

Promising Practices Article

Coaching for Continuous Improvement

Matthew B. Courtney

Since 2015, the Kentucky Department of Education (KDE) has provided schools across the state with access to highly skilled instructional coaches. Primarily working in rural settings, these coaches provide a voluntary, integrated coaching model that focuses on building sustainable systems. Coaches provide a range of services, including systems design, strategic planning support, whole-team professional learning, professional learning community (PLC) facilitation, and fidelity monitoring. This article describes the theory of action for KDE's Continuous Improvement Coaching program, presents two case studies of rural elementary schools who utilized the program, and discusses the key features of the program and its relevance for rural schools.

In the Commonwealth of Kentucky, the education of children in rural areas of the state is a persistent concern. Kentucky is a state with wide ranging and varied rural populations. U.S. Census data indicates that 75 percent of Kentucky counties have a population density of less than 100 people per square mile of land (U.S. Census Bureau, 2010). These rural counties represent 56 percent of all schools in Kentucky, and 33 percent of schools identified for either Targeted Support and Improvement (TSI) or Comprehensive Support and Improvement (CSI) based on the state's accountability system in 2018 (Kentucky Department of Education, 2018).

Many authors have sought to document the inherent inequities of a rural education since the 1981 reauthorization of the Education and Secondary Education Act (ESEA). This reauthorization created a renewed interest in the achievement of disadvantaged groups (DeYoung, 1987). It was quickly noted that schools in rural areas are dramatically under resourced and have difficulty recruiting and maintaining quality teaching and administrative staff; a finding that holds true in more current literature, as well (DeYoung, 1987; Roscigno & Crowley, 2001; Roscigno, et al., 2006).

In 2015, the Kentucky Department of Education (KDE) created the Continuous Improvement Coaching (CIC) program with the charge to "make a moral imperative a reality" by providing comprehensive coaching services to schools across the state (Continuous Improvement for Gap Closure, 2019). Originally called Novice Reduction for Gap Closure, the program sought to fill a vital need by working primarily with Kentucky's low performing schools in rural counties. While Kentucky's lowest performing schools (called Priority Schools at the

time) were served by dedicated teams of turnaround specialists, schools not identified with formal accountability designations were often left without access to quality supports. During its first three years of implementation, the CIC program has become a crucial point of access for schools working through continuous improvement processes; serving 23 percent of Kentucky public school districts during the 2017-18 school year (Kentucky Department of Education, 2019).

Theory of Action

The Continuous Improvement Coaching (CIC) program's theory of action includes four branches: needs assessment, continuous improvement planning, professional learning and coaching, and building lasting systems for improvement. The program is a voluntary opt-in program that can last either a few months or multiple school years depending on the needs of a school. Schools are assigned a single coach to work with them throughout their experience, allowing for the development of lasting relationships, trust, and rapport. Alongside the school leadership team, the coach builds a customized set of protocols that include, but are not limited to, leadership coaching sessions, needs assessment, continuous improvement planning, whole group professional learning, professional learning community (PLC) facilitation, instructional modeling, and fidelity monitoring.

Needs Assessment

The work of the CIC program generally begins with a thorough needs assessment. A well-structured needs assessment process helps to focus the work within local context and create buy-in, which is key

to the successful implementation of a continuous improvement process or cycle. It is only when need and context are established that effective innovation and lasting change can flourish in an organization (von Hippel, 2005).

Successful improvement organizations understand that the sustainability of any change is only realized when it is established within the development of effective systems – rather than being viewed as the success of an innovative leadership team (Park, et.al. 2013). The CIC promotes this idea through a KDE developed needs assessment protocol called Key Core Work Processes (KCWP). The KCWPs review the impact of six systems for sustainable success in a school. These processes are as follows:

1. Design and Deploy Standards
2. Design and Deliver Instruction
3. Design and Deliver Assessment Literacy
4. Review, Analyze and Apply Data
5. Design, Align and Deliver Support Processes
6. Establishing Learning Culture and Climate

During their initial meetings, the coaches lead school leadership teams and groups of teachers through detailed protocols to evaluate the effectiveness of each of the six systems. Each system is accompanied by a list of competencies and pieces of evidence that are used to score the system. In all, this process encourages schools to review over fifty indicators at both the school and classroom level. These indicators include items such as the existence and use of standards and curriculum alignment documents, data collection and analysis protocols, and an examination of distributed leadership structures. Typically, coaches have the leadership team and small groups of teachers complete these self-evaluations separately by rating each indicator as either in place, in progress, or not in place. This structure ensures that teacher and leadership voices are both represented during the internal needs assessment process. The results of this process are, in turn, used to determine priority needs and next steps. By identifying systemic weaknesses and focusing on establishing new sustainable systems, the coaches are able to build a thoughtful professional learning process for the school that is more likely to continue once the coach has completed their work. These protocols are made available to the public on KDE's website (Continuous Improvement for GAP Closure, 2019).

Continuous Improvement Planning

Following the completion of a thorough needs assessment, coaches collaborate with school leadership to create a continuous improvement plan. While Kentucky state regulation requires that all schools complete a Comprehensive School Improvement Plan (CSIP) annually (Continuous Improvement Planning for Schools and Districts, 2018), schools working with the CIC program are encouraged to embed specific and measurable improvement objectives that are tied to the instructional transformation that will take place in a school. Effective turnaround leadership requires school leadership to establish and communicate a clear vision for the change process (Herman, et.al., 2008) and schools that the time to create and monitor detailed strategic plans are more likely to achieve their goals as the plan forces them to focus on the process, not the result (Jacobsen, 2006).

In collaboration with the school's leadership team, the coach helps the school to build out an improvement plan to guide their work together. These plans include three-year goals, intermediate objectives to meet those goals, specific activities, responsible parties, timelines and resource allocations. Embedded within these plans are the specific supports that the coaches will bring to the table to help facilitate change in the school.

Professional Learning and Coaching

Once a detailed plan is established, the coach begins implementing the plan by facilitating professional learning protocols designed to create instructional shifts in the school. Professional learning is a vital component of the CIC theory of action. It is well documented that teachers in rural communities are more likely to have lower credentials and fewer years of experience than their counterparts in urban schools (Provasnik, et al., 2007; Lazarus, 2003; White & Klein, 2012). Professional learning is one way to help bridge that skill gap (Hattie, 2009). The CIC model of professional learning delivery reflects other common assistance models, such as Response to Intervention (RTI). Coaches often begin by providing broad professional learning to the whole faculty and then scaffolding their delivery to meet the needs of the teachers in the building. Often, coaches will dedicate time to provide instructional coaching and model specific instructional practices. This type of targeted support

has generally been found to improve student outcomes (Reddy, et al., 2017; Kurz, 2017; Kraft, in press).

The CIC program focuses its efforts on high yield instructional strategies as defined by John Hattie in his seminal work *Visible Learning: A synthesis of over 800 meta-analyses relating to achievement* (Hattie, 2009). In this work, Hattie highlights teaching practices and strategies that are considered to produce a rapid and dramatic change in student outcomes. Strategies are selected by the leadership team in consultation with their coach and the coach focuses on helping teachers to implement these high yield instructional strategies with fidelity. Coaches may also survey teachers to help establish professional learning priorities and create added buy in.

As the coaches scaffold their support, the professional learning community (PLC) becomes a place where intensive work can begin. The PLC is a vital system in school functioning. Well run PLC structures serve to facilitate meaningful discussion, mentoring, and instructional change for teachers who participate; especially in rural communities where access to outside professionals is limited (Antinluoma, et al., 2018; Cansoy & Parlar 2017; Willis & Templeton, 2017). During these PLC meetings, coaches support teachers in applying the themes and skills chosen by school leadership. They work with schools to create meaningful cycles of collaboration that involves designing, implementing, assessing, and remediating instruction (DuFour & Reeves, 2016). Coaches focus on building capacity within the PLC group; slowly removing support and guidance as their work together progresses. When necessary, coaches also model instructional practices for teachers.

When appropriate, the coach may choose to supplement professional learning by connecting the school to outside agencies that have expertise on a specific area. It is well established in the literature that rural schools often lack ready access to quality, timely, and effective professional learning (Beesley, 2011; Pharis, et al., 2019). By leveraging quality community partners to support the delivery of professional development, the coaches are better able to extend their own capacity and ensure that appropriate content experts are delivering the training that the schools need.

In addition to the professional learning provided to teaching staff, the CIC program also supports the growth and development of building leadership.

Throughout the coaching program, school administration is expected to fully participate in, monitor, and support the development of new systems and instructional practices in the school. The importance of school leadership, particularly the principal, cannot be understated. Rural principals often work in isolation; this elevates the importance of principal coaching and mentoring in rural settings (Augustine-Shaw, 2015, Bowman, 2018, Preston & Barnes, 2017). Principals who embrace their role as instructional and transformational leaders have a lasting impact on student achievement in a building (Hattie, 2009). This ongoing support is key to the development of quality transformational leaders (Daresh, 2004; Cerni, et al., 2010; Sun, et al., 2018).

Building Lasting Systems and Processes

To ensure the sustainability of new initiatives, the coaches focus on building meaningful and lasting systems that can continue to lift up the program as leaders and teachers leave. Within the context of a school, a system is a “sub-element of the overall educational system that the stakeholders exert control over (Park, et al., 2013)”. These sub-elements are mechanisms that, when established and maintained by leadership, promote long term growth and sustainability. The CIC program designs systems using the Baldrige Excellence Framework (Education) (Baldrige Performance Excellence Program, 2019).

One system that the CIC program promotes is the use of a plan-do-study-act (PDSA) cycle. Through this cycle, the school creates plans for activities, implements the activities and collects data, reviews the data, and makes adjustments to the implementation model before trying it again. PDSA models are highly customizable and ensure that stakeholders within a school remain focused on the process and implement new protocols with intentionality (Taylor, 2014). The coaches also incorporate the PDSA model into instructional design conversations during PLC meetings. The model is used effectively to help teachers coordinate their planning, instruction, assessment and remediation with fidelity (Creason, 2009; Jacobsen, 2009).

Coaches also support school leadership in developing systems for the measuring the fidelity of implementation of new teaching practices and strategies. Quality professional development requires opportunities for continued coaching and evaluative

Table 1
Outcomes of Continuous Improvement Coaching

	Proficiency in Reading	Proficiency in Math	Novice in Reading	Novice in Math
Full Service	1.97	5.37	-4.83	-3.23
Some Service	-1.65	0.95	-1.06	0.66
No Services	-4.19	-3.72	1.22	4.79

feedback (Darling-Hammond, et.al. 2017). While some schools utilize home grown observation or walk-through instruments, the coaches utilize the eleot™ instrument produced by AdvancED. This is a statistically reliable and valid instrument that, in keeping with the CIC theory of action, captures data related to the activities happening in a classroom rather than focusing on teacher quality (AdvancED, 2012). Through this data collection process, school leadership and coaches are able to monitor changes in the classroom ecosystems in a school and ensure that new instructional changes are taking hold.

Results from the Field

The Continuous Improvement Coaching program combines the four elements discussed previously to build out a series of coaching sessions. Each school receives a unique plan tailored to meet their needs and the desires of the school administration. During the 2017-18 school year the CIC program served 92 schools across Kentucky. As this is a voluntary program, only ten schools opted to receive the full theory of action available. A review of state test scores, collected through the Kentucky Performance Rating for Education Progress (K-PREP) test, shows that schools who receive the full theory of action show greater improvement than those who receive only partial service or no service from the coaching program. Table one shows the average change of these two groups on proficiency and novice scores for both reading and math.

While the average change in scores shows that schools who received the full theory of action had the greatest change, it should be noted that these scores reflect only one year of change in student test scores and not under strictly experimental conditions. These changes in the scores cannot be used to infer causation because they do not account for other unknown factors. For example, it could be assumed that a principal who voluntarily opts into a full-service arrangement with the CIC program is more focused on instructional improvement and open to new changes than a principal who does not volunteer

for the program at all. This principal's focus on continuous improvement is likely to impact other areas of the school that may impact student outcomes.

In order to place the program in context and better discuss the execution of the theory of action, the implementation stories of two rural elementary schools are presented below. The two schools presented in the case studies were chosen because they voluntarily received intensive Continuous Improvement Coaching services that included the full scope of services. In addition to their participation, these two schools also demonstrated the most significant progress on student outcomes compared to other schools who received the full scope of services. Waynesburg Elementary outpaced other schools in regards to an increase in proficiency in both reading and math while Campbellsburg Elementary outpaced other schools in regards to novice reduction in both reading and math. Both schools represent rural elementary school populations with new principals during the year services were received. The schools also present similar demographic characteristics; discussed below.

Transformation at Campbellsburg Elementary

When Campbellsburg Elementary, a small school of 371 students in rural Henry County Kentucky, received a new principal in the fall of 2017, it was clear to the new leader that the school lacked instructional systems and a clear focus on improving student outcomes. This first-time principal faced a student population that was 48 percent economically disadvantaged with 13 percent of students receiving special education services. When she sought support from the district, a district liaison facilitated an introduction between the principal a Continuous Improvement Coach (CIC) from the Kentucky Department of Education. The principal had experienced the CIC program in prior roles and felt confident that the program would provide her with the support that she needed to facilitate change at the school. About that first meeting, the principal

said, “It felt like support and not a mandate.” This atmosphere of support would follow throughout their year of work together.

Following the introductory meeting, the coach took time to talk with the principal about the needs of the school and the KCWP protocols that had been completed by the principal. Together they created a detailed plan for implementation that included 12 coaching visits totaling 36 hours. Their first step together was to create new systems to accomplish the tasks at hand. The coach assisted the leadership team in creating, implementing, and monitoring a new PLC protocol. Through these regularly scheduled meetings, the school facilitated its work aligning new curriculum to academic standards and placing an added emphasis on the regular analysis of student work and assessments. The administrative team monitored meetings weekly and the coach visited meetings sporadically where she modeled productive conversations and led the teachers deeper into their work.

Following the establishment of new PLC protocols, the leadership team worked with the coach to identify instructional changes and create a professional learning plan. The coach helped the school to gain access to professional learning opportunities offered by KDE and other community partners, and where appropriate, developed and implemented professional learning sessions herself. In an interview, the principal indicated that one of the most beneficial elements of this work was the coach’s ability to enter the classroom and model instructional practices for teachers. The school focused their professional learning efforts on standards alignment, direct instruction for writing, and revising rubrics and success criteria for writing assessment. Together, the leadership team and the coach developed monitoring instruments to track the fidelity of the implementation of new strategies. These monitoring instruments allowed the coach provided targeted and timely support to teachers who needed it.

One of the most meaningful events described by both the principal and the coach was the coach’s modeling and facilitation of a live-scoring event. During this event, teachers sat with students and scored their papers with them. They discussed the newly developed success criteria and made sure that the students understood the finer elements of the writing rubrics. The coach described the purpose of the event as “helping students to understand the language of the rubric so they could understand what

their scores meant.” This helped address one of the principal’s primary concerns – student’s ability to self-score.

A year later, the work facilitated by the coach is still in place in the school. The principal credits that with the coach’s ability to help her think about sustainability early and often. “The administrator builds systems from the beginning – thinking about sustainability and reflecting along the way. [The coach] helped build and establish protocols so that she is not needed as often anymore.” The principal credits the success of the program’s implementation in her school to the coach’s willingness to be a constant support and companion. “The coach took time to understand the vision so that she could be in-tune with the needs of the building, the teachers, and the capacity that they bring to the table. As a leader, it gets lonely sometimes,” she said, “her willingness to [provide support] and serve as a liaison is probably the thing that I appreciate the most.”

The coach credits the success of the school to the dedication of the leadership team. She said “The administrative team was all in. They made it very easy because they were eager to do what was needed to improve their school. In year two, the systems are in place and working. I provide sustainability checks, but I feel like I don’t have much to do there this year.”

This collaborative effort between the coach, the leadership team, and the teachers led to demonstrable impact on the school’s K-PREP scores. In 2017-18, the school saw a 7.0-point increase in reading proficiency and a 6.3 percent increase math proficiency. This corresponded with a 15.1-point decrease in the percentage of students scoring novice in reading and a 5.4 point decrease in the percentage of students scoring novice in math. This change led the school to be the only school in its district to not receive a school improvement designation from KDE in 2018.

Targeted Support at Waynesburg Elementary

When the new principal of Waynesburg Elementary was hired in 2017, two weeks before school started, she immediately began working to diagnose the causes of low performance in her new school. Waynesburg Elementary is located in Lincoln County in Central Kentucky. The school houses 329 students, 64 percent of whom are economically disadvantaged with 14 percent of students receiving special education services. In October of 2017, the

principal attended a regional workshop hosted by one of KDE's Continuous Improvement Coaches. The principal approached the coach after the workshop to discuss the potential work that could be done in her school. Together they scheduled their first meeting. It was during that meeting that the two began to build a relationship and develop an action plan that included a series of four visits totaling 16 hours of coaching. The principal said, "As a new principal, [the coach's] input provided some "umph". Her outside perspective helped teachers see the benefit and helped get buy in. It helped give me more credibility."

The school's new principal had already spent some time reviewing needs assessment data before the coach began her collaboration. "Through the program, we promote KDE's Key Core Work Processes (KCWPs)." The coach stated, "We used them to review the needs assessment again to determine priorities." The coach supported the principal through this work, then the principal led the teachers through their own process of examining the KCWPs. The principal and coach reviewed the different assessments together and decided to begin with the need areas that overlapped. The team decided to focus their work on increasing the number of high yield instructional strategies being utilized in the school.

Through PLCs the coach provided small group instruction to the teachers on a variety of teaching practices selected with input from the principal. These evidence-based practices included metacognition, reciprocal teaching, differentiation, and direct/explicit instruction. Whenever possible, the coach also connected the principal with outside trainers who could provide professional learning for the teachers on these topics. The coach also helped the principal get plugged into KDE's Lead Kentucky initiative (KDE's state implementation of the National Institute for School Leadership [NISL] program).

One activity that was particularly useful to this school was the coach's support in fidelity monitoring. After professional learning was offered in the fall, the coach provided monitoring support by conducting non-evaluative teacher observations. The information gathered during these coaching visits was compiled and provided the leadership team with a school level view of strategy implementation. This objective lens helped the school to adjust their professional learning protocols throughout the year.

From the beginning of their time together, the principal wanted to ensure sustainability and

maintain authority over instruction in her school. This is a commitment shared by both the principal and the coach. The coach said, "I wanted to empower [the principal] to do and maintain the work. I met with her privately first, then we made a plan for rolling out to the teachers." The principal made a similar observation, "[The coach] helped build systems and allow me to own it. They help build capacity in leadership." Through the continued use of these well-designed systems, the school has maintained and expanded upon many of the efforts planted by the coach. The leadership team has expanded the instructional strategies component of their work into an implementation of guided reading protocols that incorporate the initial strategies taught by the coach into a systemic instructional procedure. Leadership has also taken steps to increase the transparency of their decisions by continuing to include teachers in needs assessment work (through the KCWPs protocol) and continuous improvement planning work.

This collaborative effort between the coach, the leadership team, and the teachers led to a demonstrable impact on the school's K-PREP scores. In 2017-18, the school saw a 17.3-point increase in reading proficiency and a 10.1 percent increase math proficiency. This corresponded with a 17.3-point decrease in the percentage of students scoring novice in reading and a 0.3 point decrease in the percentage of students scoring novice in math. While the school was identified for Comprehensive Support and Improvement (CSI) by KDE in 2018, the principal states that the work they began with their coach has made their new state mandated improvement process easier and strengthened her skills as a principal.

Conclusion

As states seek to support rural schools in leading school improvement and turnaround efforts, Kentucky's Continuous Improvement Coaching model provides a promising practice to grow from. Having created a model that is rooted in continuous improvement theory and focuses on the implementation of evidence-based teaching practices and leadership strategies, Kentucky has created a program that has served the continuous improvement and professional learning needs of rural schools. Other rural states could benefit from exploring this model and its potential impact on their schools.

The model is not without limitations. The voluntary nature of this program means that many

schools, about a third, who participate in the program never move beyond the initial implementation meetings and whole group professional learning. This means that they do not receive the full benefits or experience the full theory of action of the program. It is clear from the experiences documented here that a full theory of action is of most benefit to schools and should be the goal of any school who opts into the program. At issue here is time. The series of meetings, planning sessions, and training events essential to this program requires a significant time commitment on behalf of the principal who is likely already stretched thin.

Additionally, the program requires a dedicated team of professionals who must be able to travel across rural regions of a state to achieve their goals. These professionals may not reside in rural areas and the nature of rural geography means that coaches may only be able to make a single coaching visit during the course of an entire work day. KDE employees six coaches, each of whom service roughly fifteen schools. In order to grow and scale the program, additional coaches are necessary. In order to ensure that the coaches are able to provide timely and quality support, they must also be regularly trained in new theories and methodologies.

A significant amount of time must be spent to ensure that the coaches are of the highest caliber.

The addition of staff time, travel, and training bring additional cost. KDE offers the services of the CIC program to schools free of charge; therefore, the SEA must encumber the full financial burden of the program. To reduce administrative and overhead costs related to the program, CIC coaches are on loan to KDE from their home districts through memorandum of understanding agreements. On days when coaches are not in the field, they work from home to further reduce overhead cost. As is typically the case, cost remains a significant barrier to the expansion or replication of the program.

The CIC program is still in its early stages and future work must be done to assess the long-term impact of the program. Future researchers could explore the impact on schools who participate and receive the full theory of action compared to those who receive only a portion of the services offered by the program. Researchers may also explore the impact on the coaching program and student achievement or its impact on other related outcomes, such as teacher efficacy, teacher retention, or improvement planning quality.

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Author:

Matthew B. Courtney is an Executive Staff Advisor at the Kentucky Department of Education. Contact: courtney.matthewb@gmail.com

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