related to professional learning and support for instructional leadership. The two organizations work closely together to develop and refine professional learning experiences, resources, assessments, and evaluation goals. The balance of vision between collaborators can be a challenging process due to conflicting ideas or viewpoints; however, DoDEA welcomes alternative perspectives and utilizes these collaborations to strengthen and refine their processes.

Incorporating Data-Driven Practices, Structures, and Systems

To support continuous improvement, leaders must establish appropriate efforts, practices, structures, and systems. A core element of DoDEA's organizational restructure was the creation of

three Centers for Instructional Leadership (CILs). The CILs are a practical representation of the advice from Park and colleagues (2013) “to set up structures across core processes or around specific goals” (p. 23). Initially conceptualized as “Centers of Excellence” (Brady, 2014), the CILs were created to develop instructional leadership to positively impact student achievement and support instructional excellence. According to documents shared at the start of the restructuring process:

The primary mission of the CIL is to ensure high academic achievement for all DoDEA students. The Centers for Instructional Leadership will systematically develop high-impact educational leaders in their pursuit of excellence and equity. Success is measured when all DoDEA schools ensure that every student is adequately prepared for success in college, careers and citizenship. (DoDEA, 2016, p. 1)

The CIL mission ties directly back to the student-centered purpose of DoDEA. Four functions describe the CIL priorities and key considerations: (a) Leadership Development and Support, (b) Development for Systemic Priorities, (c) Learning Networks, and (d) Innovative Best Practices (Figure 1). As a driving force within the continuous improvement effort, the CILs improve communication and transparency across the system; provide resources, professional development, and support to stakeholders; implement initiatives related to organizational mission, goals, and direction; and promote the use of assessments and data in decision-making.

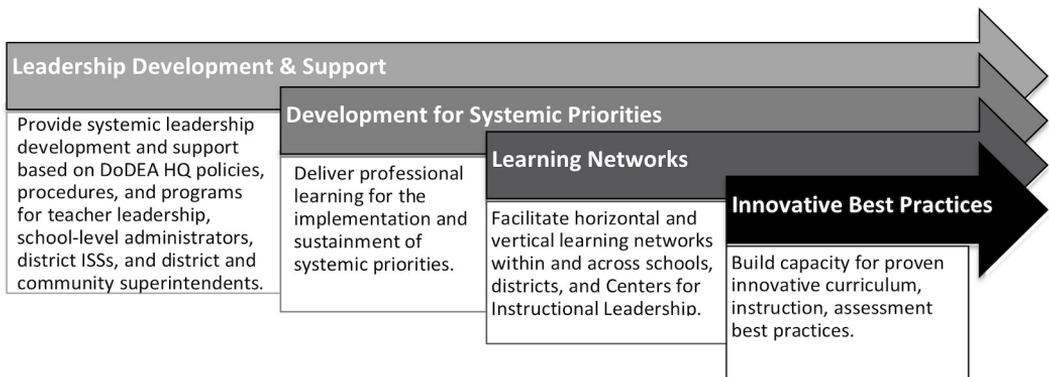


Figure 1. Center for Instructional Leadership functions identified by the Department of Defense Education Activity (DoDEA).

As DoDEA worked to align curriculum to College and Career Ready Standards (CCRS), there has been a shift from using norm-referenced tests (e.g., TerraNova) to using criterion-referenced tests from the National Assessment of Educational Planning (NAEP). In school year 2017-18, the organization devised and implemented a Comprehensive Assessment System to include “all of the assessments that are administered system-wide within DoDEA,” which are used to “support student learning, provide information for decision makers concerning instructional programs and services, and inform parents” (DoDEA, n.d.). The new system provides a list and description of all standardized assessments in order to help with communication, transparency, and alignment of curriculum.

As a formal methodology and process for continuous improvement, the CILs are developing and refining measures to assess growth and progress on strategic initiatives. These measures include CIL quarterly reports that are structured around the Deming’s (2000) Plan-Do-Study-Act (PDSA)

Cycle. Langley and colleagues (2009) provided additional context with fundamental questions to help anchor the PDSA (Figure 2): What are we trying to accomplish; how will we know that a change is an improvement; and what change can we make that will result in improvement? Within this report framework, the Plan section includes the initiatives CILs focused on during the past quarter, and the Act section includes data sources used to evaluate the initiatives. The New World Kirkpatrick Model also provides a framework for evaluating training the CILs have facilitated. The third level of Kirkpatrick’s model, Behavior, closely aligns to the Study phase of PDSA with a focus on applying learning when back on the job, assessing whether performance of critical behaviors is leading toward desired results (Kirkpatrick & Kirkpatrick, 2016).



Figure 2. Model for improvement from Langley et al.’s (2009) book, *The Improvement Guide*.

To develop professional learning content, including events and activities, the CILs incorporate an ADDIE instructional system design: Analysis, Design, Development, Implement, and Evaluate (Molenda, 2003). Adopting the PDSA cycle helps to further ensure a continuous improvement mindset, as the cycle implies that the work is never done. Additionally, Virginia Tech is facilitating focus group sessions with stakeholders, as well as individual interviews with senior leaders, to evaluate the progress of the CILs’ influence on improving student achievement.

Capitalizing on Relationships for Professional Collaboration

A core element of continuous improvement involves creating an environment to improve relationships and provide a structure for professional collaboration. This priority is emphasized and reiterated throughout the literature (Fullan, 2001; Muhammad, 2009; Park et al., 2013; Stigler & Hiebert, 1999).

Prior to the creation of the CILs, DoDEA operated as three distinct regions: Europe, Americas, and Pacific; communication and collaboration mainly occurred within the silos of each region. Effective and consistent communication is necessary for the success of any institution, but it is particularly important to DoDEA, given the frequency of military family transitions across regions. If schools across regions are not aligned in terms of vision, goals, curriculum, and standards, students will face unnecessary challenges with every transition.

For DoDEA, this requires the building and maintaining of relationships across regions and districts that are worldwide. The Community Strategic Plans (CSPs) and DoDEA’s RSA provide

clear communication throughout the system as to DoDEA’s purpose. Through the establishment of the CILs, DoDEA has increased opportunities for system-wide professional learning, through summits, workshops, PLCs, and focused collaboration. These enhanced structures and practices to build relationships will help sustain DoDEA’s efforts to improve student outcomes.

In addition to building relationships within the organization, DoDEA collaborates with outside institutions and professionals in using established practices for implementation of strategic initiatives. One such collaboration is with Virginia Tech, a public land-grant university.

Sustaining Capacity Building

In order to truly become an organization of continuous improvement, it is essential to devote time and resources to the development and training of personnel (Park et al., 2013; Stigler & Hiebert, 1999). DoDEA has put extensive energy into capacity building within the organization and has provided professional learning for continuous improvement. One of the unique challenges in capacity building is the geographic distribution of schools, and DoDEA employs a variety of delivery models including webinars, train-the-trainer modules, face-to-face workshops, and online resources and tools. In larger school divisions throughout the world, multiple delivery models also are employed to provide expanded access to learning that is necessary for capacity building of the organization.

With the vision for the CILs in mind, DoDEA put forward a request for applications to develop a high-quality, dynamic, effective professional learning delivery model and resources for DoDEA leadership, including content development, delivery, evaluation, and an aligned comprehensive program improvement and assessment process. DoDEA adopted Virginia Tech’s proposal for an alignment process (Figure 3) to design, implement, and evaluate a continuous improvement model for instructional leadership for the development of the CILs. In pursuit of project goals, Virginia Tech provided expertise in models for continuous improvement, principles of adult learning, and best practices in educational data-based decision making. The overall approach addresses the relationships among the goals, objectives, project activities, and anticipated impacts for the CIL professional learning model, program assessment, curriculum development, delivery, and evaluation.

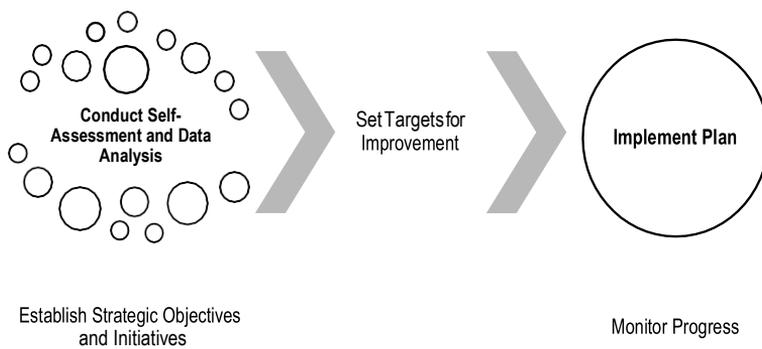


Figure 3. Conceptual model of the approach to continuous improvement through DoDEA CILs.

Virginia Tech and DoDEA have worked closely together to design and implement professional learning and support, often negotiating fine details to ensure the project activities are aligned with the immediate and emerging needs of stakeholders. While the work began with a

commitment to provide professional learning through webinars and face-to-face delivery, the focus of those sessions evolved over time. During the inaugural year of this partnership, Virginia Tech coordinated the delivery of three learning modules that highlighted the importance and appropriate application of Professional Learning Communities (later referenced within DoDEA as Focused Collaboration/PLCs):

- Module 1: Role of Professional Learning Communities in Continuous Improvement
- Module 2: Developing Capacity with Professional Learning Communities
- Module 3: Implementing Change with Professional Learning Communities

On-site professional learning institutes provided valuable face-to-face time to arrive at a common understanding of learning walkthroughs and the potential for walkthroughs to drive continuous improvement within DoDEA's instructional leadership. Work on the Learning Walkthrough protocol continued as Virginia Tech facilitated professional learning designed to increase confidence with using the Learning Walkthrough tool as an intentional strategy for instructional leadership. This led to a healthy transition of ownership to the CILs, with their commitment to provide the next iterations of professional learning on the adopted Walkthrough protocol.

In addition, the Virginia Tech team developed a Toolkit with a variety of resources the CILs can use to enhance instructional leadership within DoDEA. The Toolkit is an online compendium of job aids, tools, and exercises that CIL personnel can easily access to support the work of instructional leaders in their efforts toward continuous school improvement. The Toolkit builds upon and connects with the professional learning modules available to CILs within DoDEA's Schoology course site. The Toolkit itself is organized into four major sections:

- Section 1: Developing the Capacity for Continuous Improvement, which introduces concepts about change and its management to achieve desired outcomes.
- Section 2: Leading Focused Collaboration/PLCs, which borrows from adult learning theory and focuses on developing the capacity to work effectively in professional learning communities, also known as focused collaboration.
- Section 3: Models and Skill Aids for Instructional Leadership, which highlights professional learning around facilitative leadership, coaching for learning, and performance monitoring for change in practice.
- Section 4: Data-Driven Decision Making, which offers a deeper understanding of how a variety of data sources can be used to improve, increase, and enhance teaching and learning.

The Toolkit is a dynamic resource that will continue to grow and evolve to meet the instructional leadership needs of DoDEA, particularly those connected with the CILs.

DISCUSSION

While the concept of continuous improvement is simple, the implementation is quite complex. Even small-scale changes to a system have ripple effects and unforeseen challenges, so change to a system as large as DoDEA is certainly a complicated venture. Although implementation of continuous improvement is still in early stages, many lessons have been learned. Having a

common goal (i.e., purpose) to rally around is essential. It acts as a motivator and director for all change and assists with clear communication and consistency across regions, districts, and schools. The strategic plans also help to communicate that direction and purpose by providing structure, while retaining enough flexibility to allow for creation and negotiation of details and plans for achieving the years' goals.

In considering the complexity of DoDEA's change process, commitment has been the key. Despite unforeseen challenges, such as moving forward with CIL work while not being fully staffed, the organization retains focus and momentum for continuous improvement. Continuing forward, while keeping organizational goals in mind, requires leaders to be resilient in the face of setbacks and to recognize these difficulties are part of the change process.

When examining how to implement continuous improvement with fidelity, DoDEA realized an organizational restructure was necessary. This is no small task for a worldwide organization serving 72,000 students with over 11,000 employees (DoDEA, 2018a). Though this endeavor required significant investment in terms of time, resources, and energy, DoDEA understood that to fully shift to a continuous improvement culture, a restructure of this magnitude was essential. In addition to the restructure, DoDEA has drawn upon evidence-based practices and models such as PDSA, PLCs, and the New World Kirkpatrick Model. While there are certainly cases where creating an individualized model or practice may be useful, this should not be the rule. Utilizing practices that have already been tested—and are adaptable to context, such as PDSA—can be the best route for ensuring success with continuous improvement.

It goes without saying that data and assessment are important. The necessary questions are how to collect the data and how to use the data, with particular attention to gaps in assumptions and perspectives (Farley-Ripple et al., 2018). An important shift for DoDEA has been implementing CCRS and shifting to NAEP assessments in order to align with standards used in U.S. public school systems. This decision reflects a student-centered purpose as it will help students transition between the DoDEA school system and the U.S. public school system. Additionally, DoDEA understands the importance of data on professional development initiatives for teachers and instructional leaders. While many of these evaluation efforts are still being formed and refined, the implementation of the PDSA model ensures attention to data related to these groups and initiatives.

Partnerships can be an integral factor in implementing continuous improvement (Coburn & Penuel, 2016; Park et al., 2013; Wentworth et al., 2017). DoDEA has sought to improve partnerships and communication within the organization, while also leveraging the expertise of outside entities (e.g., Virginia Tech). Clear and consistent communication is necessary, and the CILs are the organizational structure designed to improve vertical and horizontal communication. Other schools and education agencies seeking to leverage the potential of network-based improvement initiatives may need to make similar investments in system-level innovation infrastructure (Peurach, 2016).

Devoting time, energy, and resources to build capacity is crucial for successful implementation of continuous improvement (Park et al., 2013; Stigler & Hiebert, 1999). The five-year CSPs and the acceptance of Virginia Tech's approach represent DoDEA's ability to plan ahead for changes and invest the time required. In moving from a system of schools to a school system, DoDEA has made it a priority for training and professional development to occur at all levels, from headquarters and CIL chiefs, to principals and teachers. This all-encompassing approach has been made possible by utilizing diverse modes of delivery such as webinars, train-the-trainer modules, face-to-face workshops, and online resources and tools.

CONCLUSION

Although every school system presents a unique case (Redding et al., 2017), examining the planning and early implementation of DoDEA's systemwide change provides insights into the 'how' of continuous improvement, and the example can be useful for other large systems considering systemwide change. While it is too early to assess the effects of this change on student achievement, valuable information can still be gleaned. Becoming an organization that implements continuous improvement with fidelity is a difficult task (Park et al., 2013), but far from impossible. In participating in this walk with DoDEA, it has been clear that certain factors are crucial and applicable when systems consider change: a student-centered focus the organization can rally around; commitment by leaders to the change process; investment in organizational restructure; implementation of established models and practices; purposeful use of assessments and data for students and personnel; clear and consistent communication; use of collaboration; and devotion to the time, energy, and resources it takes to build capacity for a culture of improvement.

As education researchers and policy makers continue to wrestle with best practices and strategies for continuous improvement, we encourage further investigation of successful case studies. As noted by Valdez and colleagues (2019), "It is important for leaders to not just take specific actions, but also be intentional in why and how they are creating a learning environment together with school stakeholders" (p. 17). While research-practice partnerships can be helpful, the process is often oversimplified (Wentworth et al., 2017). To help strengthen the relationship between the research community and the practice community, Farley-Ripple and colleagues (2018) have provided a conceptual framework for rethinking the connections and exploring the gaps. Also, Redding and colleagues (2017) provide guidance for scaling continuous improvement practices by facilitating conditions and implementing appropriate supports. Continuous improvement strategies are effective only when coupled with sustained effort and attention to long-term goals. Even still, the fuel for that sustained effort often comes from celebration of short-term successes, and we encourage more sharing of such achievements.

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