**Action-Oriented Design Research in Doctoral Programs:**

**Developing the Leaders Our School Systems Need**

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**Critical Conversation**

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**Introduction**

School system leaders play a critical role in developing and sustaining effective schools (Klar & Brewer, 2013; Leithwood & Louis, 2012). Over the past decade the range of leaders’ responsibilities and the level of accountability to which they are held have increased considerably (Glass & Franceschini, 2007; Louis, Leithwood, Wahlstrom, & Anderson, 2010; Sevak, 2012). Given this, many are seeking, or being required to seek, a doctoral degree (Perry, 2012). However, not all degrees are the same (Gaetane & Normore, 2010; McGowan & Pederson, 2012). Traditional PhD programs train future faculty to research, teach, and serve; whereas EdD programs, such as those associated with the Carnegie Project on the Education Doctorate (CPED), develop *scholar practitioners*, individuals capable of blending their practical wisdom with their professional skills and knowledge to name, frame, and solve problems of practice (Perry & Imig, 2010; Shulman, Golde, Bueschel, & Garabedian, 2006; Wergin, 2011; Young, 2006).

CPED is a consortium of more than 80 colleges and schools of education working collaboratively to undertake a critical examination of the doctorate in education and make it a stronger and more relevant degree for the advanced preparation of practitioners (Perry, 2012, 2015; Perry & Imig, 2008). Given this goal, CPED has encouraged schools of education to reconsider the outcomes and expectations for doctoral candidates in terms of students’ aspirations, differentiating between those who wish to secure positions in academic institutions (PhD), and those who wish to remain in the field and transform it (EdD). Programs for those aspiring to become scholar practitioners need to provide skills that align with the needs of PK-20 schools.

In recent years, several new approaches have emerged for developing these types of leaders. Those that apply principles of design, including rapid implementation and testing, show particular promise (Anderson & Shattuck, 2012; Bryk, Gomez, Grunow, & LeMahieu, 2015; Lewis, 2015). Both improvement science and design development involve implementing and evaluating interventions in the complex context of schools. These approaches are rooted in the practical examination of actual problems that demand equitable solutions.

The literature on design development studies is quite extensive. Some of the initial work in this arena was conducted by the late Ann Brown (1992) and was elaborated on by Cobb and colleagues (2003). This early body of work has a strong emphasis on theory building, whereas design development studies, in the context of an EdD program, focus on the actual improvement of schools and school districts. More recent theoretical underpinnings for design development come from the Netherlands Institute for Curriculum Development (SLO; Plomp & Nieveen, 2007; van den Akker, 1999). Their work has spawned an impressive wave of design research projects internationally (http://international.slo.nl/). Coghlan and Brannick (2014), for example, describe how leaders can use design research to transform their own organizations. The Carnegie Foundation for the Advancement of Teaching has developed a major initiative around design-based thinking and continuous quality improvement, now codified as “improvement science” (Bryk, Gomez, & Grunow, 2010; Bryk et al., 2015; www.carnegiefoundation.org). While improvement science shares many of the characteristics of design development studies, there are several key differences. Design development studies, for example, draw more extensively on the literature during the design phase, whereas improvement science places a greater emphasis on experience. In addition, design development studies yield generalizable principles that can be adapted across contexts, whereas improvement science focuses on specific contexts. If improvement science is used to address a similar problem across members of a network, the results can provide insight into variability (what works, for whom, and when; Bryk et al., 2013).

Leadership as a scholar practitioner occurs within complex organizational, cultural, and political systems. Most problems require deep analysis from multiple perspectives, including social justice perspectives, in order to initiate interventions that hold promise for improvement on the status quo. Inquiry skills, the hallmark of doctoral level education, are essential for accomplishing these goals. In addition, an interdisciplinary approach supports the development of inquiry skills in relation to problem framing (Benford & Snow, 2000; Coburn, 2006), research and development (Krathwohl, 1987; Penuel, Fishman, Cheng, & Sabelli, 2011), and influence (Kingdon, 2003). What are the essential inquiry competencies? How should they be integrated with policy leadership? What are the expected and actual outcomes for leaders who apply inquiry skills to lead educational improvement through changes processes? And how can leadership programs develop faculty who adopt these mindsets?

**Purpose of the Session**

This conversation will bring together scholars from varied institutions working in EdD programs in diverse communities. Each of these institutions has incorporated, or is working to incorporate, elements of design development or improvement science into their EdD program. The application of these approaches ranges from teaching a course on improvement science to conducting design development studies for the dissertation. Central to the success of these approaches is preparing faculty to embrace new ways of thinking about doctoral research courses and dissertations.

We will discuss emerging perspectives on the research experience that scholar practitioners need to become more effective leaders, as well as how these experiences serve as productive pedagogies within an EdD program. Our aim is to contribute significantly to the knowledge base through dialogue and critique.

**Approach**

This session will begin with a brief overview of design development studies and improvement science, and then the panelists will engage in a discussion of how these approaches impact the development of scholar practitioners. In the next part of the session, attendees will interact with one another and the panelists in small-group discussions, focusing on critical questions related to these approaches. Finally, panelists and attendees will elaborate on key questions that emerge from the small group discussions.

**Examples of Provocative Questions to Stimulate Lively Discussion**

During this session, panelists and attendees will engage around the following central questions:

* What are the salient features of improvement science and design development?
* How do these approaches impact the development of scholar practitioners?
* How do these approaches generate contributions to the broader field?
* What are the affordances and challenges of incorporating these approaches into an EdD program?
* What evidence supports the efficacy of these approaches?

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