

**Leadership Development of Doctoral Students in a Carnegie Project on the Education
Doctorate Affiliated Ed.D. Program**

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Abstract

Educational practitioners in the 21st century must respond to the availability of a wide array of data relating to student outcomes and student achievement. To make effective use of this data as well as be able to respond to the growing needs of the field, educational practitioners must be able to apply the knowledge they gain in the graduate preparation programs. In this article, the authors reflect on the role of a signature pedagogy grounded on inquiry-based learning in their leadership development, and how an ongoing emphasis on action research throughout their doctoral program was invaluable in their professional and academic growth. As a result, the authors recommend that action research should strongly supplement traditional, theory-driven graduate pedagogy in education.

Introduction

Effective educational leadership, regardless of the individual practitioner's setting, requires an ongoing focus on improving student learning outcomes while adjusting to the demands of national policy and legislation at regional and local levels. More fundamentally, leadership involves an understanding of the indirect and decentralized nature of relationships within educational organizations, as well as the relationships between stakeholders in the overall system (Bolman & Deal, 2008). As the goal of improving student achievement is adopted throughout all levels of public education, there is a need for effective leadership that can address national and state priorities (Wahlstrom, 2008). To this end, Leithwood (2012) found that collective leadership can exert its influence through reciprocal, highly interactive relationships among individuals working within educational organizations, creating greater capacity and powerful motivation to meet ever more demanding goals.

With the rising general awareness of education as a driving force of national economic growth and competitiveness (Zumeta, Breneman, Callan, & Finney, 2012), the need for meaningful articulation between all levels of publicly funded education is of increasing importance. Irrespective of historical understandings of the distinct responsibilities of each level of the education system, the interdependence of these structures is increasingly apparent as changes in one component of the system influence other segments. Publicly funded education is an example of systemic complexity that will require change and enhanced coordination of the processes among the interrelated organizations (Senge, 2006).

The collection and analysis of longitudinal student data in K-16 systems is a primary example of meaningful application of systems level leadership and a representation of dynamic complexity within public education. Leaders in preschool through twelfth grade (P-12) systems, as well as systems of public higher education, frequently have a desire to answer questions about individual or aggregate student populations (Mandinach & Gummer, 2015). This use of longitudinal data to address larger questions of system performance has brought into question the very notion of separate educational structures, which have historically been based on nothing more than the age of students. A growing body of evidence suggests that the process of achieving long-term learning outcomes is complex and not confined to specific age categories (Fullan, 2013).

Given the positive impact that education has on the increasingly knowledge-centered economies of the 21st century (Tucker, 2011), institutional and state policy that is responsive to societal change is necessary in order to ensure the relevance and service of education. The model of publicly supported colleges and universities, which function virtually autonomously in regards to the development of curriculum, instruction, and student outcomes, has had the unintended consequence of isolating these institutions from wider reaching P-12 educational systems. As a result, promising practices developed in one system very rarely cross into another system. It is the task of contemporary leadership programs to bring practitioners together, and emphasize the consistent application of action research across publicly-funded education, with a goal of increasing the scholarship of teaching and learning and improving student outcomes (Darling-Hammond & Bransford, 2005; Shulman, 2005).

Doctoral programs in educational leadership occupy a unique position in providing a shared vision of state and national educational needs. With the support of the Carnegie Project on the Education Doctorate (CPED) initiative to develop professional practitioners committed to improving student outcomes (Perry & Imig, 2010), doctoral programs in educational leadership have strengthened the degree with a greater focus on developing practitioners that can blend

theory with effective practice (Shulman, Golde, Bueschel, & Garabedian, 2006). By preparing doctoral students, working in both P-12 and higher education, with the knowledge, analytical tools, and organizational awareness necessary for reform, the intended goal is for these leaders to serve as catalysts for effective change in the organizations that characterize contemporary education (Slater, Brown-Welty, Cohn, & Rodriguez, 2009).

In recognition of the many goals of leadership preparation programs, CPED provides guidelines and best practices as it relates to the development and implementation of graduate programs serving this purpose. To accomplish this, CPED recommends that leadership preparation program adopt one of several signature pedagogies, all of which are grounded on inquiry-based learning and action research, to assist practitioners in effective reform.

The purpose of this paper is to reflect and analyze how the particular signature pedagogy of the Doctoral Program in Educational Leadership at Fresno State (DPELFS), embedded fieldwork, influenced the leadership development and preparation of the authors as professional practitioners. The analysis will be framed by Senge's open systems theory and Leithwood's (2012) framework for evaluating effective leadership in the P-12 system.

The Doctoral Program in Educational Leadership at Fresno State

The designers of DPELFS integrated the foundations of the CPED initiative into the program curriculum. DPELFS leaders sought to prepare doctoral students for service as practitioners who can carry out local research and evaluation that will ultimately shape practice at all levels of the educational system. This close integration of scholarship with practice in both P-12 and higher education settings requires the practitioner to be capable of high levels of organizational awareness in addition to being able to carry out multi-dimensional problem solving (Shulman et al., 2006).

CPED and its member institutions established several emphases for its member institutions' graduate programs, "(a) the scholarship of teaching, (b) the identification of a signature pedagogy, (c) the creation of laboratories of practice that undertake best evidence analyses, and (d) the development of new capstone experiences in which Ed.D. candidates demonstrate their proficiencies in scholarship." (Browne-Ferrigno & McEldowney Jensen, 2012, p. 408.) These guidelines impact the attitudes and behaviors of the individuals working within the doctoral program and become the foundation of every decision that is made. Furthermore, these guidelines ensure a consistent basis for pedagogy, student assessment, and evaluation, all of which tie into concrete behaviors that are identifiable in every graduate.

DPELFS has the pedagogical orientation and curriculum design of coursework based on the principles of inquiry-based learning, a primarily-student-driven process. Inquiry-based learning can be characterized by three principal components: (1) problem-based learning, (2) the integration of contextualized field studies and case studies into the general curriculum, and (3) a research-based approach to developing analytical framework and conducting educational evaluation (Donovan, Bransford, & Pellegrino, 2000).

The greatest strength of this pedagogical orientation is in its emphasis on having learners identify organizational problems, develop research questions, and determine the optimal means by which to address those questions. A deeper element to signature pedagogies is that they address and redefine some of the traditional assumptions about how to convey knowledge of the profession to learners. The third and final dimension of signature pedagogies is the underlying expectations of attitudes professionals should hold as norms and the convictions one should act upon (Donovan et al., 2000).

The adopted signature pedagogy of DPELFS, embedded fieldwork, allows doctoral students to design studies relating to school practice and theory, as well as apply collaborative effort in group projects intended to develop individual leadership skills (Slater, Brown-Welty, Cohn, & Rodriguez, 2009). The goal is to develop highly skilled scholar-practitioners to effect reform in their local educational contexts by creating a bridge from the theoretical knowledge gained through lecture to its application in the field. As a result of a programmatic focus on applied research, students are able to immediately enact and disseminate their findings to improve the effectiveness of their current educational environment; thus, embedded fieldwork distinguishes itself from other, more theoretically-oriented pedagogical strategies through the immediacy of its application in the field (Golde, 2007).

According to their work examining graduate education in relation to embedded fieldwork, Sappington, Baker, Gardner, and Pacha (2010) found that the application of the content of coursework outside of the classroom setting allowed doctoral students to explore a problem holistically. Doctoral students participating in action research are able to return to their local contexts with knowledge of an approach that is necessary for catalyzing positive reform. As part of DPELFS coursework, doctoral students are given the opportunity to work with local educational systems to conduct evaluations in a client-evaluator format. Leaders of local organizations contact DPELFS faculty with organizational problems they are having that could use a research-based analytical framework to determine solutions. Students are tasked with developing an evaluative framework, collecting data, and delivering an evaluation to stakeholders.

These projects support the programmatic goals for doctoral students to develop visionary leadership skills to execute concrete educational reform focused on instructional practices and policies, curriculum, campus cultures, school-community relations, and home and school learning environments. This includes developing the capacity within practitioners to build cooperative teams of practitioners and researchers in schools, as well as the research capabilities necessary for the implementation of educational policy and practices that are based on the effective use of data (Mandinach & Gummer, 2015).

Doctoral Student Experiences with Projects Connected to Course Curriculum

The authors participated in three embedded fieldwork projects as part of the DPELFS implementation of its signature pedagogy. Each project was designed to apply the theoretical learning from a specific course to address a problem of practice in an educational setting with which they were not directly involved. Each embedded fieldwork assignment required recommendations to the client for action. In the process of analyzing the problem and developing a literature review, the team learned to prioritize possible actions based on principles of change leadership. Recognizing opportunities for action that would bring about immediate change was a skill that developed over the course of several fieldwork projects.

The first project was assigned in a second semester course, *Conceptual Curriculum Perspectives for Educational Leadership*, and focused on the philosophical and cognitive skills necessary to analyze curriculum theory and practice across educational systems. The purpose of the project was to examine curriculum from an external organization and evaluate progress relative to the criteria for meeting programmatic excellence. Research, data collection, and analysis using appropriate design methods and instruments were all essential elements of the project. Central elements of the course included in the project were system-wide educational

reform, data-driven decision-making, school and campus cultures, collaborative management, and student development and learning.

The second project was conducted during a third term course, *Educational Reform*. The purpose of the course was to provide doctoral students with a broad perspective on change in education settings in the context of organizational theory, structure, and culture. Change leadership was emphasized in the course. The project required a doctoral student team to meet with a client to discuss the client’s reform project. The team then researched comparable reform implementations, developed recommended strategies to effect the reform, and provided the client with an abbreviated literature review and an executive summary.

The third project was a program review of data analytics infrastructure preparedness and use at the university campus, assigned in a fourth term course, *Educational Evaluation, Assessment, and Planning*. The team met with university administrators to define the scope of the project and determine project goals. Interviews of leaders on the local campus, as well as participation in a group meeting of leaders from two other campuses who were ahead in their deployment of data analytics infrastructure and software, supplied the data for the project.

Other doctoral candidates in the cohort selected projects that were varied in topic, scope, and type of client (see Figure 1). Teams were formed based on interest in the projects suggested by the faculty. Each project required an extensive review of the literature, an in-depth written summary of the project for the professor, an abbreviated written report for the client, and a meeting with the client to discuss the findings and recommendations. By performing each of these tasks, the students were able to gain an organizational perspective on the problems of practice in educational environments, which is a necessary precursor to effective leadership.

Figure 1. Sample Embedded Fieldwork Projects

Course Title	Project Title	Client
Conceptual Curriculum Perspectives for Educational Leadership	Examination of a Curriculum or Course Design: In-Depth Case Study of an External Organization	Public High School
	English 9 AB Curriculum Review	Suburban PK-12 School District
	An Analysis of Curriculum Alignment Between the First-Year Writing Program and General Education Courses in the Social Sciences	University: Fresno State
Educational Reform	Development of a Reform Plan to Increase the Diversity of an Educational Law Firm	Educational Law Firm
	El Dorado Park to Fresno State: Creating an Educational Pipeline	Charter High School
	The International Student Experience at Fresno State	University President

Educational Evaluation, Assessment, and Planning	Evaluation of the Total Educational Systems Support (TESS)	Rural PK-12 School District
	Examination of Key Components of the English Language Learner Programs: In-Depth Case Study of Merced County Schools	Two Rural Elementary School Districts
	Model Character Education Programs in Secondary Settings	Bonner Center at Fresno State
	Progressing Toward Analytic Maturity: A Road Map for Fresno State	University: Fresno State

Becoming Change Agents as Educational Leaders

Leithwood (2012) developed a comprehensive framework for evaluating effective leadership within the context of the school site as well as at the district level. While this framework was originally intended to describe P-12 systems, it has value in the assessment of leadership effectiveness in higher education. The DPELFS program goal of developing visionary leaders who can implement change is supported by the basic premises of the model for evaluating leadership skills, particularly through assessment of what Leithwood identifies as one of the more prominent means by which a leader can be assessed, the extent to which a leader can demonstrate what is termed *problem-solving expertise*.

This problem-solving expertise is a set of skills that allows an individual to identify structural challenges and problems and address them with solutions that are supported by research. According to Leithwood (2012), such a problem is narrowly defined as when, “(a) there is a gap between some current state of affairs and a preferred future state of affairs and (b) the means required to reduce the gap requires thought” (p. 44). Leithwood further identified three types of *unstructured problems* that require solutions and approaches beyond conventional approaches: those that are historical and persistent, those that are unique, and those that can be addressed with recent developments in research. The expertise in solving problems is not based solely on intellectual skills, but on leadership that can address the particular situation. Leithwood’s framework identifies the personal resources that effective leaders develop in three dimensions: cognitive, social, and psychological.

According to this framework, the most important characteristics to develop in individuals who are training to be future educational leaders are the skills necessary to envision a better future, understand a given context, and bridge the present with that desired future. As a result of the fieldwork projects, DPELFS students developed their ability to identify problems in educational practice and to apply their skills and knowledge in these external problems to exercise and gain expertise in practice. Part of the process involves identifying functional or organizational constraints and creating solution processes to address and overcome them.

Doctoral Student Responses

After completing the doctoral program, the authors reflected on their leadership learning through embedded fieldwork utilizing the components of the cognitive personal resources framework designed by Leithwood (2012). The greatest leadership learning came from the interactions with clients and the application of theory to unstructured problems facing the clients.

With each project, the team's understanding of the scope of possible outcomes from the action research increased. The topics of the projects were not similar; however, the doctoral program team applied leadership skills learned in previous projects to each new project.

The doctoral student team deduced the principles and values of the clients through interviews and reviews of documents provided by the client and available through organization web sites. In the period of time for the projects, the team found vastly different perceptions among stakeholders in the issues studied for two of the three projects. In contrast, the client for one of the projects was a university president who clearly articulated his principles and values related to the project at the initial meeting.

Each embedded field work project required collaboration among doctoral students working together on teams. Although each team member brought individual strengths to the project, no one member possessed all of the leadership characteristics needed to complete the project. Working in stressful situations where there is not a clear, known route to solve the problems forced the doctoral students to learn to respect the individual work styles of their peers and to contribute their strengths and interests to the overall project. Learning to control emotional responses to problems in the group work environment is a leadership skill that was greatly needed. Strong emotional responses to a problem and what was required to solve it limited flexibility in thinking about ways to solve the problem.

Summary of Reflections

Learning to work within constraints and envisioning plausible leadership actions in circumstances with multiple, complex issues were the most difficult aspect of the embedded fieldwork projects. However, this was a central feature of the pedagogy of the doctoral program, and the one that had the longest-lasting impacts on student learning.

The insight and guidance of faculty was foundational to the success of the team projects. Faculty mentoring through both successful outcomes and unsuccessful components of the projects provided valuable learning for the team. Preparing the presentations for clients required in-depth study of the problem with an extensive literature review for each project, developing a plan for data collection and analysis, and presenting ideas for solutions through recommendations for the client. This process reinforced the importance of leaders understanding problems from many different perspectives before attempting to carry out a solution.

Effective teaching practices, at any level of education and in any subject matter, rely upon ongoing reinforcement of learning such that it becomes cemented in long-term practice. In the case of DPELFS and its student learning outcomes, it was clear that leadership skills were developed through the processes of the curriculum and embedded fieldwork.

Conclusion

In conclusion, the embedded fieldwork projects in the doctoral program provided learning that incorporated theory and practice. The variety in the format of the projects and the stated purpose of the projects allowed for both broad learning and learning specific to individual client's needs. The strongest leadership learning came from presenting the results of the fieldwork projects to the clients. As graduate students presenting a well-prepared project to top administrators on the campus, the team gained a vision of themselves as future leaders. Participating in discussions regarding the recommendations presented gave doctoral students feedback about the feasibility of implementing suggestions.

As a result of these experiences, the authors strongly recommend that graduate pedagogy in educational leadership should supplement traditional instruction with action research. The application of theoretical learning to everyday problems faced by leaders in the field of education provided the authors with robust learning and the ability to apply these experiences to future problem as leaders in the educational system.

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