

# Contemporary Approaches to Dissertation Development and Research Methods

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# Chapter 11

## Enacting a Cycle of Inquiry Capstone Research Project in Doctoral–Level Leadership Preparation

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### **ABSTRACT**

*Over the last decade, the doctorate in Urban Education Leadership at the University of Illinois at Chicago (UIC) has been redesigned to respond to two distinct but important challenges: (a) the challenge of creating greater distinction between the academic and professional doctorates, and (b) the challenge of improving the nature and quality of its principal preparation program. Within the context of a broader multi-year program improvement and redesign effort, program faculty designed and enacted an alternate Culminating Research Experience (CRE) for their doctoral students. This CRE emphasizes the leadership of cycles of inquiry for school-wide improvement over a two-year period of time and the subsequent analysis of this work using empirical and scholarly literature. The accounting provided in this article advances existing literature by making visible many of the important granular details associated with this CRE as well as considerations associated with its design and implementation within a doctoral-level leadership preparation program.*

### **INTRODUCTION**

There has been a proliferation of professional practice doctoral degrees in the last several decades as well as a dramatic increase in the number of individuals seeking these degrees (Zusman, 2013). These doctorates have become widely recognized in such fields of medicine, public health, law, and education

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(Zusman, 2013). Professional practice doctorates now exist within many universities throughout the US, and several scholars (Shulman, Golde, Bueschel, & Garabedian, 2006) have urged higher education institutions to carefully construct or reconstruct these degrees with a different purpose than academic or research doctorates. If such a distinction is to be achieved with the degree design, professional practice degrees will need to be designed in ways that strongly emphasize practice and use research and theory to inform professional practice (Guthrie, 2009; Shulman, Golde, Bueschel, & Garabedian, 2006).

Professional practice doctorates are becoming increasingly commonplace in the field of educational leadership. These doctorates are oftentimes provided within the context of the Doctorate of Education and the Ed.D. degree (Normore, 2010). However, if this degree is to cultivate robust professional practice in the field of educational leadership, it is critical that degree designers carefully consider the vision, purpose, and goals associated with degree completion and draw on this information in the design of program learning experiences (Shulman et al., 2006). Such rethinking will require careful consideration of the needs of practicing school principals. An important area for redesign attention will be culminating research experiences (CRE) which will be strengthened from careful alignment “with the expectations and demands confronting school leaders in the twenty-first century” (Smrekar & McGraner, 2010, p. 156).

Beyond the call to strengthen professional practice doctorates, there has been simultaneous pressure to improve the overall quality of principal preparation programs (Bottoms & O’Neil, 2001; Cheney & Davis, 2011; Cibulka, 2009; Hess & Kelly, 2005; Levine, 2005). Arguably, the convergence of these two factors has motivated efforts within some universities across the US to improve educational leadership programs through program/degree redesign. Not surprisingly, the last decade has seen a notable increase in scholarship about redesigned, innovative, or exemplary principal preparation programs/degrees (such as Darling-Hammond, LaPointe, Meyerson, Orr, & Cohern, 2007; Davis & Darling-Hammond, 2012; Orr, 2011; Orr & Orphanos, 2011). Although a small body of literature on such programs shares insights about the redesign of CREs, recent research suggests that the field in general is slow to enact new CRE designs in lieu of conventional dissertations and that lack of faculty understanding relative to these designs is a likely contributor (Osterman, Furman, & Sernak, 2014). Clearly, there is a need for additional literature that makes visible alternate CRE approaches and does so in ways that cultivate deeper faculty understanding by revealing granular details about CRE features and enactment considerations. Alternate CRE models from doctoral-level principal preparation programs can make important contributions both to the literature on professional practice doctorates as well as to the literature on principal preparation.

To address these needs, this article explores a redesigned CRE that replaced a more traditional dissertation within a redesigned doctoral-level principal preparation and development program at the University of Illinois at Chicago (UIC). In 2012, UIC’s program was identified as an exemplary principal preparation and development program in research conducted by Davis & Darling-Hammond (2012). In 2013, the University Council of Educational Administration (UCEA) recognized UIC’s program as one of two Exemplary Educational Leadership Preparation programs in the US in its inaugural competition in 2013. Although the doctoral program was introduced in 2002 to replace a more conventional masters-level principal preparation program, it has been dramatically enhanced over the last decade through ongoing formal and informal continuous improvement efforts. One of the more recent enhancements made to the program has been the replacement of a traditional dissertation with an action-research oriented capstone research project as the CRE.

This article proceeds as follows. First we provide a brief literature review that explores alternate CREs in educational leadership. Before introducing UIC’s alternate CRE, we then discuss UIC’s program goals and the overall structure of UIC’s doctorate in Urban Education Leadership. Next, we present the

purpose of UIC's Cycle of Inquiry Action Research Capstone as a CRE and the rationale that informed its purpose and design. Following this discussion, we present UIC's Cycle of Inquiry CRE and elaborate the use of data and scholarly and empirical literature within this cycle of inquiry CRE. We also discuss course-embedded and clinical supports for students as they engage in this alternate CRE. Capstone writing, advising, and the final capstone defense are discussed. Next we discuss key actions that were taken to support this CRE design and enactment and institutional challenges that have been encountered. We close with conclusions and implications.

## LITERATURE REVIEW

### Alternate CREs in Leadership Preparation

In the last decade in particular a growing body of literature has been advanced that examines redesigned, innovative, and exemplary leadership preparation programs (such as Cosner et al., 2012; Cosner et al., 2015; Davis & Darling-Hammond, Darling-Hammond et al., 2007; Orr, 2011; Orr & Orphanos, 2011). Within this body of work is a smaller collection of articles that examines or advocates for alternate CREs in lieu of more traditional dissertations within the context of principal preparation. Although several alternative CREs have been documented—such as client-centered research projects (Guthrie, 2009; Smrekar & McGraner, 2010), thematic, collaborative research projects, (Marsh, Dembo, Gallager & Stowe, 2010), and action research projects (Amrein-Berdsley et al., 2012; Anderson et al., 2007; Barnett & Muth, 2008; Furman, 2012; Herr & Anderson, 2005; Osterman et al., 2014; Zambo & Isai, 2013)—action research models have received the greatest scholarly attention.

Lewin (1946), a social psychologist, introduced action research roughly seventy years ago, and during the last several decades action research has been widely examined and advocated for use within education in a range of educational applications and contexts including classrooms, teacher teams, and schools (Allen & Calhoun, 1998; Anderson, 2002; Anderson, Herr & Nihlen, 2007; Carr & Kemmis, 2003; Gilles, Wilson, & Elias, 2010; Militello, Rallis, & Goldring, 2009; Mitchell, Reilly, & Logue, 2008; Sagor 2000). Although actual steps or stages in the action research process vary, action research as a CRE in principal preparation generally focuses on solving problems through multi-step cyclical processes that require both “action and investigation” (Amrein-Beardsley et al., 2012, p. 102).

Several key purposes, outcomes, or goals have been associated with action research designs as an alternative CRE within principal preparation. For example, action research designs can allow leaders to solve authentic problems, inform the designs and enactment of instructional or organizational interventions, and cultivate or improve leadership practice (Barnett & Muth, 2008; Osterman et al., 2014; Zambo & Isai, 2013). For these reasons, Osterman and her colleagues (2014) point to the “effectiveness of action research in addressing real problems and its value as a leadership development experience” (p. 99). Moreover, action research has potential for developing school leaders who are also practitioner-scholar researchers (Barnett & Muth, 2008).

Literature provides several examples of action research as a CRE within leadership preparation programs. However, these accountings are oftentimes slim on such details as the explicit goals to be achieved through CRE enactment, focal areas of project attention, steps or phases emphasized in the action research cycle, rationale for the selection and use of a particular action research cycle, the nature of data and literature use, and procedures for documenting action research as a CRE. One of the more

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illustrative accountings appears in research published by Amrein-Beardsley and her colleagues (2012) and Zambo and Isai (2013) whose program develops a range of mid-career professionals. Together these two articles reveal the action research process utilized in Arizona State's CRE which includes five steps:

1. Finding a problem of practice,
2. Taking action informed by scholarship,
3. Investigating the action,
4. Reflecting on what this means, and
5. Reporting results to stakeholders (Zambo & Isai, 2013, p. 99).

Examples of project foci are also revealed in relation to the program's mission of developing "scholarly and influential leaders" (p. 99). This action research capstone documentation format includes sections that largely parallel those in a traditional dissertation: "need or purpose for action, review of literature, description of methods, analysis, results, findings and conclusions" (p. 102). The use of literature is emphasized in this action research project particularly in relation to the second step in the process—informing the design of actions to address practice-oriented problems. Further, both qualitative and quantitative data collection and analysis appear to be emphasized in the third step of the action research process where students investigate the actions that they have enacted. Students receive support for their action research cycles in a course that requires them to "produce written reports and present findings" (Amrein-Beardsley et al., 2012, p. 102). Students are also organized into "leader-scholar communities" that "comprises five to six students and two faculty members, one serving as dissertation chair and the other a second committee member" (Zambo & Isai, 2013, p. 98). Surveys with program completers suggest that students valued the capstone research project but may have benefited from more faculty direction in relation to the project (Amrein-Beardsley et al., 2012).

## **UIC's PROGRAM GOALS AND OVERALL STRUCTURE**

Beginning in 2013, UIC introduced a new capstone research project that could be situated within the broad umbrella of action research. This CRE replaced a traditional dissertation. In a later section of this article, we detail the features of this CRE as well as the key considerations in relation to the enactment of this CRE. However, before exploring this CRE in detail, it is important to consider UIC's program's goals and overall structure, which includes a constellation of program features that research associates with "exemplary" programs. These features are oftentimes absent or underdeveloped in more typical programs. Both the program goals and its structure heavily influenced the design of the current CRE at UIC.

From the onset, UIC's doctorate in Urban Education Leadership was designed with one goal in mind: to consistently prepare school principals who could transform challenging urban schools. This goal not only informed initial program design but it also motivated ongoing program evaluation for considering our progress with respect to this goal. In turn, program evaluation as well as formal and informal cycles of inquiry for program improvement informed ongoing program refinement. Key features of the program as enhanced through 2015 are reported below.

UIC's leadership preparation program is a three-stage license, certificate, degree combination. Stage 1, which includes the first 18-months of study, supports principal preparation and certification. In addition to 44 hours of coursework, this phase of the program includes a 12-month fully-paid principal

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residency where students also receive field-based support from a mentor principal and UIC leadership coach. Nearly all students transition into principal or assistant principal posts immediately following the completion of this phase of their program participation.

Following the preparation phase of the program, students engage in two years and one final summer term (roughly 16 hour) of post-preparation coursework with aligned coaching support. As is discussed in more detail below, this phase of the program begins to explicitly engage students in and support them with their CRE. During this period of time students must also earn passing scores on a series of authentic and course-embedded performance-based assessments. If these things are achieved, students complete Stage 2 and earn a Certificate of Advanced Study (CAS) through UIC. Finally students earn an Ed.D. degree through UIC upon the successful completion of Stage 3, which involves an additional 20 hours of capstone research project work. As a part of this phase of work students:

1. Document their cycle of inquiry leadership work and the impact of this work in a “capstone case” and write a capstone proposal which details a plan for critically analyzing the capstone case,
2. Orally defend a capstone proposal,
3. Analyze their capstone case and write a final capstone research project, and
4. Orally defend their final capstone research project.

Utilizing this structure allows us to work with students both before and after principal certification to support preparation and early career development.

Considering the program in a bit more detail, a cohort of roughly 12 to 20 students begin their studies at UIC each spring following a rigorous selection process. Although most cohort members enter the program as teacher leaders or assistant principals, 1-2 students in each cohort typically enter as principals seeking to strengthen their practice and improve student achievement in the schools they serve. It is important to note that among other things, our selection process seeks to identify students who are highly motivated to seek school leadership posts immediately following the preparation phase of our program.

The first 18 months or four academic semesters (spring, summer, fall and spring) includes the preparation phase of the program. Students begin to take a set of specified and tightly sequenced courses and remain in their current educational positions for the first spring semester. Near July 1 students who began as teacher leaders or assistant principals typically transition into a fully-paid, yearlong principal residency in either a Chicago Public School (CPS) elementary or secondary school<sup>1</sup>. This ensures that all students, and not just those who began their doctoral studies while serving in principalships, are in a full-time school leadership position with considerable administrative authority for the final year of the “preparation” phase of the program. It is important to note that despite research that points to a robust clinical experience as a critical feature of principal preparation (Darling-Hammond et al., 2007; Davis & Darling-Hammond, 2012; Orr, 2011; Orr & Orphanos, 2011) and principal preparation policies in some states that have within the last decade begun to set higher expectations for the duration and scope of such clinical experiences (Klostermann et al., 2015; Manna, 2015), few preparation programs in the country currently have fully-paid, yearlong principals residencies as enacted at UIC.

During the residency year (July 1 to June 30), all students continue taking a carefully sequenced collection of courses. Given that all students are in school leadership positions for the final year of their preparation experience, most of the courses and course assignments during this year are explicitly designed to draw on students’ school settings and to motivate streams of leadership work within these settings. During this time, students also receive intensive field-based support from their mentor principal,

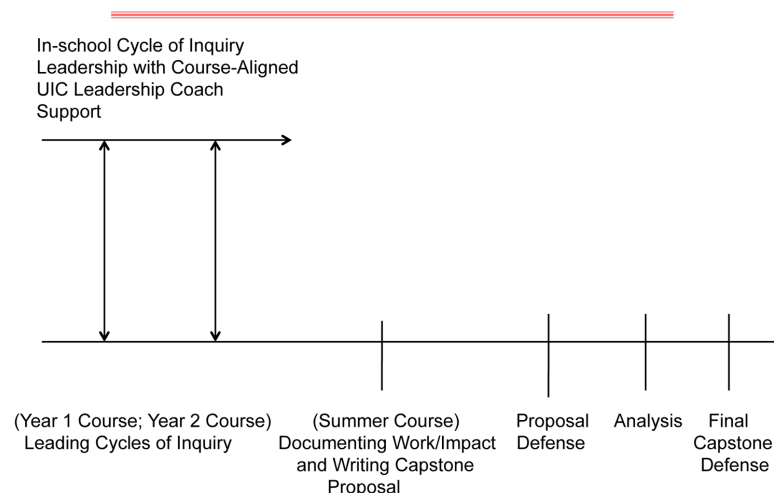
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who is the principal of their residency school setting, and a UIC leadership coach. Of importance, UIC leadership coaches meet with resident principals roughly once a week for between two and four hours a week throughout the year. Like the principal residency experience, leadership coaching has been associated with exemplary preparation and development programs (Darling-Hammond et al., 2007; Davis & Darling-Hammond, 2012). Coaching has been found to impact leader development generally as well as instructional and transformational leadership (Cardno & Youngs, 2013; Cerni, Curtis, & Colmar, 2010; Goff, Guthrie, Goldman, & Bickman 2015; James-Ward & Potter, 2011). Moreover, principal development policies in a few states, such as ours in Illinois, have begun to provide some financial support for the coaching of certain principals (Stickel, 2005). However, it is likely that few preparation programs in the country have the kinds of leadership coaching supports that are embedded in UIC's program.

At the end of this 18-month preparation experience and upon successful completion of state exams, students obtain principal licensure. Nearly all of the students aggressively seek and are able to secure assistant principal or principal positions immediately following the completion of their residency principalship. This swift trajectory into administrative leadership posts following preparation is likely atypical. However, it provides a critical opportunity for the later phases of the program experience to remain tightly linked to students' school settings and their authentic leadership work. Of importance, the design of the capstone research project takes explicit advantage of this opportunity.

As is illustrated in Figure 1, students officially begin their "Cycle of Inquiry" CRE in a course-embedded and clinically-supported manner. During this period of time, when students are typically in assistant principal or principal roles, students participate in two, yearlong university courses that meet roughly every three weeks. One of these courses is taken during the first year following the residency and the other course is taken during the second year following the residency. These two courses are designed to deepen student understanding of cycle of inquiry leadership and to authentically engage students with cycle of inquiry leadership work within their respective schools. Throughout this timeframe, students also receive support for their cycle of inquiry leadership work from their UIC leadership coach. Although such coaching is not as intensive as the coaching support during the residency principal experience, students still meet with their leadership coach roughly every other week for two to four hours.

Figure 1. UIC's CRE experience: Cycle of inquiry capstone





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After the completion of these two courses, and the successful completion of a series of course-embedded performance assessments that have replaced more traditional comprehensive exams, students are eligible to move into the final stage of the program. In this final stage of the program, students complete a course that supports the documentation of their cycle of inquiry leadership work and the impact of this work on their respective schools. This course also supports the writing of a capstone proposal, which details a plan for critically analyzing the cycle of inquiry leadership work and impact. Upon the successful oral defense of their capstone proposal, students work independently on their capstone research project under the supervision of a capstone advisor. Students earn an Ed.D. degree upon the successful final oral defense of their Cycle of Inquiry Capstone Research Project.

### **PURPOSE, RATIONALE FOR CYCLE OF INQUIRY CAPSTONE AS CRE**

Similar to other action research approaches that have been documented as an alternate CRE within the context of principal preparation, UIC's Cycle of inquiry Capstone Research Project is designed to create a more authentic research experience for school and system leaders than would be gained through the completion of a traditional dissertation. Moreover, like Osterman and her colleagues (2014) suggest, our cycle of inquiry capstone model engages students with authentic leadership work. We also agree with other scholars that action-research oriented CREs can address problems of practice and cultivate or strengthen leadership practice more generally. However, given our work to align our redesigned program with leadership standards (such as ISLCC 2008) and leadership competencies that operationalize these standards, we sought to design this CRE to support particular standards-aligned leadership competency development.

The importance of explicitly attending to leader standards and standards-aligned competency development is increasingly apparent in the logic that connects principal preparation to principal performance. Following the emergence of leadership standards, such as ISLCC, there have been persistent calls to align principal selection, preparation, and ongoing development with standards and standards-aligned leadership competencies (Anthes, 2004; Orr & Barber, 2007, Turnball, Riley, & MacFarlane, 2015). Leadership standards "codify expectations for school leaders' capabilities and performance" (Turnball et al., p. 19). The availability of ISLCC and other related standards has encouraged school districts to specify competencies of effective principals and use these competency frameworks for the selection, development, and evaluation of principals (Canole & Young, 2013; Turnball et al., 2015). Increasingly, new statewide principal evaluation systems are aligned with leadership standards and assess school leaders along a range of standards-aligned competencies (Clifford, Hansen, & Wraight, 2012). Taken collectively these issues suggest that principal preparation and development programs would be wise to draw upon alternate CRE designs as a mechanism to cultivate standards-aligned leadership competency development.

As we began to consider competency areas for emphasis within our alternate CRE, we had two broad considerations that shaped the selection of competency focus. First, given that CREs are generally designed to strengthen research skills we sought to identify those competency areas that necessitated strong practitioner research skills and practices. Second, we have come to understand the importance of aligning learning experiences with the leadership practices that matter most to student learning (Leithwood & Levin, 2008; Reardon, 2008). This emphasis is also made explicit by our program goal of consistently

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preparing school leaders who can transform high needs schools. Taken collectively, we therefore sought to develop an alternate CRE that would provide:

1. An authentic research experience for school leaders, and
2. A robust experience for the development of leadership competency area(s) that are likely to be of consequence to the improvement of student learning in the kinds of schools led by UIC-trained leaders.

With these issues in mind, we identified Interstate School Leaders Licensure Consortium (ISLLC) Standard #1 as an important area of focus for our alternate CRE. Given our partnership with the Chicago Public Schools, we also aligned this work with the CPS principal competencies aligned with this work. Of importance to this selection, leadership practices within Standard #1 rely heavily on strong practitioner research skills. First, Standard #1 requires that school leaders be able to facilitate the development, articulation, implementation and stewardship of a vision of learning that is shared and supported by a school community (ISLLC, 2008). The performance of this standard necessitates that school leaders be able to lead the collection and use of a range of data for a range of purposes including establishing a school's vision and goals, identifying and addressing barriers to goals, and monitoring, evaluating, and revising plans to support goal achievement. Second, our decision to focus on this standard in relation to an alternate CRE also made considerable sense given research by Robinson, Lloyd, and Rowe (2008) that identifies goal setting and planning, a domain of school leader work reflected in this standard, as having a moderate effect on student achievement. Moreover, additional empirical and scholarly literature points to the importance of robust school-level goal-setting and planning in low-performing schools like those commonly led by our students (Cosner & Jones, 2016; Finnigan & Daly, 2012; Finnigan, Daly, & Stewart, 2012). More recent research by Le Floch and her colleagues (2014) also reinforced our focus. This research reveals that low-performing schools receiving school improvement grants (SIG) and reporting the greatest number of improvement areas within their schools after one year of SIG-based support were settings with higher levels of principal strategic leadership which emphasizes school-wide goal setting and planning for improvement.

As we worked to operationalize Standard #1, we recognized that school-wide cycles of inquiry offers support for goal-setting and planning for goal achievement (Finnigan & Daly, 2012; Finnigan et al., 2012; Smylie, 2010). That is, we viewed such cycles as robust mechanisms for driving the kinds of goal-setting and planning that is likely to cultivate school-wide improvement. For these reasons we regard using and leading cycles of inquiry as a central discipline of effective principals. Accordingly, we concluded that our principals must deeply understand and be able to effectively use and lead cycles of inquiry in their schools as a key entailment of Standard 1 leadership practice. For these reasons, we framed out capstone research project around the work of leading cycles of inquiry for school-wide improvement.

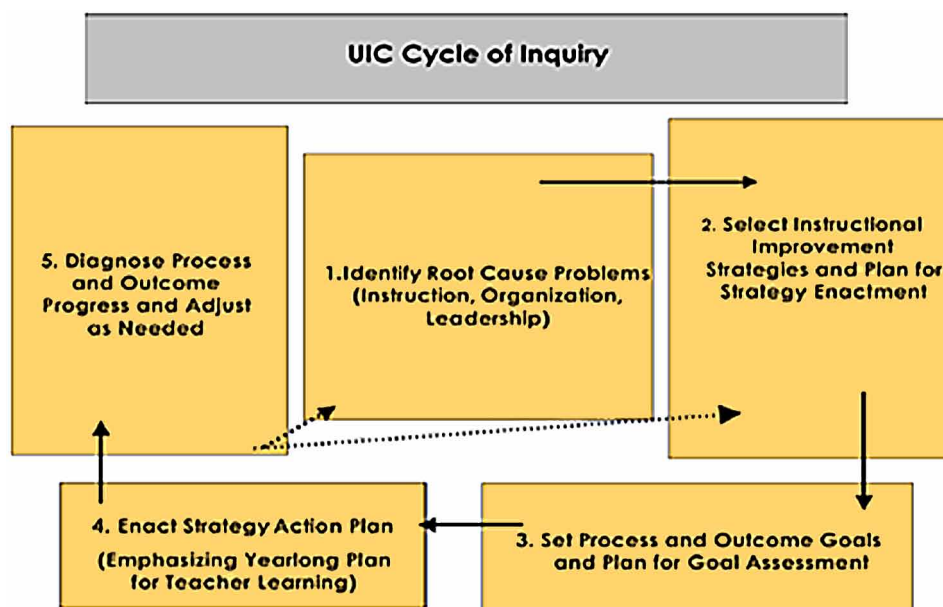
We quickly recognized that there are many cycle of inquiry processes or models from which to choose (Smylie, 2010). As we examined artifacts from our students' schools, particularly created school improvement plans that can be argued as tools for documenting a school's cycle of inquiry work, we identified notable patterns of problems in their work that would likely undermine their school's improvement efforts. Consistent with findings from Finnigan and her colleagues (Finnigan & Daly, 2012; Finnigan et al., 2012), who examined improvement planning work in a set of low achieving schools that continued to struggle with the improvement of student learning, we regularly observed plans that were based on weak root cause problem identification, which in turn, encouraged the "recycling of old ideas and practices"

(Finnigan et al., 2012, p. 4) as strategies for improving student learning. We viewed weak root cause problem identification as a concerning problem given that “the process of accurately diagnosing the underlying problems facing an organization is one of the first and most crucial steps in an organizations’ ability to learn and improve” (Finnigan et al., 2012, p. 2). We therefore sought to use a cycle of inquiry process in our program and in relation to the CRE that would cultivate the kinds of organizational learning necessary for key within-school problems to be identified and addressed. However, as we examined a range of cycle of inquiry models (for example, see Smylie, 2010) that could be draw upon to inform school-wide improvement planning, we realized that many processes or models did not make explicit the need to identify underlying problems as one of the first steps in the process. Our appreciation of sensemaking and sensemaking tools (Coburn, 2005; Cosner, 2011; Spillane & Miele, 2007), as devices that “mediate interactions among people” (Spillane & Miele, 2007, p. 63) and shape meaning making, suggested that we must use a cycle of inquiry process that made critical, but often overlooked, cycle of inquiry work visible to our students and ultimately to their schools. With this in mind, Cosner dramatically adapted for use within our program and CRE a cycle of inquiry process found in Smylie (2010). Figure 2 shares UIC’s five-step cycle of inquiry process and model in its most recent iteration.

## **UIC’s CYCLE OF INQUIRY CRE**

UIC’s CRE is called a Cycle of Inquiry Capstone Research Project and this project requires that students develop a full range of understandings and practices associated with leading school-wide cycles of inquiry as a mechanism that drives improvement in their respective school settings. These understandings and practices are cultivated and supported through a two-year course sequence and course-aligned

*Figure 2. UIC’s cycle of inquiry*



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leadership coaching. Both the coursework and coaching are tightly tethered to students' work settings and their authentic leadership work in these settings.

There are many leadership practices that are necessitated by this work. Students learn about these practices in the two yearlong courses, and both courses require that students engage in these practices within the context of their schools with UIC leadership coach support. To elaborate some of the central practices, our cycle of inquiry process necessitates that school leaders be able to lead school-wide processes for the:

1. Design of a data collection plan (including finding and/or designing data collection tools and protocols) for finding and identifying leadership, organization, and instructional problems within their schools,
2. Collection and analysis of a range of data sources,
3. Oral and visual reporting of key findings and the cultivation of shared understandings of these findings across a school community,
4. Selection and planning of improvement strategies to resolve identified problems,
5. Establishment of goals—both process and outcome,
6. Enactment of strategy plans,
7. Design of a data collection plan (including finding and/or designing data collection tools and protocols) for diagnosing progress with process (strategy enactment) and outcome goals (student learning), and
8. Collection and analysis of a range of data sources for diagnosing progress with process and outcome goals and making strategy adjustments.

## **DATA COLLECTION/ANALYSIS AND INITIAL USE OF LITERATURE**

### **Data Collection/Analysis**

Data collection and analysis take place in two of the five steps within UIC's cycle of inquiry, which appears in Figure 2:

1. Step 1 for root cause problem identification, and
2. Step 5 for diagnosing progress with process (strategy enactment) and outcome (student learning) goals.

Related to step 1 that focuses on problem identification, school leaders must be able to work with others in their schools to collect and analyze a broad assortment of data from their work settings to understand root cause problems that are impacting current student learning. During the first semester, students work with others in their school to collect a range of student data (such as attendance, behavior, achievement) so they can come to understand most pressing student issues. In collaboration with others from their school they then develop a data collection plan for exploring various root cause problems that are likely to be impacting student learning. As they begin to explore root cause problems, considerable emphasis is initially placed on developing an instructional data system that will allow their schools to

find, and ultimately solve, instructional problems. An assortment of qualitative data is likely to be collected in an instructional data system including classroom walkthrough and observation data, lesson and curriculum plans, and student work tasks. Quantitative data including student survey data about the nature and quality of instruction are also likely to be useful. Of particular importance, this work necessitates that students be able to find or design a range of qualitative data collection tools that are aligned to their areas of foci, such as classroom observation tools or rubrics for assessing the nature and quality of lesson/curriculum plans or student work tasks.

Related to step 5 that focuses on the diagnosis of process and outcome goals, students in collaboration with others from their school must be able to collect data to learn about the progress being made with the enactment of their improvement processes (strategy(ies) being enacted) and the impact of process/strategy enactment on desired outcomes (student learning). Given that we have students initially focus on finding and solving instructional problems in their schools, their initial diagnostic work related to step 5 tends to focus on learning about the enactment of and progress being made with instructional improvement strategies. We have students focus on diagnosing progress with both process and outcomes because research from the organizational sciences underscores the importance of tracking both leading and lagging improvement indicators. As Hohn (2013) suggests, “organizations that successfully maintain continuous improvement begin the journey by shifting their focus from lagging indicators [such as student outcomes] to leading indicators” (p. 1).

To help students identify appropriate leading and lagging indicators, we have students develop a logic model that shows the pathway by which each instructional improvement strategy is expected to impact student learning. This logic model makes visible to our students and their schools the kinds of instructional data that should be collected to diagnose the nature and quality of instructional strategy enactment. Again classroom walkthrough and observation data, lesson and curriculum plans, student work tasks are likely to be useful data to understand the nature and quality of instructional strategy enactment. Quantitative student data are important data for collection and analysis to understand progress with outcome (student learning) goals.

## **Use of Empirical and Scholarly Literature**

Students must use empirical and scholarly literature at two points in time as they are leading cycle of inquiry work in their schools and the use of literature is again emphasized once they have completed their cycle of inquiry work and are working on their capstone proposal and final capstone. In this section, we briefly review the use of literature during the two years that students are leading cycle of inquiry work in their schools. In a later section, we discuss the use of empirical and scholarly literature following the completion of the cycle of inquiry work as students are engaged in their capstone analysis and writing, which necessitates that students use literature to analyze and critique their cycle of inquiry work and results.

During work associated with step 1 in UIC’s cycle of inquiry, students are expected to use empirical and scholarly literature. First students must be able to draw upon relevant literature to provide a rationale for their focal areas of root cause problem identification. Second, students must be able to use empirical and scholarly literature in the design of data collection tools. For example, a student who is investigating literacy instructional problems must be able to draw upon relevant literacy instructional literature to identify what to “look for” in relation to robust literacy instruction. With the development of a literature-informed tool(s), this school can then use this tool to identify facets of robust literacy instructional practice that are present or absent in literacy classrooms.

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During work associated with step 2 in UIC's cycle of inquiry, schools have identified root cause problems and consider strategies to address these problems. At this juncture, empirical and scholarly literature is again used to inform strategy selection and plan for strategy enactment.

### **MULTIPLE AND ALIGNED SUPPORTS FOR LEADING CYCLES OF INQUIRY**

As illustrated in Figure 1, the development of understandings and practices associated with the CRE are formally supported in an aligned manner by both academic courses and UIC leadership coaching over a two-year period of time. These are both discussed in more detail in this section.

#### **Course-Embedded Support through Two Yearlong Courses**

As scholars consider how to strengthen the CRE for students in educational leadership programs there is increased attention to embedding research experiences throughout the program experience rather than having these experiences occur following the completion of structured coursework (Barnett & Muth, 2008; Page, 2001). We have followed such recommendations with our CRE design. As a part of our program redesign we created two back-to-back 4-credit yearlong courses that provide course-embedded support for student's CRE which requires them to lead cycle of inquiry work in their work settings. The first course begins immediately following the yearlong residency principal experience as students' transition into their first assistant principal or principal posts. Both courses use a yearlong format with a first session typically in July and a last session near the end of May or early June. Course meetings are held roughly every three weeks for three hours throughout the year. Both courses are designed to teach and provide intensive support for cycle of inquiry leadership development and work. The expectation is that students introduce and lead cycle of inquiry work in their respective work settings beginning in year one and continuing into the second year<sup>2</sup>. At the present time, two faculty members teach these courses and both faculty members loop with a group of students, teaching both the first and second year courses to one cohort of students.

During these two courses students engage in performance-based projects that involve them with each of the cycle of inquiry steps and critical work associated with the inquiry process. The first course emphasizes the recursive submission of discrete elements of the cycle of inquiry work so that students can obtain faculty feedback for ways to strengthen their work and can use this feedback to enhance their practice over time.

#### **UIC Leadership Coaching Support**

In addition to these two yearlong courses, students also enroll in coaching and this enrollment provides them with UIC leadership coaching support for their first two years following their principal residency. Coaching is provided by both full-time leadership coaches and clinical faculty members, whose roles are slightly broader in scope than those of the leadership coaches. Currently we have two clinical faculty members and three full-time leadership coaches. Coaching emphasizes helping students make deeper meaning of cycle of inquiry leadership work, surfacing challenges to work enactment within each students' local school context so that challenges can be addressed, and helping students plan for the enactment of the work.

## **Faculty and Coach Collaboration**

There is a need for close collaboration between faculty and coaches during the two years that students are engaging in and beginning to lead cycle of inquiry work in their schools. Several approaches promote such collaboration. Emails are forwarded to students and coaches, which include a session recap and attached session materials, following most course sessions as a way of ensuring that both students and their coaches have a clear understanding of the leadership work that is expected in the coming weeks. Within the context of the yearlong courses, students are also now beginning to maintain leadership journals where they must explicitly reflect upon and consider next streams of work within the unique context of their respective schools and use journal entries to motivate subsequent discussions with their leadership coach. This year we are also beginning to institute “triad meetings” between the yearlong course faculty member, coach, and student at points in time when students are receiving course-embedded feedback on their in-practice work. Lastly, it is also common for the faculty member teaching the yearlong course and the UIC leadership coach to meet as a team with students if an individual student is encountering more unique challenges with their work at any point over the two-year period of time.

## **WRITING CAPSTONE CASE/PROPOSAL, CAPSTONE ADVISING, AND FINAL CAPSTONE DEFENSE**

Once students have successfully completed the two yearlong cycle of inquiry courses and related work in their school settings and have passed the course-embedded performance assessments that now replace more traditional comprehensive exams, students are eligible to enroll in a capstone case and proposal writing course. In this course, students must “write up” their cycle of inquiry work and results and must develop a literature-based plan for critically analyzing this work following the successful defense of their capstone proposal. This case and analysis plan are the basis of a capstone proposal.

Their capstone proposal for our CRE looks quite different from a traditional dissertation. The capstone proposal begins with their “capstone case”. This case begins with a thick description of the student’s setting to provide context for the cycle of inquiry case. Demographic and community information are important in this section, as is information on other unique internal or external factors or challenges that were at play in this setting during the cycle of inquiry timeframe. In this introductory section, students must also present an assortment of metrics to help the reader understand the organization at the beginning and end of the cycle of inquiry work. These metrics help the capstone reader learn about levels of student learning as well as the nature and quality of instruction, organization, and leadership at these two distinct points in time. Taken together, these metrics help the capstone reader understand any changes or development in this organization over this period of time. In the case, students must explain key leadership work enacted in relation to each of the steps in the inquiry process over the two-year timeframe. Of importance, students must introduce artifacts (which are included in an appendix) to support claims made about this work. Such artifacts might include meeting agendas and minutes, power point presentations, data displays, and various communication pieces. Following the actual capstone case, students must then develop a literature-based plan for analyzing their case. Students typically apply three lenses when examining their case, analyzing:

1. Cycle of inquiry leadership work,
2. The organization’s change or development over the cycle of inquiry time frame, and
3. Their own leadership development over the cycle of inquiry time frame.

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To engage in analysis, students return to the literature to identify areas of literature that will likely to be instructive for this analysis and critique. Lastly, students must include an appendix with their capstone proposals that includes all artifacts and data drawn upon in the proposal. Like traditional dissertations, capstone proposals are forwarded to a committee for review and students must orally defend their capstone proposal. Following a successful capstone proposal defense, students work individually with an advisor to conduct their literature-based analysis of the capstone case and to “write-up” this analysis for their final capstone. This document is again forwarded to a committee for review and students must orally defend their final capstone, which now typically includes a literature-based analysis and critique of:

1. Their cycle of inquiry leadership work,
2. The change or development that occurred within the organization, and
3. Their own leadership development.

This final document also includes recommendations for future actions.

### **THE REALITIES OF MAKING IT WORK**

As Panero and Talbert (2013) suggest, school leadership preparation programs can “either advantage or inhibit local capacity for inquiry-based improvement” (p. 131). For these reasons, they press leadership preparation programs to take on what they call the “no small feat” (p. 131) of aligning programs with inquiry approaches. We have done this at UIC. Although a number of actions were taken to support the enactment of our cycle of inquiry CRE, two broad areas of attention were of particular importance:

1. Overall program redesign work in relation to the preparation experiences leading up to students’ two-year cycle of inquiry work, and
2. Several new faculty work routines that supported the redesign and design implementation.

We briefly detail both below and we point to several institutional challenges that make this work complex.

### **Redesigning Precursor Learning Experiences to CRE**

Robustly enacting and leading cycle of inquiry work is challenging. It requires the cultivation of new knowledge as well as the ability to put that knowledge to practice. That is, we recognized that program learning experiences had to support the “transfer from knowing to acting” (Huber, 2011, p. 635). Learning designs with this purpose in mind would necessitate a series of carefully planned learning experiences over extended periods of time in ways that scaffolded learning. These experiences would need to engage students with active learning designs that required the ongoing application and practice of learning and that engaged students with the learning routine of making their practice public for purposes of feedback and critical reflection (Desimone, Porter, Garet, Yoon, & Birman, 2002; Hochberg & Desimone, 2010; Huber & Hiltmann, 2011; Kruse, Louis, & Bryk, 1996). With this in mind, we drew upon our broader program redesign work to help us create a strong program learning design for the support of our CRE.



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Our program redesign, which is detailed elsewhere (Cosner et al., 2012, 2015), led us to adopt a program logic model and to dramatically change program curriculum in alignment with this model and in a manner that is generally organized around three curricular/content strands:

1. Instructional diagnosis and development,
2. Organizational/leadership diagnosis and development, and
3. Cycles of inquiry for school wide improvement.

The emphasis of these three strands led us to design new courses, redesign many existing courses, and carefully consider the overall semester-by-semester sequencing of courses so that a series of courses could work in alignment to cultivate particular student understandings and practices. Within the context of this broader work, we considered how a series of precursor courses could help ready students for the cycle of inquiry work beginning the year immediately following their residency principal experience.

Students are in the program at UIC for four semesters prior to the first of two yearlong courses that guide and support students' school-wide cycle of inquiry work. However, cycles of inquiry are introduced during the first semester of the program and students begin to engage in authentic but small-scale cycle of inquiry projects within at least one course in their second, third, and fourth semesters (summer, fall, spring) as they are also engaged in the yearlong principal residency. These early projects are embedded in courses in the instruction and organizational/leadership program strands, because research suggests that struggling schools are likely to have longstanding instructional, organizational and leadership problems that warrant improvement attention (Mintrop & Sunderman 2009; Mintrop & Trujillo, 2005; Orr, Berg, Shore, & Meier, 2008). Given that students are in leadership positions throughout these three semesters, these projects link directly to students' school settings and in-the-field work. As a result, students gain authentic practice with components of cycle of inquiry work prior to their enrollment in the first of two yearlong cycle of inquiry courses.

### **New Collaborative Faculty/Coach Work Routines**

A broad assortment of collaborative routines have been designed and enacted to support our work over time. For example, we have enacted a number of new collaborative faculty and coach collaboration routines to support students' cycle of inquiry work, as detailed above. In addition, a number of collaborative routines were necessary in our historical and ongoing work to redesign the overall program and to support program improvement. History about this work and key routines are detailed elsewhere (Cosner et al., 2012, 2015). Beyond these collaborative routines, we briefly discuss below several additional collaboration routines that have proven essential in relation to CRE design and implementation.

First, our design of our current CRE is a product of extensive work by a subgroup of the broader faculty/coaching team for the design and ongoing refinement of the model. To refine the initial model, we collected and reviewed the work of students who were the first to engage in this new CRE. Collaborative discussions of these early work products helped us think about and refine our CRE design. Second, to plan for alignment between the small scale cycle of inquiry projects and the subsequent CRE cycle of inquiry leadership work, faculty members teaching in that series of courses met in an ongoing fashion to consider student work, patterns of learning problems, and plan for aligned learning experiences across the sequenced of courses. Third, we realized the need to cultivate a shared understanding across our

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entire program team (academic faculty, clinical faculty, leadership coaches) of cycles of inquiry and of the entailments of leading cycle of inquiry work within schools. This was motivated by the fact that we recognized that everyone in our program would play a role at supporting some facet of students' cycle of inquiry learning and practice development—as a faculty member for course supporting CRE, as a leadership coach supporting student's school-based CRE enactment, or as a eventual capstone advisor. Cultivating such understandings has necessitated multiple “learning sessions” over extended periods of time for presentations, resource sharing, and large group discussions. Such interactions and sharing have encouraged everyone to make meaning of this work, deepen their understanding of their own contributions to student learning and practice development, and consider issues of alignment between their own work and the work of others guiding and supporting students.

### **Facing Institutional Challenges**

There are several institutional challenges that we have encountered in our work to design and enact this new CRE. We highlight three for discussion here. As discussed above and illustrated in Figure 1, our CRE begins with two yearlong courses, which is an atypical course format within our university. Although we were able to gain university support for a yearlong course format, we have yet to gain university support for thinking more flexibly about the actual scheduling of a faculty member's teaching load when he/she is teaching a yearlong course.

Second, our program places considerable emphasis on leadership coaching as a central program feature, and this coaching is directly tied to our CRE. Although the university financially supports two clinical lines that provide a certain level of coaching, we have needed to hire at least three additional coaches to ensure that our students receive the coaching supports that we deem necessary. Presently these coaching positions are partially funded through a combination of sources including CPS and state policy that provides some financial support for the coaching of first year principals. However, over the years we have had to aggressively seek and have been fortunate to obtain external funding for leadership coaching.

Third, program redesign and enactment more generally and the design and enactment of this CRE in particular has necessitated unprecedented levels of collaboration between members of our program team. To support this, we have intentionally emphasized the hiring of individuals who are predisposed to collaborate. We have also had to aggressively seek out external funding to support faculty collaboration time<sup>3</sup>. Even with external funding, individuals have collaborated over many years in ways that extend well beyond externally-funded collaboration time.

## **CONCLUSION AND IMPLICATIONS**

Over the last decade, UIC's doctorate in Urban Education Leadership has responded to two distinct but important challenges:

1. The challenge of creating greater distinction between the academic and professional doctorates, and
2. The challenge of improving the nature and quality of its principal preparation program.

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Within the context of a broader multi-year program improvement and redesign effort, we designed and enacted an alternate CRE for our doctoral students. Our CRE emphasizes the leadership of cycles of inquiry for school-wide improvement over a two-year period of time and the subsequent analysis of this work using empirical and scholarly literature. The accounting provided in this article advances existing literature by making visible many of the important granular details associated with this CRE as well as considerations associated with its design and implementation within a doctoral-level leadership preparation program. We offer three final thoughts for those considering the redesign of professional practice leadership preparation CREs.

First, although we view action research as a viable and potentially robust option for leadership preparation CREs, we argue that it is imperative that CRE designs be enacted in ways that explicitly supports standards-aligned competency development. Moreover, given that competency “focuses on one’s actual performance in a situation” (Schroeter, 2008, p. 2), CRE designs should engage students with the actual work entailed in competency performance. At UIC, we have chosen to focus on cultivating leadership for cycle of inquiry work as we operationalize competency development through the CRE experience. It is also critical to note that our design of such a CRE experience is made possible because our students aggressively seek and are extremely successful at obtaining school leader positions immediately following the preparation experience. Certainly our selection process that seeks to identify such students, and our strong preparation design, are critical program feature that have enabled our CRE design.

Second, the existing literature on action research as an alternate leadership preparation CRE suggests that an assortment of action research processes or models have and can be drawn upon in CRE designs. As our discussion revealed, we thought carefully about the selection of a particular cycle to address issues of importance to our students and their schools. We believe that different cycles have affordances and limitations and therefore believe that programs would be wise to consider these affordances and limitation in relation to purposes and goals to be achieved through an action research CRE.

Lastly, the CRE redesign and ongoing implementation of this redesign would not have been possible without extra-ordinary levels of team member collaboration within and across our program. As briefly discussed above, we have been successful at obtaining ongoing external funding to support certain levels of this work. However, this work has necessitated extensive levels of work by nearly everyone associated with the program. This work has extended over many years well beyond externally funded collaboration time. Such efforts are not typically recognized in incentive or evaluation systems in research intensive settings and UIC is no exception to this long-standing national practice. Stated differently and rather harshly, faculty collaboration is not typically valued in research intensive universities and faculty who choose to collaborative in such settings for the sake of program improvement can be significantly disadvantaged in university evaluation systems. Ultimately this value system and the related incentive and evaluation systems will need to be reconsidered or the good will of individuals to take on such collaborative improvement work will be destroyed thereby making innovative CRE design and enactment unlikely in many institutions throughout the US.

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## **ENDNOTES**

- <sup>1</sup> These residency principal experiences are fully funded by CPS through our partnership agreement.
- <sup>2</sup> Students who job transition between the first and second year-long course are responsible for writing a one-year rather than two-year cycle of inquiry capstone case.
- <sup>3</sup> Key funders who have supported ongoing program improvement, leadership coaching, or leadership development research have included the John D. and Catherine T. MacArthur Foundation, the Broad Foundation, the Chase Foundation, the Chicago Community Trust, Chicago Public Education Fund, the Lloyd A. Fry Foundation, McCormick Foundation, McDougal Family Foundation, W. Clement and Jessie V. Stone Foundation, the Educational Development Center, the National Science Foundation, and the Wallace Foundation.